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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY

COLE HAAN LLC Plaintiff, v. TOP GLORY TRADING GROUP INC. and DP DREAM PAIRS INC. Defendants.	Civil Action No.: 2:25-cv-176-ES-SDA **Jury Trial Demanded**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Cole Haan LLC ("Cole Haan"), for its First Amended Complaint for Patent Infringement against Defendants Top Glory Trading Group d/b/a Bruno Marc ("Top Glory") and DP Dream Pairs Inc. ("Dream Pairs") (collectively, "Defendants"), alleges as follows:

INTRODUCTION

1. Cole Haan is a global performance lifestyle brand, serving customers innovative footwear and accessories designed for customers to wear from work-to-workout-to-weekend.

2. Once a purveyor of classic dress shoes, Cole Haan has evolved into a brand known for pushing the aesthetic boundaries of footwear while still remaining connected to its heritage by prioritizing craftmanship and high-quality materials.

3. This evolution has led to Cole Haan pioneering new categories of footwear, and earning industry and customer acclaim for its versatile products that combine cultural charm, time-honored craft, and modern innovation. Cole Haan has developed its brand and earned its distinction through significant investments in the research, design, development, and marketing of its products.

4. To protect its innovations, Cole Haan has sought and been awarded patents from the United States Patent and Trademark Office. Cole Haan has invested millions of dollars researching, creating, and promoting its new shoe designs and shoe innovations. On the strength of its legally protected innovations, Cole Haan has grown to sell its shoes in approximately 100 countries and over 500 retail stores, as well as through its website and numerous third-party websites.

5. Rather than innovating, Top Glory and Dream Pairs have copied Cole Haan's patented designs. By making, offering for sale, selling, and/or importing at least the: (1) [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers; (2) [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers; (3) [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes; (4) [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers; and (5) [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords (collectively, the "Accused Products"), Defendants are infringing Cole Haan's patents.

Bruno Marc [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes
[KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers
[KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords

Bruno Marc [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers
Bruno Marc [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers

6. Cole Haan is filing this lawsuit to protect its innovations and to stop Defendants from infringing Cole Haan's patents.

PARTIES

7. Plaintiff Cole Haan LLC is a Delaware limited liability company with a principal place of business at 150 Ocean Road, Greenland, New Hampshire 03840.

8. Upon information and belief, Defendant Top Glory Trading Group Inc. is a corporation duly organized and existing under the laws of the State of New Jersey, with its principal place of business located at 9500 Railroad Avenue, North Bergen, New Jersey 07047.

9. Upon information and belief, Defendant DP Dream Pairs, Inc. is a corporation duly organized and existing under the laws of the State of New Jersey, with its principal place of business located at 9500 Railroad Avenue, North Bergen, New Jersey 07047.

10. Upon information and belief, Defendants own and/or sell products under the brand "Bruno Marc."

11. Upon information and belief, Mr. Chuan Shan (Brian) Cao is the founder and/or CEO of Top Glory and DP Dream Pairs. Mr. Cao uses his business entities to import, distribute, and sell shoes throughout the United States, including the shoes accused of infringement in this litigation.

JURISDICTION AND VENUE

12. This is a complaint for patent infringement arising under the patent laws of the United States (35 U.S.C. §§ 101 *et seq*.). This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (any Act of Congress relating to patents or trademarks).

13. This Court has personal jurisdiction over Defendants. Upon information and belief, Defendants have their principal place of business in this District, are incorporated in the State of New Jersey, have committed and continue to commit acts of infringement in this District, and have conducted business in this District and/or engaged in continuous and systematic activities in this District.

14. Venue in this Court is proper under the provisions of 28 U.S.C. §§ 1391(b) and (c) and 1400(b) because Defendants were incorporated within this District and because, upon information and belief, Defendants reside in this District, and/or because Defendants have a regular and established place of business and have committed acts of infringement in this District by making, using, offering to sell, selling, and/or importing products that infringe one or more of Cole Haan's patents at issue in this lawsuit.

FACTUAL BACKGROUND

A. Cole Haan Background and Patents

15. Cole Haan has evolved into a brand customers know as an innovator of crafted and versatile fashionable footwear.

16. Cole Haan's renown was not attained by happenstance: Cole Haan expends significant time, money, and other resources designing, researching, and developing its products.

17. In addition to its R&D investments, Cole Haan dedicates significant resources to protecting its innovations.

18. As a result, the United States Patent and Trademark Office and patent offices around the world have granted Cole Haan hundreds of patents in the past decade. Cole Haan also has many other patent applications presently pending.

19. Relevant to this dispute, Cole Haan owns all right, title, and interest in, and has the right to sue and recover for all infringements of, U.S. Patent Nos.:

- U.S. Pat. No. 10,327,511 ("the '511 patent") (Ex. A);
- U.S. Pat. No. 10,443,163 ("the '163 patent") (Ex. B);
- U.S. Pat. No. 11,041,262 ("the '262 patent") (Ex. C); and
- U.S. Pat. No. D768,969 ("the '969 patent") (Ex. D).

The ’511 patent, ’163 patent, ’262 patent, and ’969 patent are collectively referred to as the “Asserted Patents.”

20. The Asserted Patents are presumed to be valid. 35 U.S.C. § 282.

21. Cole Haan marks its products, including those covered by the Asserted Patents, in conformity with 35 U.S.C. § 287. *See* https://www.colehaan.com/Patents.html.

B. Defendants’ Infringing Activities

22. Upon information and belief, Defendants began selling the Accused Products after the filing date of each of the Asserted Patents.

23. Without Cole Haan’s authorization, Defendants make, use, offer for sale, sell, and/or import into the United States the Accused Products.

24. Top Glory offers to sell and sells the Accused Products to customers through its website (brunomarc.com)[1] and through online retailers (*e.g.*, Amazon[2]).

25. Likewise, Dream Pairs offers to sell and sells the Accused Products to customers through its website (dreampairs.com).[3]

26. As explained below, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men’s Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords infringe one or more claims of each of the ’511 and ’163 patents.

[1] *See, e.g.,* https://www.brunomarc.com/products/mens-oxford-dress-sneakers-sbox2326m?color=1888; https://www.brunomarc.com/products/mens-oxford-sneakers-sbox2318m?color=1888; https://www.brunomarc.com/products/mens-smart-casual-knit-oxford-shoes-sbox2414m?color=1908.
[2] *See* https://www.amazon.com/Bruno-Marc-Sneakers-Oxfords-Wingtip/dp/B0C73JTPQW.
[3] *See* https://www.dreampairs.com/products/mens-comfortable-vegan-leather-wingtip-sneakers-sbox2326m?color=1888.

27. Further, as explained below, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords infringe one or more claims of the '262 patent.

28. Finally, as explained below, the [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes infringe the '969 patent.

29. Upon information and belief, Defendants' copying of Cole Haan's designs was deliberate.

30. Because Cole Haan marks its product packaging and because the Accused Products are nearly identical to Cole Haan's designs, Cole Haan believes Defendants either had knowledge of the Asserted Patents prior to the filing of this Complaint or engaged in willful blindness as to the Asserted Patents.

31. Further, Defendants had actual knowledge of at least the '511 and '163 patents. Cole Haan previously contacted Defendants regarding other infringing shoes and identified the '511 and '163 patents as being infringed by such shoes. A true and correct copy of the correspondence is attached hereto as Ex. E.

32. Specifically, Cole Haan contacted prior known counsel for Top Glory and Ms. Carina Cao responded. While her signatures in the letter indicated affiliation with Top Glory Trading Group Inc., her email signature indicated that she was affiliated with the Legal Department of Miracle Miles Group, Inc.

33. Upon information and belief, Miracle Miles Group Inc., Top Glory Trading Company, and DP Dream Pairs Inc. are all owned by and affiliated with Brian Cao.

34. In responding to Cole Haan's prior allegations of infringement, Ms. Cao asserted that one of the at-issue shoes did not infringe the '511 and '163 patents because it lacked "a unitary one-piece construction comprising a knitted upper heel region." *See, e.g.,* Ex. E at 7, 11. Despite Ms. Cao's argument, the Accused Products comprise a unitary one-piece construction comprising a knitted upper heel region.

35. Thus, Defendants had actual or constructive knowledge of the Asserted Patents.

36. Despite their knowledge of and/or willful blindness to the Asserted Patents, Defendants proceeded to make, use, sell, offer for sale, and/or import the Accused Products in egregious disregard of the Asserted Patents.

37. Defendants have infringed, and continue to willfully infringe, the Asserted Patents by making, using, selling, offering to sell, and/or importing the Accused Products in this District and elsewhere in the United States, without the consent or authorization of Cole Haan.

COUNT I - Patent Infringement Under 35 U.S.C. § 271 of the '511 Patent ([MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords)

38. Cole Haan re-alleges and incorporates by reference the above allegations as if fully set forth herein.

39. Defendants, without authorization from Cole Haan, have made, used, offered for sale, sold, and/or imported into the United States, and continue to make, use, offer for sale, sell, and/or import into the United States, shoes that infringe at least claims 1 or 21[4] of the '511 patent, including at least the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe,

[4] Cole Haan reserves the right to assert infringement of other claims of the '511 patent in accordance with this Court's Local Patent Rules.

[KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords, as set forth below.

Claim 1 ([MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords)

1. A shoe comprising:

40. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords are each a shoe.

a knit upper;

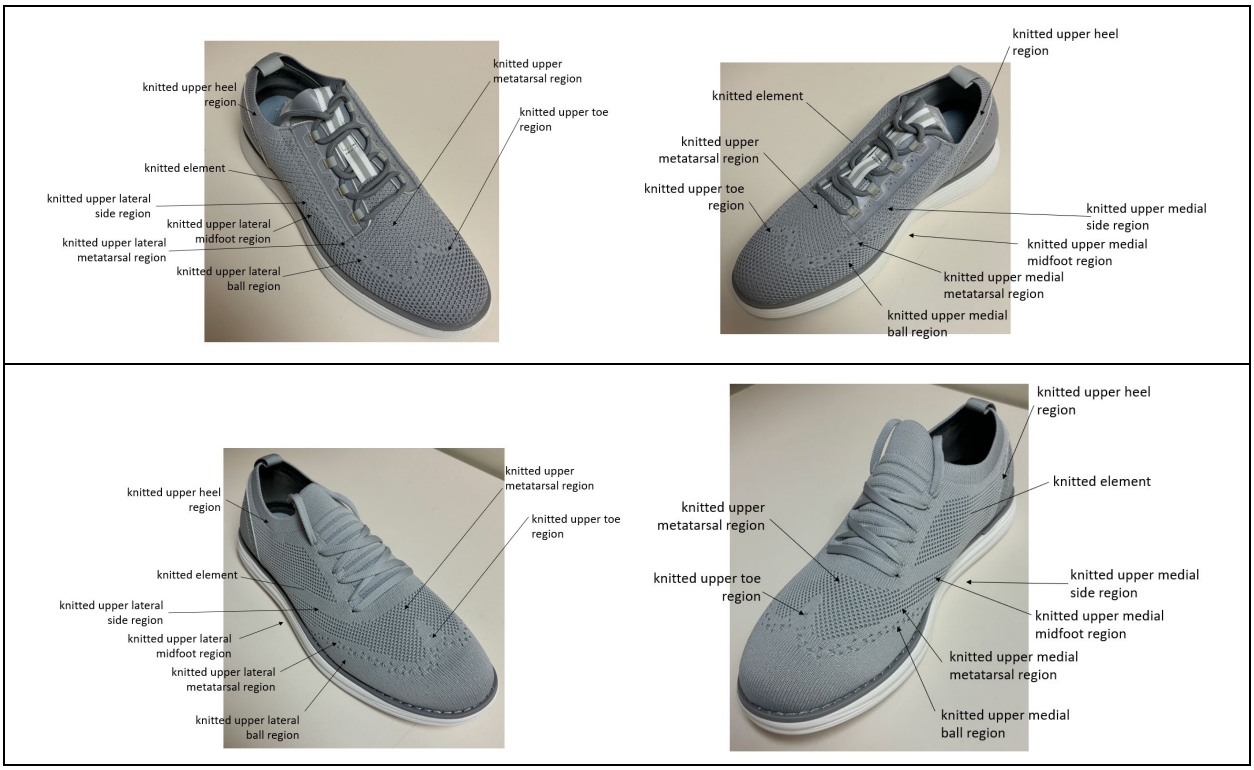
41. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each have a knit upper:

a sole secured to the upper;

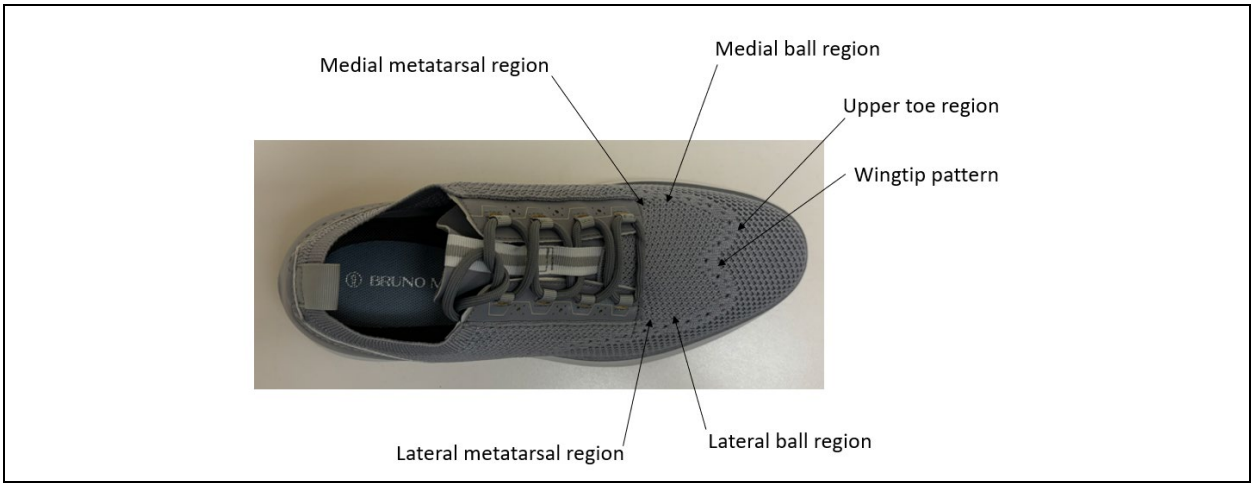
42. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each have a sole secured to the upper:

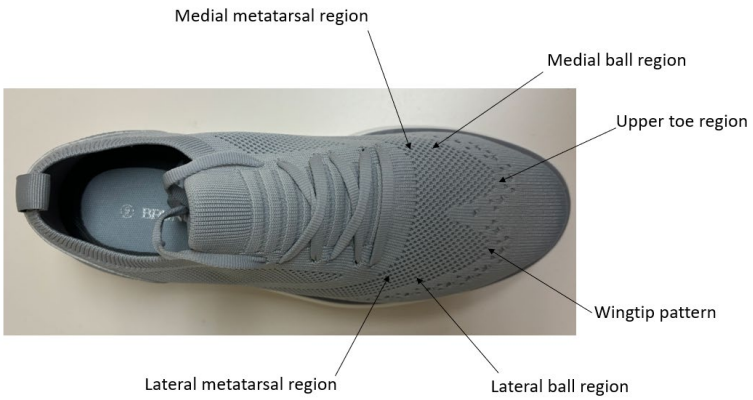
the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting process, the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions;

43. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each comprise the regions set forth in claim 1; likewise, such regions are knitted as recited in claim 1:



44. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each have a wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions:

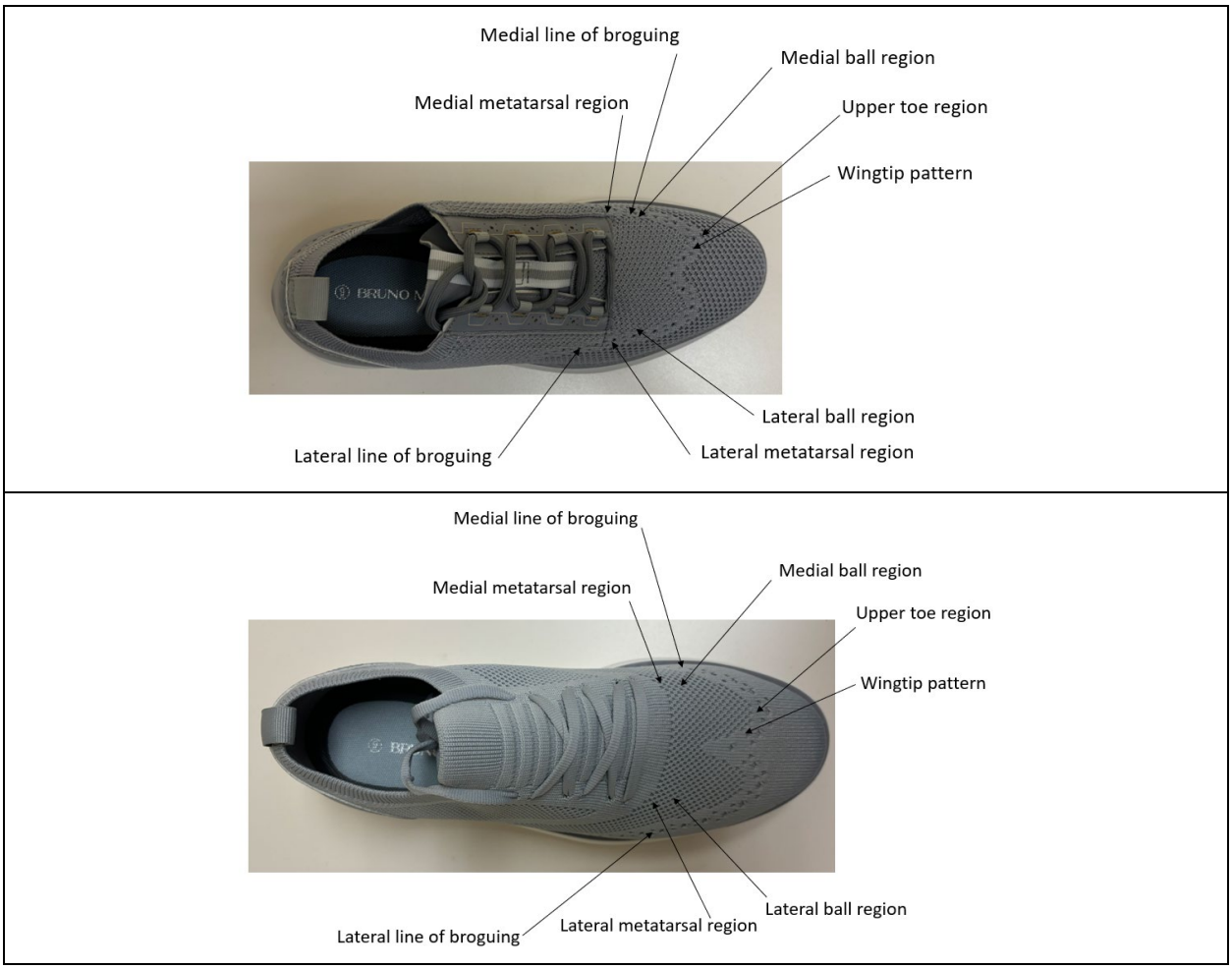




the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively being knitted with the wingtip pattern during the knitting process, the wingtip pattern comprising a medial line of broguing and a lateral line of broguing, the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively being knitted with the medial and lateral lines of broguing, the medial line of broguing comprising a wing-shaped curved line of holes having a medial side broguing portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the lateral line of broguing comprising a wing-shaped curved line of holes having a lateral side broguing portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the rearwardly extending central broguing portion of the medial line of broguing converging toward the rearwardly extending central broguing portion of the lateral line of broguing.

45. As shown above, the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions of the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords are collectively knitted with the wingtip pattern.

46. The wingtip patterns of the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords also comprise medial and lateral lines of broguing as recited in claim 1:



47. Accordingly, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords embody every limitation of at least claim 1 of the '511 patent.

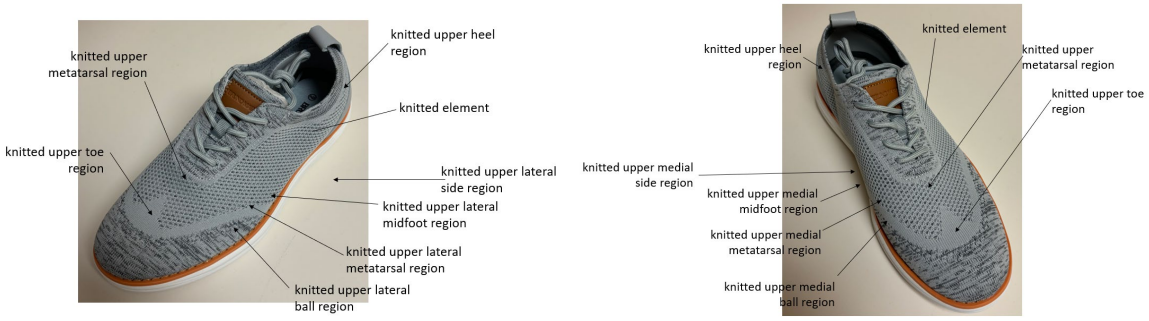
Claim 21 ([KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers)

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

48. The [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers are an article of footwear having a knitted upper and a sole.

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;

49. The [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers have a knitted element of a unitary one-piece construction having the regions recited in claim 21:



50. The [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers also have a first area of a jersey stitch knit and a second area of a pointelle stitch knit. The first area is at least in

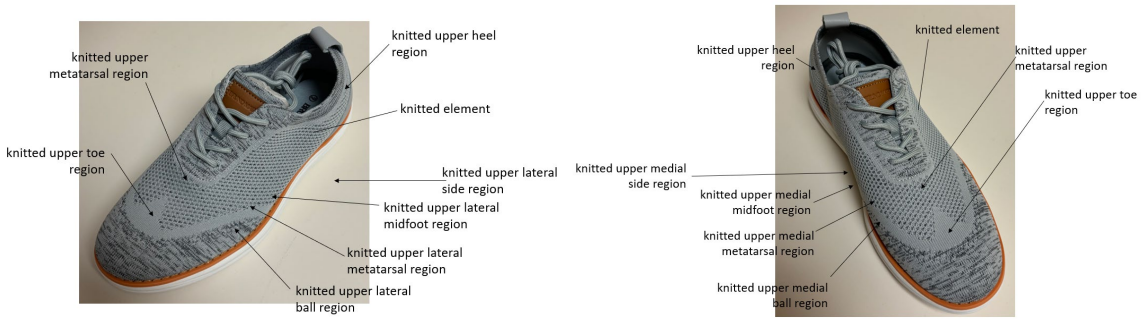
the upper toe region and the second area is at least in the upper lateral and medial metatarsal regions.

attaching the sole to the upper;

51. The [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers have a sole attached to an upper:

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

52. The [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers have an upper toe region that is seamlessly knitted with the upper medial and lateral ball regions:



the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

53. As shown above, the upper medial and lateral ball regions of the [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers are seamlessly knitted with the upper metatarsal region.

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

54. As shown above, the upper metatarsal region of the [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers is seamlessly knitted with the upper lateral and medial midfoot regions.

the first and second areas being knitted during the knitting step.

55. As shown above, the first and second areas of the [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers are knitted.

56. Accordingly, upon information and belief, the [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers are manufactured via the method of claim 21 of the '511 patent.

57. As a result of Defendants' infringement of the '511 patent, Cole Haan has suffered, and continues to suffer, economic harm as a result of Defendants' infringement in an amount to be proven at trial.

58. Moreover, Cole Haan has been and will continue to be irreparably harmed by Defendants' infringements of the '511 patent.

59. Cole Haan has no adequate remedy at law for Defendants' infringement of the '511 patent.

60. On information and belief, Defendants' infringements of the '511 patent will continue unless enjoined by this Court.

COUNT II - Patent Infringement Under 35 U.S.C. § 271 of the '163 Patent ([MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords)

61. Cole Haan re-alleges and incorporates by reference the above allegations as if fully set forth herein.

62. Defendants, without authorization from Cole Haan, have made, used, offered for sale, sold, and/or imported into the United States, and continue to make, use, offer for sale, sell, and/or import into the United States, shoes that infringe at least claim 1[5] of the '163 patent, including at least the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords, as set forth below.

Claim 1

1. A shoe comprising:

63. As set forth above with respect to the '511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords are each a shoe.

a knit upper;

64. As set forth above with respect to the '511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford

[5] Cole Haan reserves the right to assert infringement of other claims of the '163 patent in accordance with this Court's Local Patent Rules.

Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each comprise a knit upper.

a sole secured to the upper;

65. As set forth above with respect to the '511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each comprise a sole secured to the upper.

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting process, the knitted []upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions;

66. As set forth above with respect to the '511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords each have the claimed regions and the knitted element of the respective shoes have a wingtip pattern in the claimed regions.

the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary

of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the wingtip pattern comprising the boundary line, the boundary line having a medial boundary line and a lateral boundary line, the medial boundary line comprising a wing-shaped curved line having a medial side portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the lateral boundary line comprising a wing-shaped curved line having a lateral side portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the rearwardly extending central portion of the medial boundary line converging toward the rearwardly extending central portion of the lateral boundary line.

67. The [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men’s Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords each have the claimed first and second areas.

68. Accordingly, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe, [KnitFlex Breeze+] Men's Mesh Wingtip Oxford Sneakers, and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords embody every limitation of at least claim 1 of the '163 patent.

69. As a result of Defendants' infringement of the '163 patent, Cole Haan has suffered, and continues to suffer, economic harm as a result of Defendants' infringement in an amount to be proven at trial.

70. Moreover, Cole Haan has been and will continue to be irreparably harmed by Defendants' infringements of the '163 patent.

71. Cole Haan has no adequate remedy at law for Defendants' infringement of the '163 patent.

72. On information and belief, Defendants' infringements of the '163 patent will continue unless enjoined by this Court.

COUNT III - Patent Infringement Under 35 U.S.C. § 271 of the '262 Patent ([MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords)

73. Cole Haan re-alleges and incorporates by reference the above allegations as if fully set forth herein.

74. Defendants, without authorization from Cole Haan, have made, used, offered for sale, sold, and/or imported into the United States, and continue to make, use, offer for sale, sell, and/or import into the United States, shoes that infringe at least claims 1[6] of the '262 patent, including at least the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords, as set forth below.

Claim 1 ([MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords)

1. **A method of manufacturing an article of footwear having a knit upper and a sole, the method comprising:**

75. As set forth above with respect to the '511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men's Lightweight Mesh Casual Oxfords are each an article of footwear having a knit upper and sole.

knitting with a knitting machine to form a knitted element of the knit upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel

[6] Cole Haan reserves the right to assert infringement of other claims of the '262 patent in accordance with this Court's Local Patent Rules.

region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, a knitted upper toe region, a knitted upper lateral side region including the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region, and the knitted upper lateral ball region, a knitted upper medial side region including the knitted upper medial midfoot region, the knitted upper medial metatarsal region, and the knitted upper medial ball region, a first area of a jersey stitch knit being at least in the knitted upper toe region, and a second area of a pointelle stitch knit being at least in the knitted upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, and a line of broguing adjacent the boundary line; and

attaching the sole to the knit upper;

76. As set forth above with respect to the ’511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords each have the regions recited in claim 1 of the ’262 patent.

77. Likewise, as set forth above with respect to the ’163 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords comprise the first and second regions recited in claim 1 of the ’262 patent.

78. The first and second areas of the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords also define a boundary line between the first and second areas and have a line of broguing adjacent the boundary line.

the knitted upper toe region being seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting step,

79. As set forth above with respect to the ’511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh

Casual Oxfords each have the knitted upper to region being seamlessly knitted with the upper medial and lateral ball regions.

the knitted upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step,

80. As set forth above with respect to the ’511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords each have the knitted upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region.

the knitted upper metatarsal region being seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting step, and

81. As set forth above with respect to the ’511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords each have the knitted upper metatarsal region being seamlessly knitted with the knitted upper lateral and medial midfoot regions.

the first and second areas being knitted during the knitting step.

82. As set forth above with respect to the ’511 patent, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords each have a first and second area that is knitted.

83. Accordingly, upon information and belief, the [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoe and [KnitFlex SmartCraft-] Men’s Lightweight Mesh Casual Oxfords are manufactured via the method of claim 1 of the ’262 patent.

84. As a result of Defendants’ infringement of the ’262 patent, Cole Haan has suffered, and continues to suffer, economic harm as a result of Defendants’ infringement in an amount to be proven at trial.

85. Moreover, Cole Haan has been and will continue to be irreparably harmed by Defendants' infringements of the '262 patent.

86. Cole Haan has no adequate remedy at law for Defendants' infringement of the '262 patent.

87. On information and belief, Defendants' infringements of the '262 patent will continue unless enjoined by this Court.

COUNT IV - Patent Infringement Under 35 U.S.C. § 271 of the '969 Patent ([MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes)

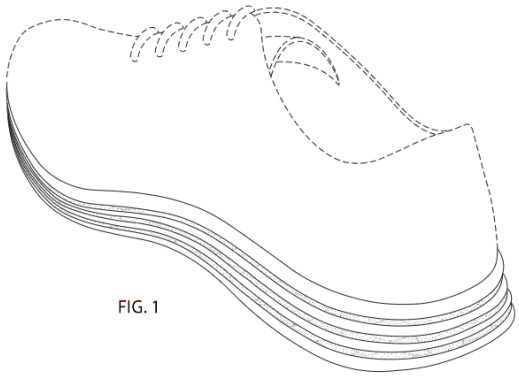
88. Cole Haan re-alleges and incorporates by reference the above allegations as if fully set forth herein.

89. Defendants, without authorization from Cole Haan, have made, used, offered for sale, sold, and/or imported into the United States, and continue to make, use, offer for sale, sell, and/or import into the United States, shoes having designs that infringe the '969 Patent, including at least the [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes.

90. Defendants directly infringe the '969 patent in violation of 35 U.S.C. § 271(a) by making, using, offering for sale, selling and/or importing the [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes, because in the eye of an ordinary observer, giving such attention as a purchaser usually gives, such products are substantially the same as the '969 patent, since the resemblance between the two is such as to deceive the ordinary purchaser, inducing the observer to purchase one supposing it to be the other.

91. The aforementioned resemblance between such products and the ’969 patent is apparent when comparing the similarities in the overall claimed design of the ’969 patent and the design of the [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes, as shown in the side-by-side comparison of figures of the ’969 patent and the such products.

92. The below chart is a side-by-side comparison of the figures of the ’969 patent to the [MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers, [MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers, and [MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes.

Cole Haan’s D768,969[7]	**[MaxFlex SuiteCraft] Men's Casual Wingtip Dress Sneakers**
	

[7] As set forth in the ’969 patent, “The broken lines are for the purpose of illustrating environmental structure; the broken lines form no part of the claimed design.”

FIG. 2

FIG. 3

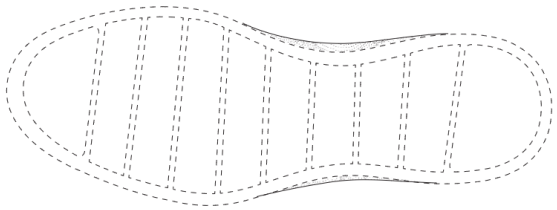


FIG. 4

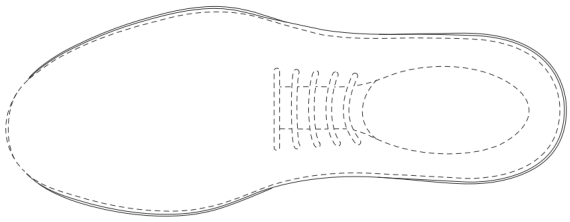


FIG. 5

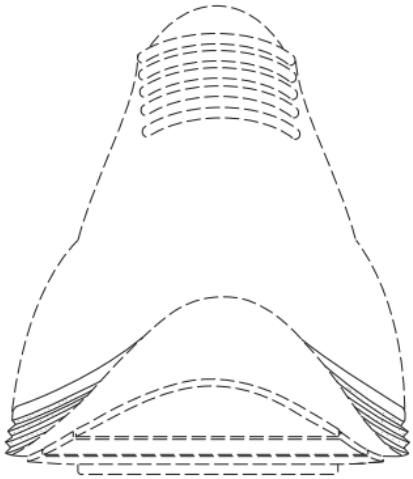


FIG. 6

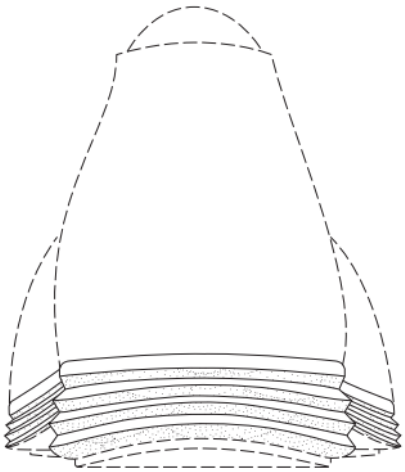
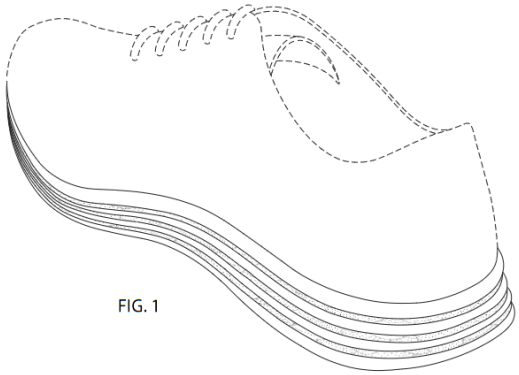
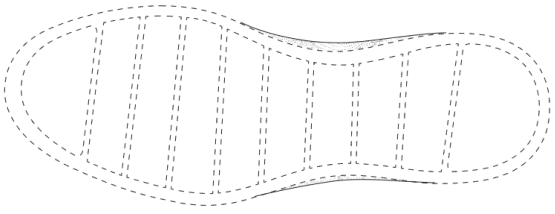


FIG. 7

Cole Haan's D768,969	[MaxFlex SuiteCraft-] Men's Business Casual Oxford Sneakers
 FIG. 1	
FIG. 2	
FIG. 3	
 FIG. 4	

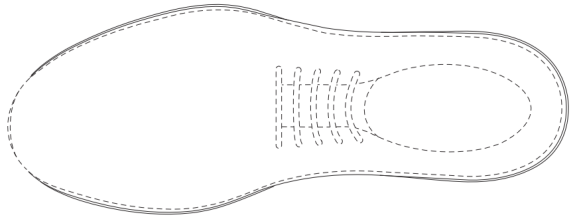


FIG. 5

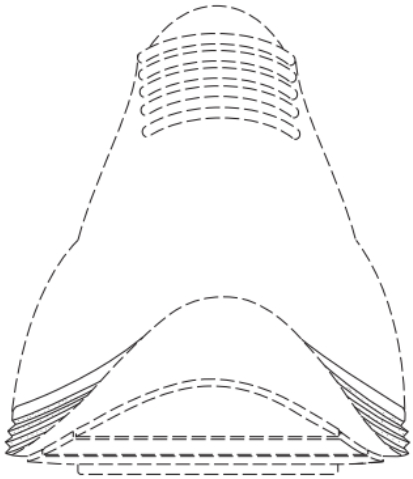


FIG. 6

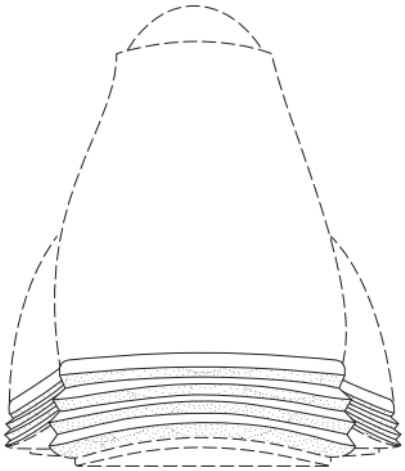
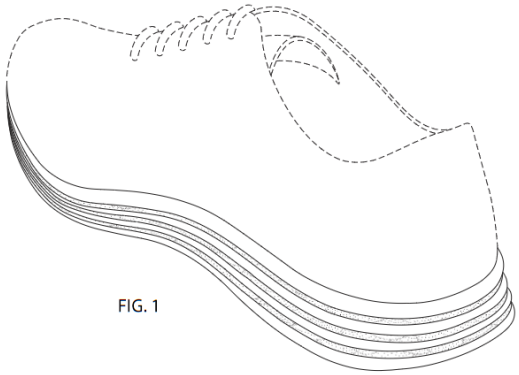
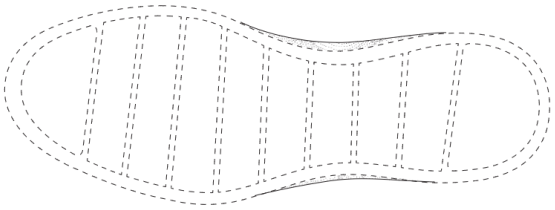


FIG. 7

Cole Haan's D768,969	[MaxFlex SuiteCraft+] Men's Smart Casual Knit Oxford Shoes
 FIG. 1	
FIG. 2	
FIG. 3	
 FIG. 4	

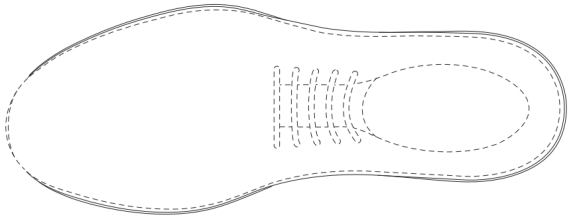


FIG. 5

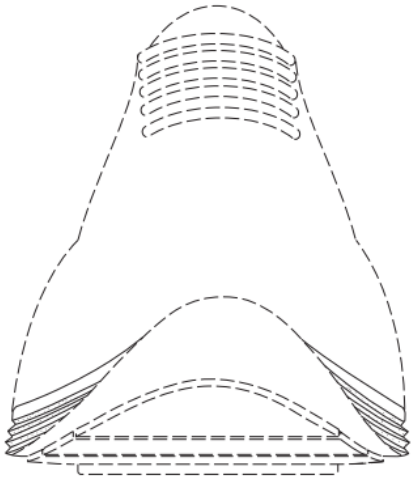


FIG. 6

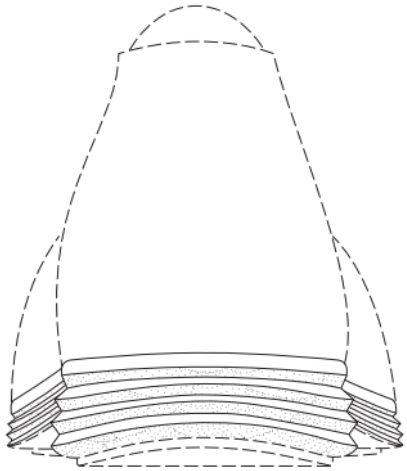


FIG. 7

93. Cole Haan has suffered, and continues to suffer, economic harm as a result of Defendants' infringements in an amount to be proven at trial.

94. Cole Haan has been and will continue to be irreparably harmed by Defendants' infringements of the '969 patent.

95. Cole Haan has no adequate remedy at law for Defendants' infringement of the '969 patent.

96. On information and belief, Defendants' infringements of the '969 patent will continue unless enjoined by this Court.

JURY DEMAND

97. Pursuant to Federal Rule of Civil Procedure 38(b), Cole Haan demands a trial by jury of all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Cole Haan prays for judgment against Defendants as follows:

A. A judgment and order that Defendants have infringed the Asserted Patents by making, using, offering to sell, selling, and/or importing the Accused Products into the United States;

B. A judgment and order permanently enjoining Defendants and their affiliates, officers, agents, employees, attorneys, and all other persons acting in concert with Defendants, from infringing the Asserted Patents;

C. A judgment and order that Defendants' infringements of the Asserted Patents have been willful;

D. A judgment and order requiring Defendants to pay Cole Haan damages adequate to compensate Cole Haan for Defendants' infringements of the Asserted Patents pursuant to 35 U.S.C. § 284, or the total profit made by Defendants from its infringements of the Asserted Patents pursuant to 35 U.S.C. § 289;

E. A judgment and order requiring Defendants to pay Cole Haan supplemental damages or profits for any continuing post-verdict infringement up until entry of the final judgment, with an accounting, as needed;

F. A judgment and order requiring Defendants to pay Cole Haan increased damages up to three times the amount found or assessed pursuant to 35 U.S.C. § 284;

G. A judgment and order requiring Defendants to pay Cole Haan pre-judgment and post-judgment interest on any damages or profits awarded;

H. A determination that this action is an exceptional case pursuant to 35 U.S.C. § 285;

I. An award of Cole Haan's attorneys' fees for bringing and prosecuting this action;

J. An award of Cole Haan's costs and expenses incurred in bringing and prosecuting this action; and

K. Such further and additional relief as this Court deems just and proper.

Top Glory - Ex. 1057, Page 00034

Dated: January 30, 2025

Respectfully submitted,

By: /s/ Steven F. Gooby

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Attorneys for Plaintiff Cole Haan LLC

Ex. A

US010327511B2

(12) **United States Patent**
Boys et al.

(10) **Patent No.: US 10,327,511 B2**
(45) **Date of Patent: Jun. 25, 2019**

(54) **SHOE HAVING KNIT WINGTIP UPPER**

(71) Applicant: **Cole Haan LLC**, New York, NY (US)

(72) Inventors: **Jack Boys**, New York, NY (US); **Ann Bono**, New York, NY (US); **Aubert Shepherd**, Greenland, NH (US); **Mattias Verfl**, Brooklyn, NY (US)

(73) Assignee: **COLE HAAN LLC**, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 83 days.

(21) Appl. No.: **15/205,672**

(22) Filed: **Jul. 8, 2016**

(65) **Prior Publication Data**

US 2018/0008006 A1 Jan. 11, 2018

(51) **Int. Cl.**

D04B 1/10	(2006.01)
A43B 23/02	(2006.01)
A43B 23/04	(2006.01)
D04B 1/22	(2006.01)
D04B 1/24	(2006.01)
A43B 1/04	(2006.01)

(52) **U.S. Cl.**

CPC ***A43B 23/0245*** (2013.01); ***A43B 1/04*** (2013.01); ***A43B 23/0205*** (2013.01); ***A43B 23/042*** (2013.01); ***D04B 1/104*** (2013.01); ***D04B 1/22*** (2013.01); ***D04B 1/24*** (2013.01); *D10B 2401/041* (2013.01); *D10B 2403/032* (2013.01); *D10B 2501/043* (2013.01)

(58) **Field of Classification Search**

CPC .. D04B 1/10; D04B 1/104; D04B 1/24; A43B 23/0245; A43B 23/04; A43B 23/042

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D97,783	S *	12/1935	Peterson	D2/945
2,312,078	A *	2/1943	Crannell	A43B 1/0027 36/45
D293,386	S *	12/1987	Kelley	D2/969
D394,739	S *	6/1998	Carlson	D2/906
D401,398	S *	11/1998	Carlson	D2/969
6,910,288	B2 *	6/2005	Dua	A43B 1/04 36/45
7,347,011	B2 *	3/2008	Dua	A43B 1/04 36/45
2012/0255201	A1	10/2012	Little	
2014/0310985	A1	10/2014	Tran et al.	
2015/0342285	A1	12/2015	Huffman et al.	

FOREIGN PATENT DOCUMENTS

KR	10-1367445	B1	2/2014

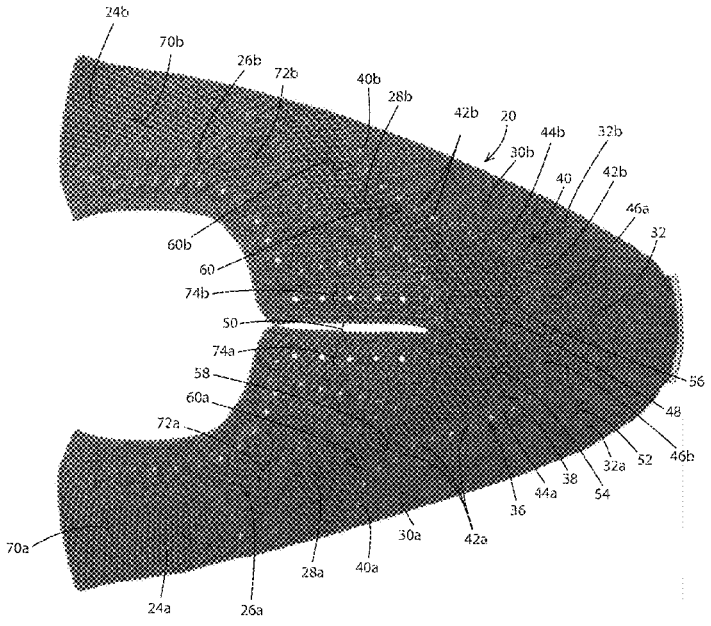
* cited by examiner

Primary Examiner — Danny Worrell
Assistant Examiner — Larry D Worrell, Jr.
(74) *Attorney, Agent, or Firm* — Thompson Coburn LLP

(57) **ABSTRACT**

A shoe includes a knit upper and a sole secured to the upper. The knit upper has a wingtip pattern knit into the knit upper.

23 Claims, 6 Drawing Sheets



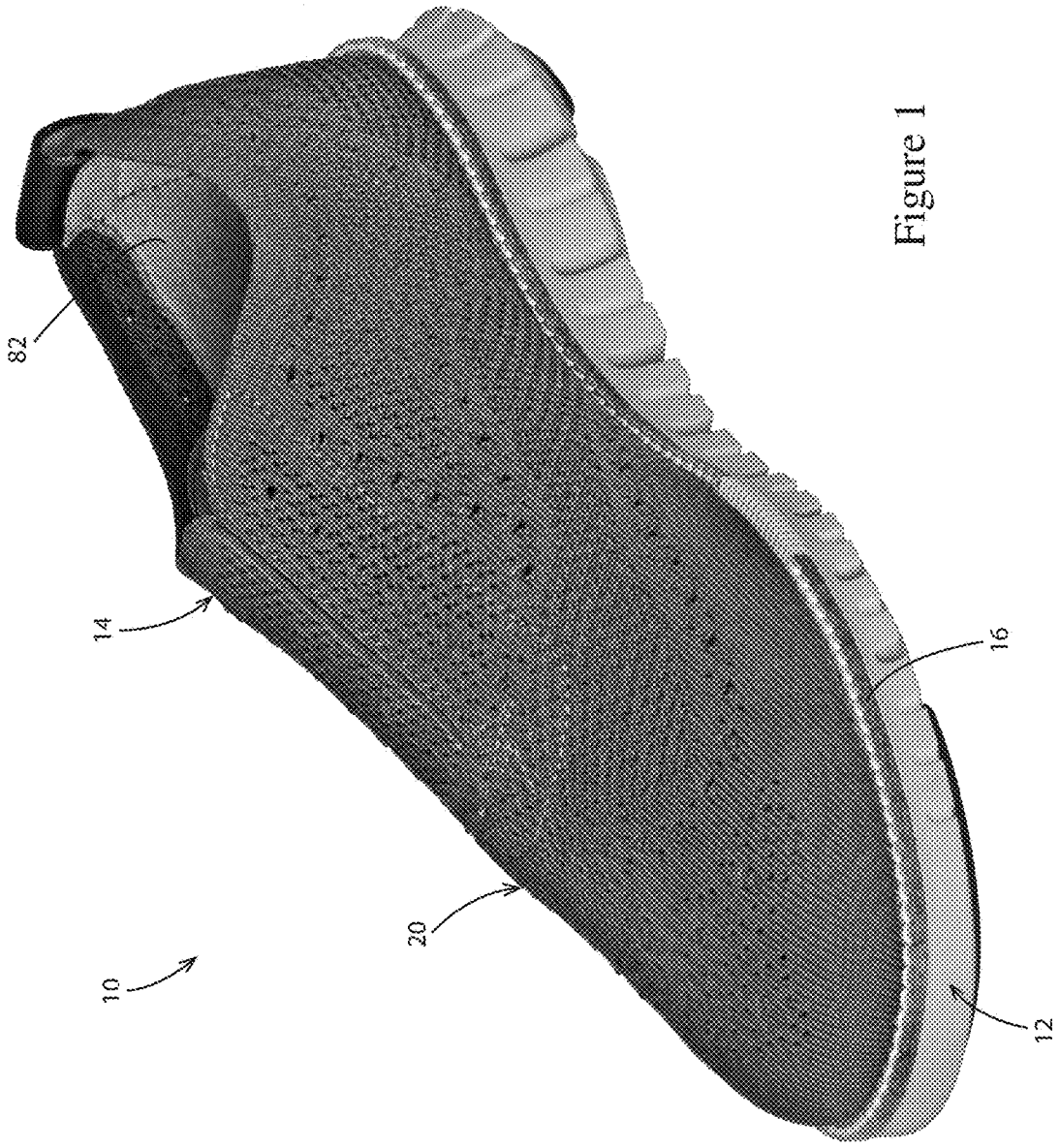
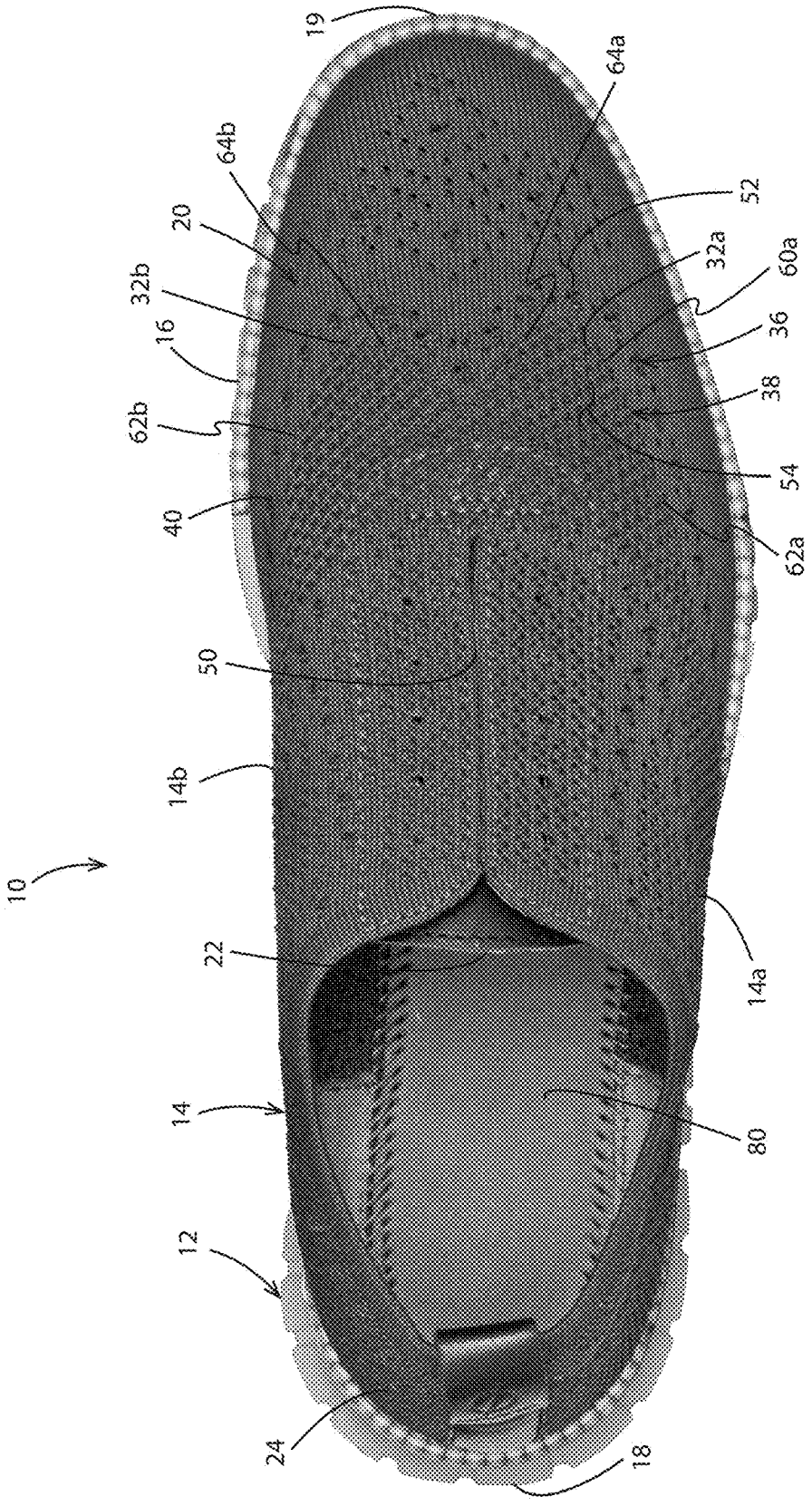


Figure 1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14a
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Figure 2

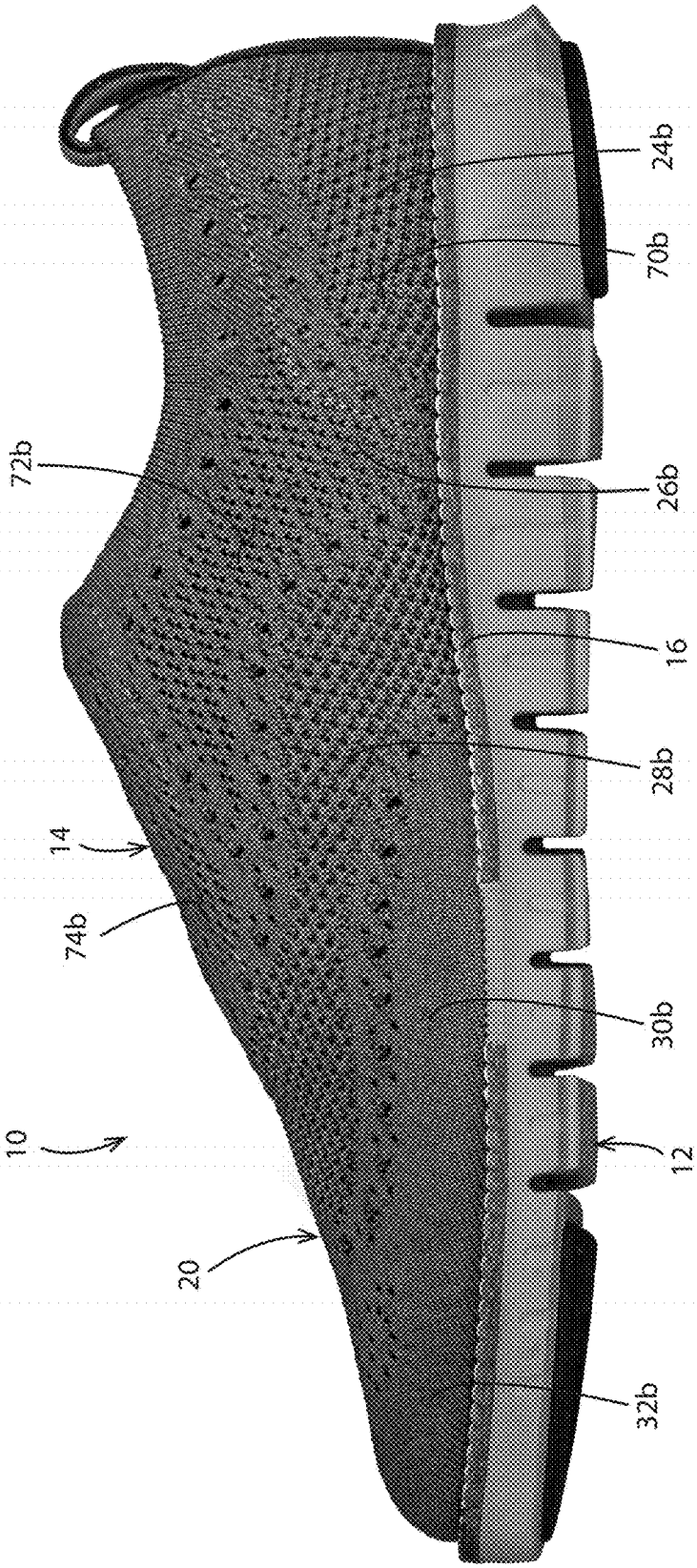


Figure 3

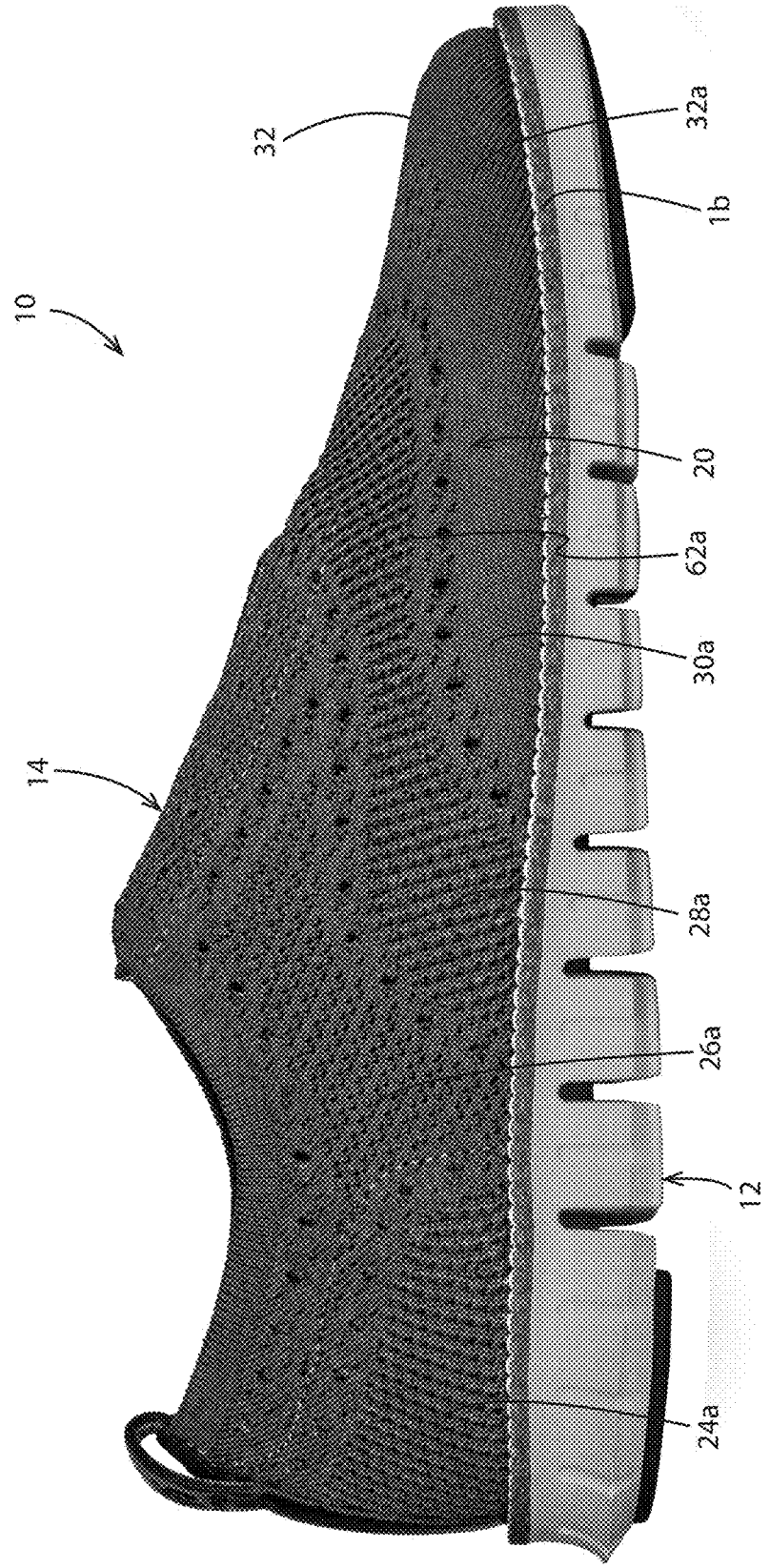
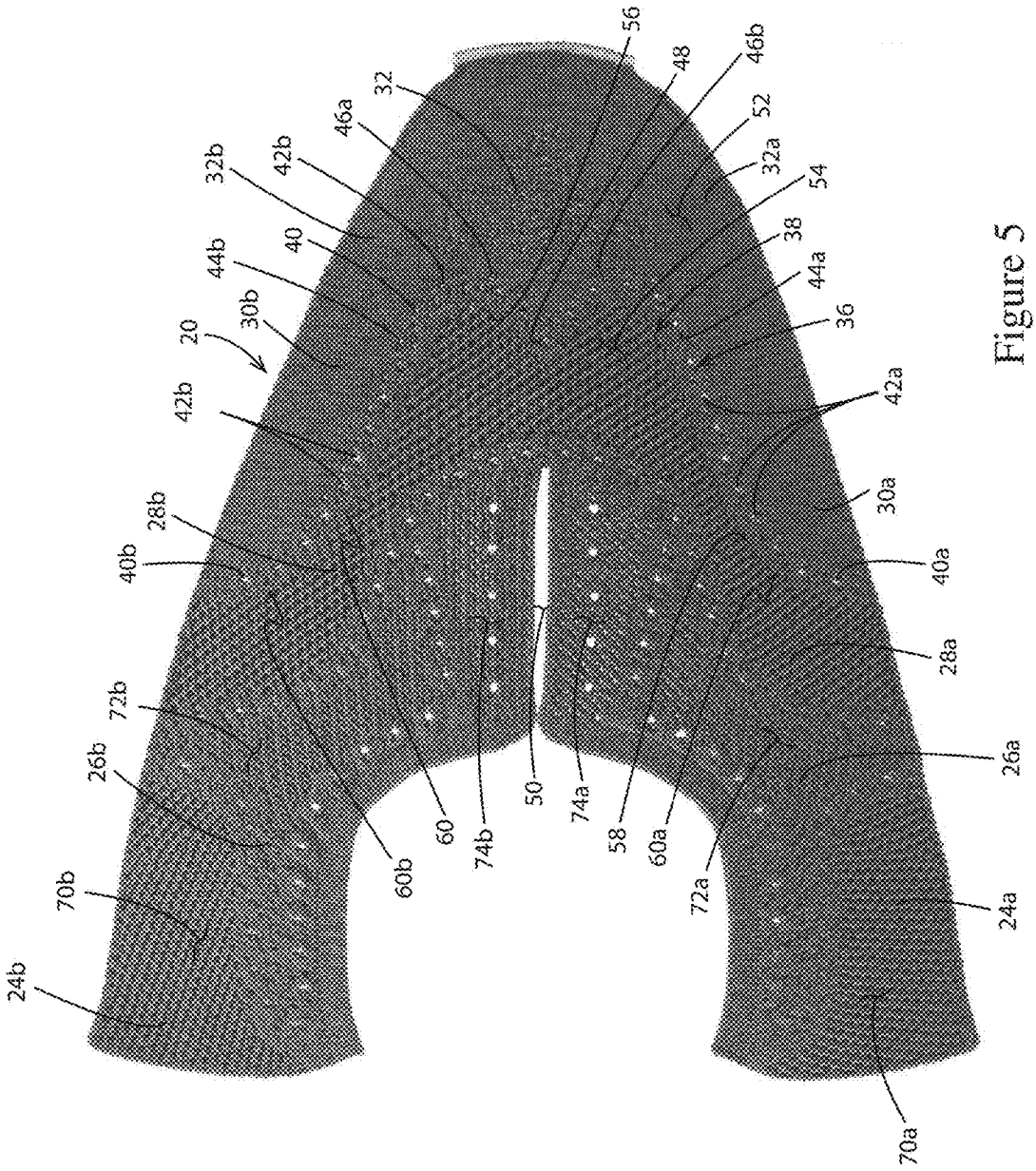


Figure 4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42b
30a
28b
40a
40b
28a
72b
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74b
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72a
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70b
24b
70a

Figure 5

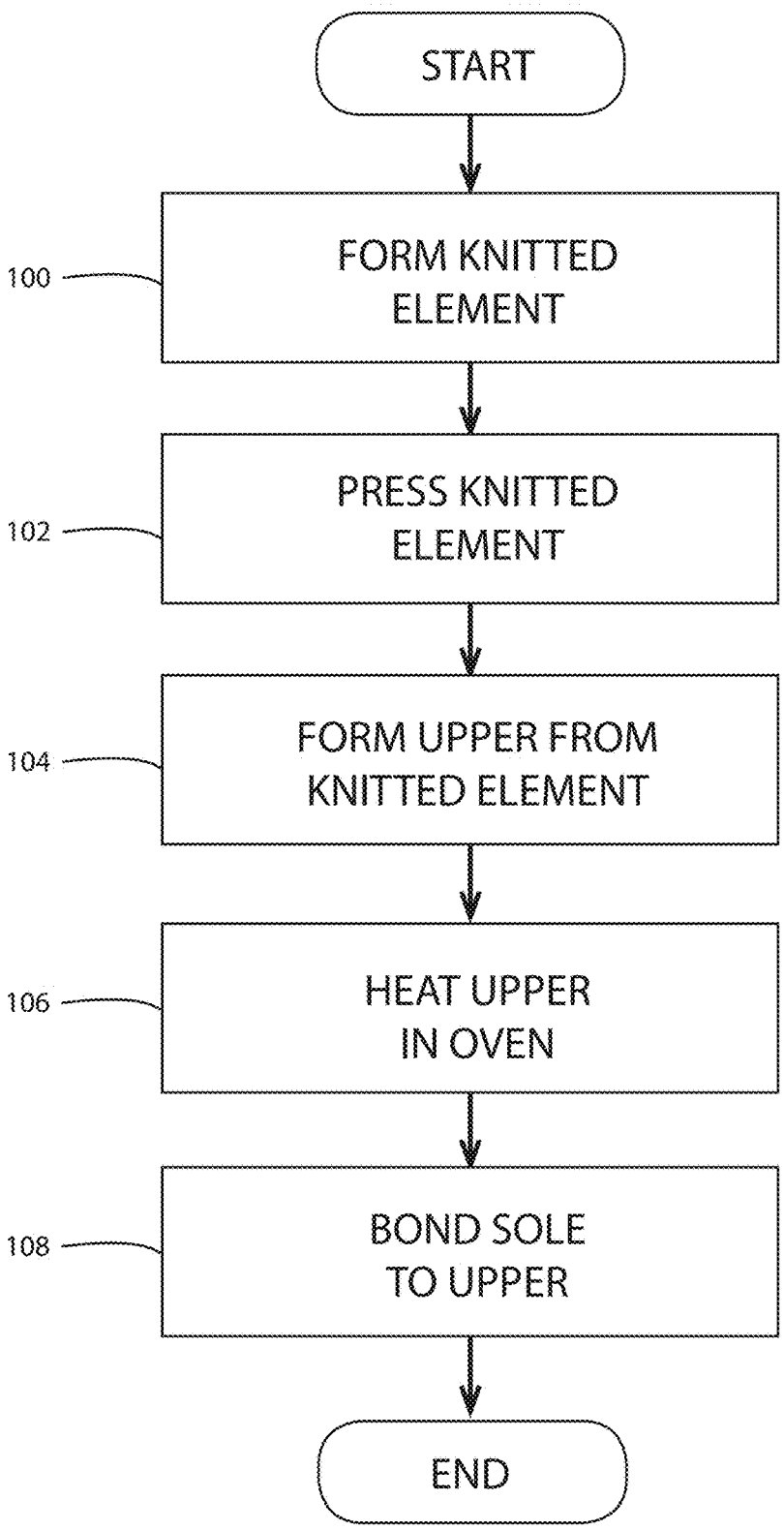
START
100
FORM KNITTED ELEMENT
102
PRESS KNITTED ELEMENT
104
FORM UPPER FROM KNITTED ELEMENT
106
HEAT UPPER IN OVEN
108
BOND SOLE TO UPPER
END

Figure 6

SHOE HAVING KNIT WINGTIP UPPER

CROSS-REFERENCE TO RELATED APPLICATIONS

Not Applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable.

APPENDIX

Not Applicable.

BACKGROUND OF THE INVENTION

Field of the Invention

This invention pertains to shoes having knit uppers.

SUMMARY

One aspect of the invention is a shoe comprising a knit upper and a sole secured to the upper. The knit upper has a knitted element. The knitted element is formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The upper has a knitted upper lateral side region and a knitted upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting process. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting process. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process. The knitted element includes a wingtip pattern. The wingtip pattern comprises portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions. The upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively are knitted with the wingtip pattern during the knitting process.

Another aspect of the invention is a shoe comprising a knit upper and a sole secured to the upper. The knit upper has a knitted element formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The upper has a knitted upper lateral side region and a knitted upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting process. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting process. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process. The knitted element includes a line of broguing. The upper toe region is knitted with the line of broguing during the knitting process. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area.

Another aspect of the invention is a method of manufacturing an upper for an article of footwear. The method comprises knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The knitted element includes a line of broguing. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting step. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting step. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step. The upper toe region is knitted with the line of broguing during the knitting step. The first and second areas are knitted during the knitting step.

Another aspect of the invention is a method of manufacturing an article of footwear having a knitted upper and a sole. The method comprises knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region,

a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The knitted element comprises a first area of a jersey stitch knit and a second area of a pointelle stitch knit. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The method further comprises attaching the sole to the upper. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting step. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting step. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step. The first and second areas are knitted during the knitting step.

Further features and advantages, as well as the operation, are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an exemplary embodiment of a shoe of the present disclosure.

FIG. **2** is a top plan view of the shoe of FIG. **1**.

FIG. **3** is a medial side view of the shoe of FIG. **1**.

FIG. **4** is a lateral side view of the shoe of FIG. **1**.

FIG. **5** is a plan view of a knitted element to be formed into a part of an upper of the shoe of FIG. **1**.

FIG. **6** is a flow diagram of a method of making the shoe of FIG. **1** according to an exemplary embodiment of the present disclosure.

Reference numerals in the written specification and in the figures indicate corresponding items.

DETAILED DESCRIPTION

An embodiment of a shoe in accordance with the present invention is indicated by reference numeral **10** in FIGS. **1-4**. The shoe **10** comprises a sole, generally indicated at **12**, a knit upper, generally indicated at **14**, and a welt, generally indicated at **16**. The sole **12** and welt **16** are secured to the upper **14**. The shoe **10** extends forward from a heel end **18** to a toe end **19**. The knit upper **14** has a knitted element **20** and a tongue **22** secured to the knitted element. The knitted element **20** is shown alone in FIG. **5** and shown as part of the assembled shoe in FIGS. **1-5**.

The knitted element **20** is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element **20** comprises a knitted upper heel region **24**, a knitted upper lateral midfoot region **26***a*, a knitted upper medial midfoot region **26***b*, a knitted upper metatarsal region **28**, a knitted upper lateral ball region **30***a*, a knitted upper medial ball region **30***b*, and a knitted upper toe region **32**. The upper heel region **24** includes a knitted upper lateral heel region **24***a* and a knitted upper medial heel region **24***b*. The upper metatarsal region **28** includes a knitted upper lateral metatarsal region **28***a* and a knitted upper medial metatarsal region **28***b*. The knitted upper toe region **32** includes a knitted upper lateral toe region **32***a* and a knitted upper medial toe region **32***b*. The upper **14** has a knitted upper lateral side region **14***a* and a knitted upper medial side region **14***b*. The upper lateral side region **14***a* includes the upper lateral heel region **24***a*, the upper lateral midfoot region **26***a*, the upper lateral metatarsal region **28***a*, the upper lateral ball region **30***a*, and the upper lateral toe region **32***a*. The upper medial side region **14***b* includes the upper medial heel region **24***b*, the upper medial midfoot region **26***b*, the upper medial metatarsal region **28***b*, the upper medial ball region **30***b*, and the upper medial toe region **32***b*. The upper toe region **32** is seamlessly knitted with the upper lateral and medial ball regions **30***a*, **30***b* during the knitting process. The upper lateral and medial ball regions **30***a*, **30***b* are seamlessly knitted with the upper lateral and medial metatarsal regions **28***a*, **28***b* during the knitting process. The upper lateral and medial metatarsal regions **28***a*, **28***b* are seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting process.

The knitted element includes a first wingtip pattern, generally indicated at **36**, and a second wingtip pattern, generally indicated at **38**. Each of the first and second wingtip patterns **36**, **38** comprises portions of at least the upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the first and second wingtip patterns **36**, **38** during the knitting process.

The first wingtip pattern **36** comprises a line of broguing **40** comprising a lateral line of broguing **40***a* and a medial line of broguing **40***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the lateral and medial lines of broguing **40***a*, **40***b*. The lateral line of broguing **40***a* comprises a wing-shaped curved line of holes **42***a*. The lateral line of broguing **40***a* comprises a lateral side broguing portion **44***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central broguing portion **46***a* extending rearward from the upper toe region **32**. The lateral side broguing portion **44***a* and the central broguing portion **46***a* are each comprised of some of the holes **42***a* of the lateral line of broguing **40***a*. The medial line of broguing **40***b* comprises a wing-shaped curved line of holes **42***b*. The medial line of broguing **40***b* comprises a medial side broguing portion **44***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central broguing portion **46***b* extending rearward from the upper toe region **32**. The medial side broguing portion **44***b* and the central broguing portion **46***b* are each comprised of some of the holes **42***b* of the medial line of broguing **40***b*. The central broguing portions **46***a*, **46***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **48**. The upper **14** further comprises a throat **50**. The apex **48** points rearwardly toward the throat **50** of the upper **14**. Preferably, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are in the knitting element via the knitting process as opposed to being formed by removal of material such as by cutting or punching.

The knitted element **20** comprises a first area, generally indicated at **52**, of a first type of knit structure and a second area, generally indicated at **54**, of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area **52** is generally forward of the second area **54**. The first area **52** has a rear boundary **56** and the second area **54** has a forward boundary

58. The rear boundary **56** of the first area **52** and the forward boundary **58** of the second area **54** is coincident and coextensive with each other and define a boundary line **60** between the first and second areas **52**, **54**. The second wingtip pattern **38** comprises the boundary line **60**. The first wingtip pattern **36** is forward of and adjacent the second wingtip pattern **38**. Also, the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the boundary line **60**. As such the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the rear boundary **56** of the first area **52**, and adjacent the forward boundary **58** of the second area **54**. The boundary line **60** has a lateral boundary line **60***a* and a medial boundary line **60***b*. The lateral boundary line **60***a* comprises a wing-shaped curved line having a lateral side portion **62***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central portion **64***a* extending rearward from the upper toe region **32**. The medial boundary line **60***b* comprises a wing-shaped curved line having a medial side portion **62***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central portion **64***b* extending rearward from the upper toe region **32**. The central portions **64***a*, **64***b* of the lateral and medial boundary lines **60***a*, **60***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **66**. The apex **66** points rearwardly toward the throat **50** of the upper **14**.

The first type of knit structure (that is, the knit structure of the first area **52**) may be more tightly knit than the second type of knit structure (that is, the knit structure of the second area **54**). In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. The knitted element **20** may be knitted with one or more yarns, such as polyester yarns, nylon yarns, cotton yarns, and spandex yarns. In one embodiment, the knitted element **20** is knitted of polyester covered spandex yarn and hot melt yarn, such that of the finished knitted element, the polyester covered spandex yarn constitutes at least 50% by mass (and more preferably at least 60% by mass), and the hot melt yarn constitutes at least 15% by mass (and more preferably at least 20% by mass but not more than 30% by mass). The hot melt yarn is knitted with the polyester covered spandex yarn during the knitting process. Preferably, the polyester covered spandex yarn has a linear density of between about 120 denier and about 180 denier, and the hot melt yarn has a linear density of between about 80 denier and about 120 denier. In addition to the polyester covered spandex yarn and the hot melt yarn, the knitted element **20** may be knitted with stretch yarn, with the stretch yarn preferably constituting at least 5% by mass of the knitted upper. If stretch yarn is included, it is preferably limited (but need not be limited) to the topline area of the knitted element **20** to provide a stretch function primarily in the ankle region of the upper **14** of the shoe **10**. Preferably, the polyester covered spandex yarn includes a double layer of polyester. Also preferably, the stretch yarn is spandex yarn. In another embodiment, the knitted element **20** is formed by knitting hot melt yarn with polyester yarn during the knitting process such that polyester yarn constitutes at least 50% by mass of the knitted element and the hot melt yarn constitutes at least 15% by mass of the knitted element.

FIG. **6** is a flow diagram of a method of making the shoe **20** of FIGS. **1-5**. In step **100**, the knitted element **20** is formed via a knitting machine, such as a CNC knitting machine, as a unitary one-piece construction. During the knitting step **100**, the upper lateral and medial heel regions **24***a*, **24***b* are knitted, the upper lateral and medial midfoot regions **26***a*, **26***b* are knitted, the upper lateral and medial metatarsal regions **28***a*, **28***b* are knitted, the upper lateral and medial ball regions **30***a*, **30***b* are knitted, and the upper lateral and medial toe regions **32***a*, **32***b* are knitted. By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed separately and then sewn or bonded together. As such, the upper toe region **32** is seamlessly knitted with the upper medial and lateral ball regions **30***a*, **30***b* during the knitting step, the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region **28** during the knitting step, the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting step, and the upper lateral and medial midfoot regions are seamlessly knitted with the upper lateral and medial heel regions **24***a*, **24***b* during the knitting step.

The knitted element **20** is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area **52** is of the first type of knit structure (e.g., jersey stitch knit) and the second area **54** is of the second type of knit structure (e.g., pointelle stitch knit). Also, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are formed via the knitting step, as opposed to being formed via removal of material (e.g., punching, cutting, etc.) after the knitting step. As shown in FIG. **5**, the knitted element **20** also includes lateral and medial heel areas **70***a*, **70***b* of the second type of knit structure (e.g., pointelle stitch knit), lateral and medial midfoot areas **72***a*, **72***b* of the second type of knit structure (e.g., pointelle stitch knit), and lateral and medial eyestay areas **74***a*, **74***b* of the second type of knit structure (e.g., pointelle stitch knit). Broguing holes forming lines of broguing (the same or similar in form and construction to the lateral and medial lines of broguing **40***a*, **40***b*) are between the lateral heel area **70***a* and the lateral midfoot area **72***a*, between the lateral midfoot area and the lateral eyestay area **74***a*, between the lateral midfoot region and the second area **52**, between the lateral eyestay area and the second area, between the medial heel area **70***b* and the medial midfoot area **72***b*, between the medial midfoot area and the medial eyestay area **74***b*, between the medial midfoot region and the second area, and between the medial eyestay area and the second area.

After the knitted element **20** is knitted via the knitting step **100**, the knitted element is pressed with a hot press during a pressing step, indicated at reference number **102** in FIG. **6**.

During step **104**, the upper **14** is formed by attaching a strobel board **80** (see FIG. **2**)) to the knitted element **20**, attaching the tongue **22** to the knitted element, and attaching the upper lateral heel region **24***a* to the upper medial heel region **24***b*. A heel counter **82** (see FIG. **1**) may also be attached to the inner surface of the upper lateral and medial heel regions **24***a*, **24***b*. The upper **14** is then placed around a last at step **106**. Adhesive is applied to the underside of the strobel board **80**, and the upper **14** is passed via a conveyer through an oven (or heat tunnel). The oven heats the adhesive and also heats the hot melt yarn of the knitted element **20**. The heating and subsequent cooling of the hot melt yarn causes the hot melt yarn to affix to the other yarns (e.g., to the polyester yarn or polyester covered spandex yarn) so that the upper **14** conforms to the shape of the last. The sole **12** and welt **16** are bonded via the adhesive to the strobel board **80** and bottom periphery of the knitted element at step **108**.

An inner surface of the knitted element **20** (i.e., the surface facing the inside of the shoe **10**) may be lined or

unlined. In an unlined configuration, the inner surface of the knitted element **20** is devoid of a lining (other than the heel counter **82** or eyelet reinforcement adjacent the throat) and such inner surface of the knitted element defines at least a majority of a foot receiving cavity of the shoe. In a completely lined configuration, a lining is between the inner surface of the knitted element and the foot receiving cavity of the shoe such that the foot receiving cavity of the shoe is in part defined by the lining (instead of by the inner surface of the knitted element).

In view of the foregoing, it should be appreciated that the invention has several advantages over the prior art.

As various modifications could be made in the constructions and methods herein described and illustrated without departing from the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative rather than limiting. For example, the wedge shoe may be any type of wedge shoe, such as a wedge sandal, a wedge pump, an open-toe wedge, a platform wedge, etc. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims appended hereto and their equivalents

It should also be understood that when introducing elements of the present invention in the claims or in the above description of exemplary embodiments of the invention, the terms "comprising," "including," and "having" are intended to be open-ended and mean that there may be additional elements other than the listed elements. Additionally, the term "portion" should be construed as meaning some or all of the item or element that it qualifies. Moreover, use of identifiers such as first, second, and third should not be construed in a manner imposing any relative position or time sequence between limitations.

What is claimed is:

1. A shoe comprising:

a knit upper;

a sole secured to the upper;

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting process, the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions;

the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively being knitted with the wingtip pattern during the knitting process, the wingtip pattern comprising a medial line of broguing and a lateral line of broguing, the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively being knitted with the medial and lateral lines of broguing, the medial line of broguing comprising a wing-shaped curved line of holes having a medial side broguing portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the lateral line of broguing comprising a wing-shaped curved line of holes having a lateral side broguing portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the rearwardly extending central broguing portion of the medial line of broguing converging toward the rearwardly extending central broguing portion of the lateral line of broguing.

2. A shoe as set forth in claim **1** wherein the central broguing portions of the medial and lateral lines of broguing meet at a rearwardly pointing apex.

3. A shoe as set forth in claim **2** wherein the upper further comprises a throat, and wherein the apex points toward the throat.

4. A shoe as set forth in claim **1** wherein the knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the medial and lateral lines of broguing being adjacent a rear boundary of the first area, the medial and lateral lines of broguing being adjacent a forward boundary of the second area.

5. A shoe as set forth in claim **4** wherein the first type of knit structure is more tightly knit than the second type of knit structure.

6. A shoe as set forth in claim **4** wherein the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit.

7. A shoe as set forth in claim **1** wherein the knitted element comprises covered spandex yarn and hot melt yarn, the hot melt yarn being knitted with the covered spandex yarn during the knitting process.

8. A shoe as set forth in claim **7** wherein the hot melt yarns constitute at least 15% by mass of the knitted element.

9. A shoe as set forth in claim **8** wherein the covered spandex yarn constitute at least 50% by mass of the knitted element.

10. A shoe as set forth in claim **9** wherein the covered spandex yarn comprises polyester covered spandex yarn.

11. A shoe as set forth in claim **10** wherein the knitted element further comprises stretch yarn, the stretch yarn constituting at least 5% by mass of the knitted element.

12. A shoe as set forth in claim **1** wherein the knitted element comprises polyester yarn and hot melt yarn, the hot melt yarn being knitted with the polyester yarn during the knitting process.

13. A shoe as set forth in claim **7** wherein the covered spandex yarn has a linear density of between about 120

denier and about 180 denier, and wherein the hot melt yarn has a linear density of between about 80 denier and about 120 denier.

14. A shoe as set forth in claim **1** wherein the knitted element comprises hot melt yarn, the hot melt yarn constituting at least 15% by mass of the knitted element.

15. A shoe as set forth in claim **1** wherein the knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the wingtip pattern comprising the boundary line, the boundary line having a medial boundary line and a lateral boundary line, the medial boundary line comprising a wing-shaped curved line having a medial side portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the lateral boundary line comprising a wing-shaped curved line having a lateral side portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the rearwardly extending central portion of the medial boundary line converging toward the rearwardly extending central portion of the lateral boundary line.

16. A shoe as set forth in claim **15** wherein the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit.

17. A shoe comprising:

a knit upper;

a sole secured to the upper;

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting process, the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a line of broguing, the upper toe region being knitted with the line of broguing during the knitting process, the line of broguing comprising a line of holes, the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the line of broguing being adjacent a rear boundary of the first area, the line of broguing being adjacent a forward boundary of the second area.

18. A shoe as set forth in claim **17** wherein the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit.

19. A shoe as set forth in claim **18** wherein the first type of knit structure is more tightly knit than the second type of knit structure.

20. A method of manufacturing an upper for an article of footwear, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element including a line of broguing, the line of broguing comprising a line of holes, the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the line of broguing being adjacent a rear boundary of the first area, the line of broguing being adjacent a forward boundary of the second area;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the upper toe region being knitted with the line of broguing during the knitting step;

the first and second areas being knitted during the knitting step.

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot

region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

22. A method as set forth in claim **21** wherein the upper is knitted during the knitting step with at least first and second yarns, the first yarn being of a hot melt yarn, the second yarn being of a yarn other than a hot melt yarn.

23. A method as set forth in claim **22** further comprising:

placing the upper around a last;

applying heat to the upper while the upper is around the last to cause the hot melt yarn to affix to the second yarn.

* * * * *

Ex. B

US010443163B2

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Boys et al.

(10) **Patent No.: US 10,443,163 B2**
(45) **Date of Patent: *Oct. 15, 2019**

(54) **SHOE HAVING KNIT WINGTIP UPPER**

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(73) Assignee: **COLE HAAN LLC**, New York, NY (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/409,970**

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(65) **Prior Publication Data**

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Related U.S. Application Data

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(51) **Int. Cl.**

D04B 1/24	(2006.01)
A43B 1/04	(2006.01)
D04B 1/10	(2006.01)
A43B 23/04	(2006.01)
D04B 1/22	(2006.01)

(52) **U.S. Cl.**

CPC ***D04B 1/24*** (2013.01); ***A43B 1/04*** (2013.01); ***A43B 23/042*** (2013.01); ***D04B 1/104*** (2013.01); ***D04B 1/22*** (2013.01); *D10B 2501/043* (2013.01)

(58) **Field of Classification Search**

CPC .. D04B 1/10; D04B 1/104; D04B 1/24; A43B 23/0245; A43B 23/04; A43B 23/042

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D97,783	S	12/1935	Peterson
2,312,078	A	2/1943	Crannell
D293,386	S	12/1987	Kelley
D394,739	S	6/1998	Carlson
D401,398	S	11/1998	Carlson
6,910,288	B2	6/2005	Dua
7,347,011	B2	3/2008	Dua et al.
2012/0255201	A1	10/2012	Little
2014/0310985	A1	10/2014	Tran et al.
2015/0342285	A1	12/2015	Huffman et al.

FOREIGN PATENT DOCUMENTS

KR	10-1367445	B1	2/2014

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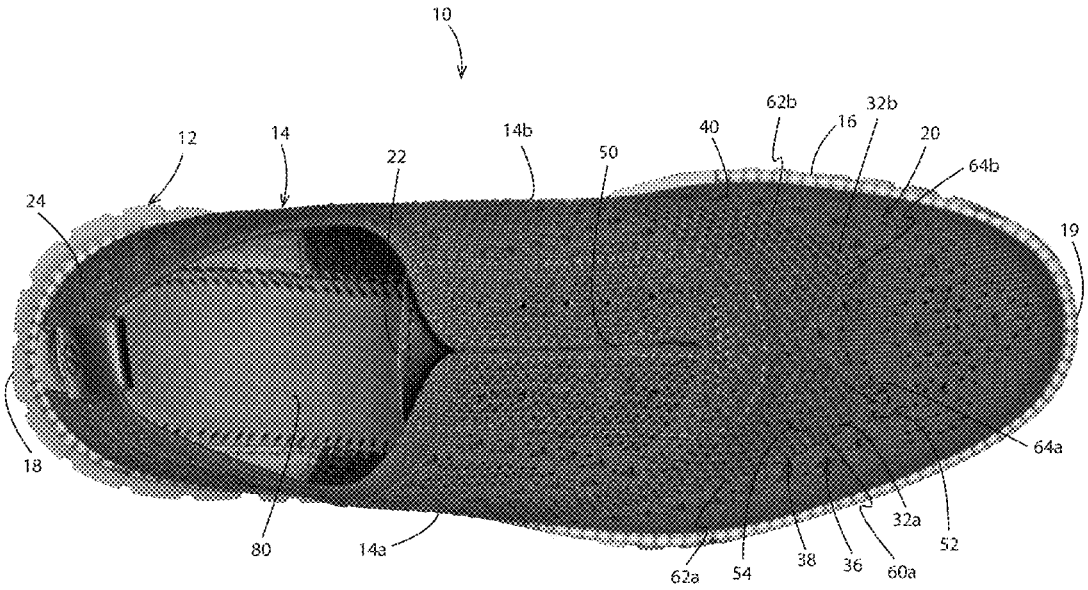
(74) *Attorney, Agent, or Firm* — Thompson Coburn LLP

(57) **ABSTRACT**

A shoe includes a knit upper and a sole secured to the upper. The knit upper has a wingtip pattern knit into the knit upper.

28 Claims, 6 Drawing Sheets



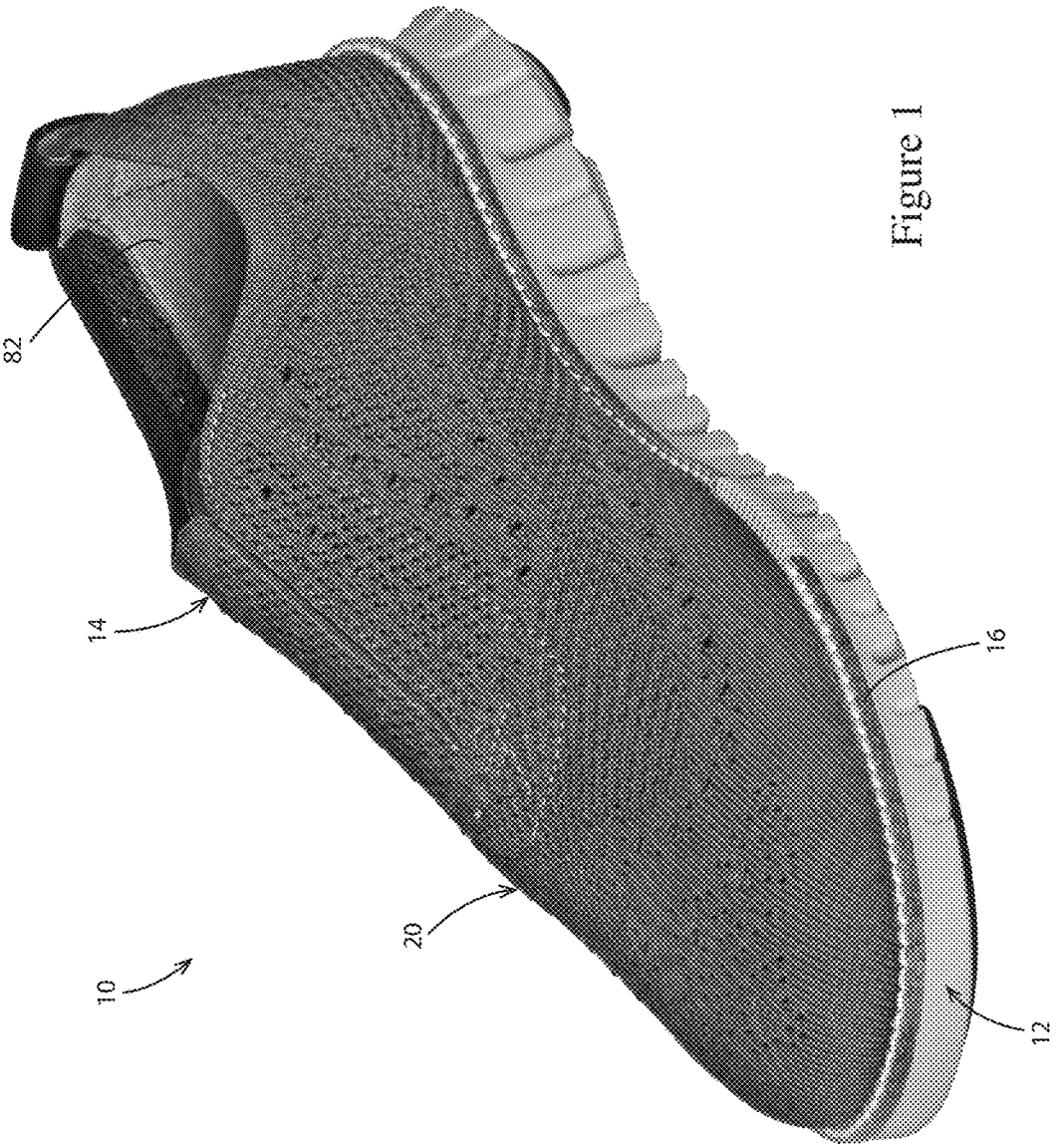
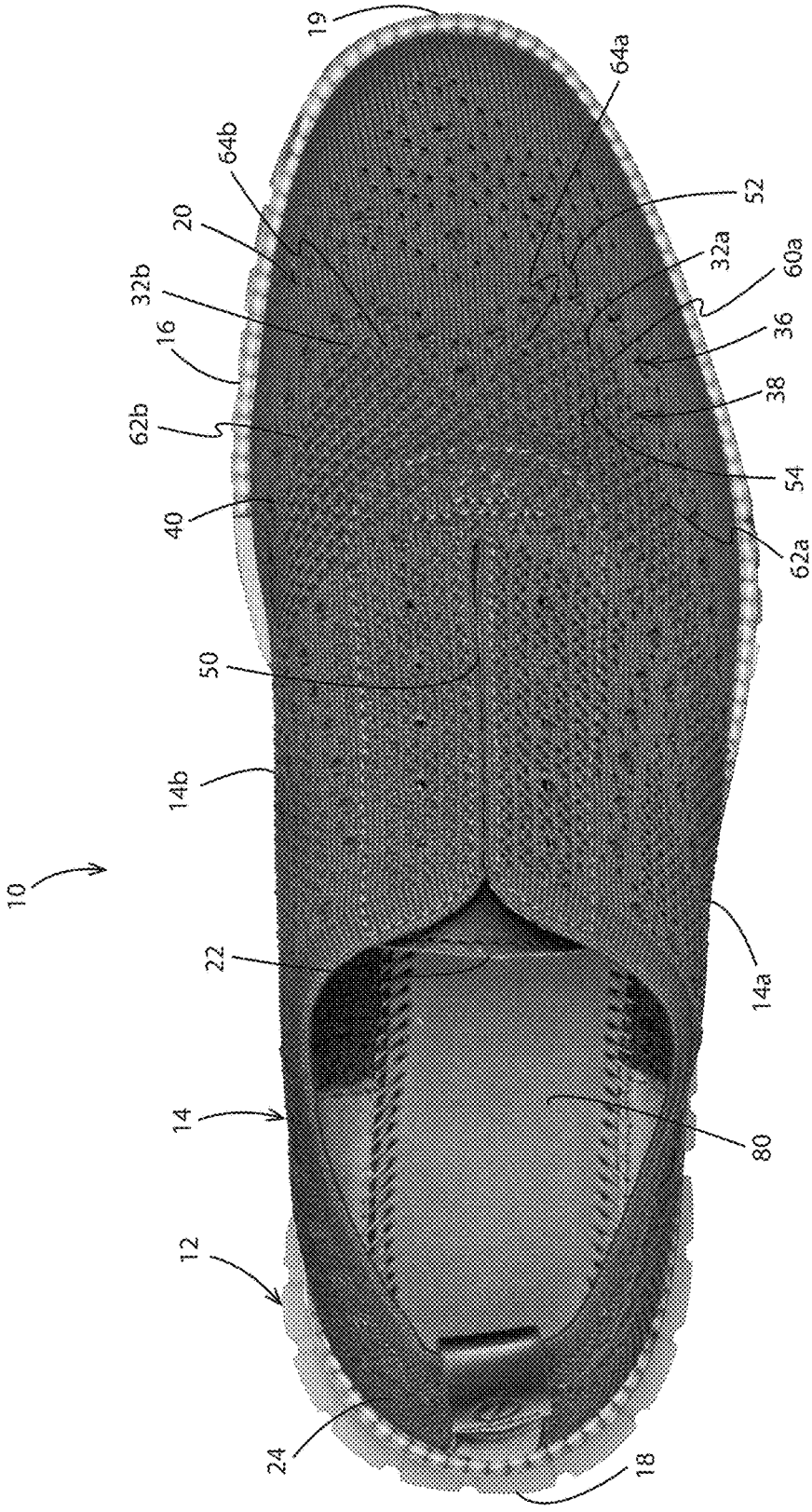


Figure 1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64b
52
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32a
60a
32b
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62a
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14b
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14a
14
80
12
24
18

Figure 2

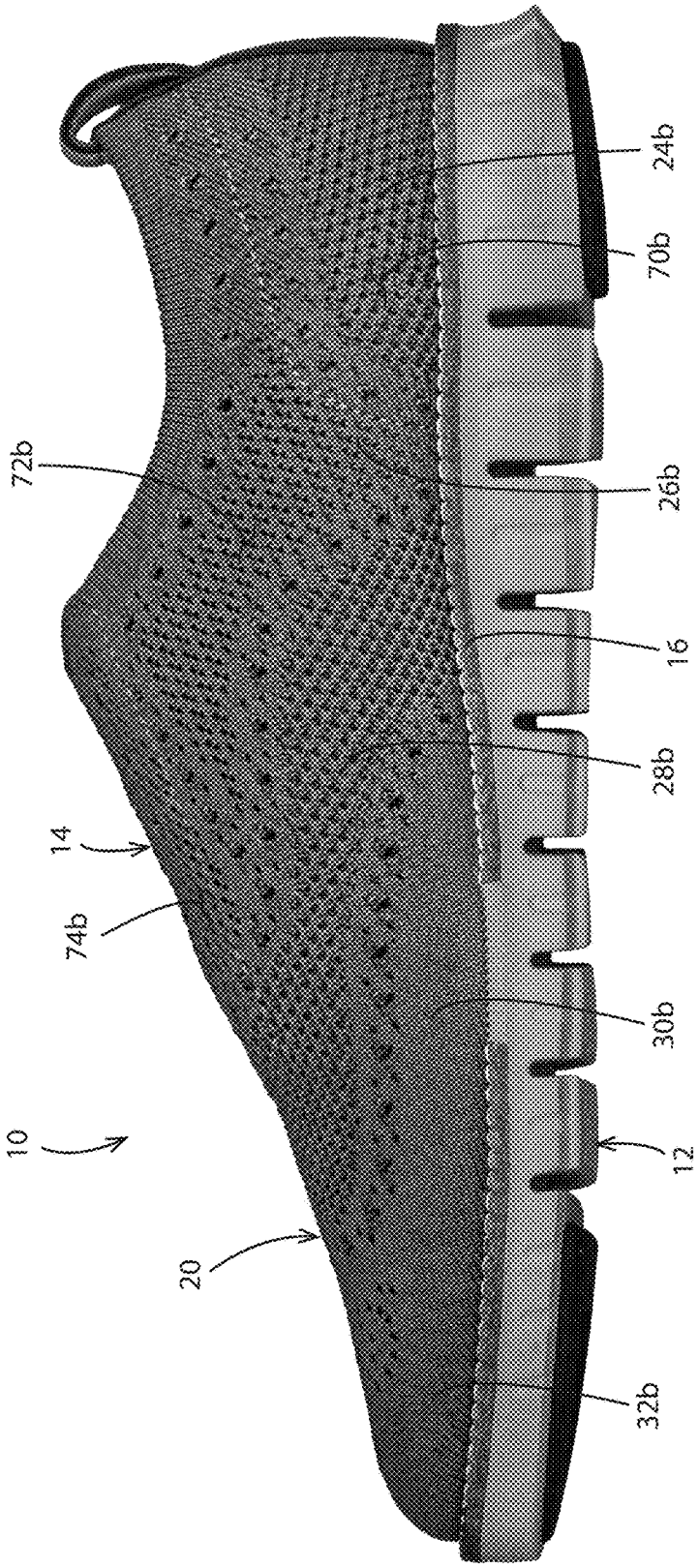


Figure 3

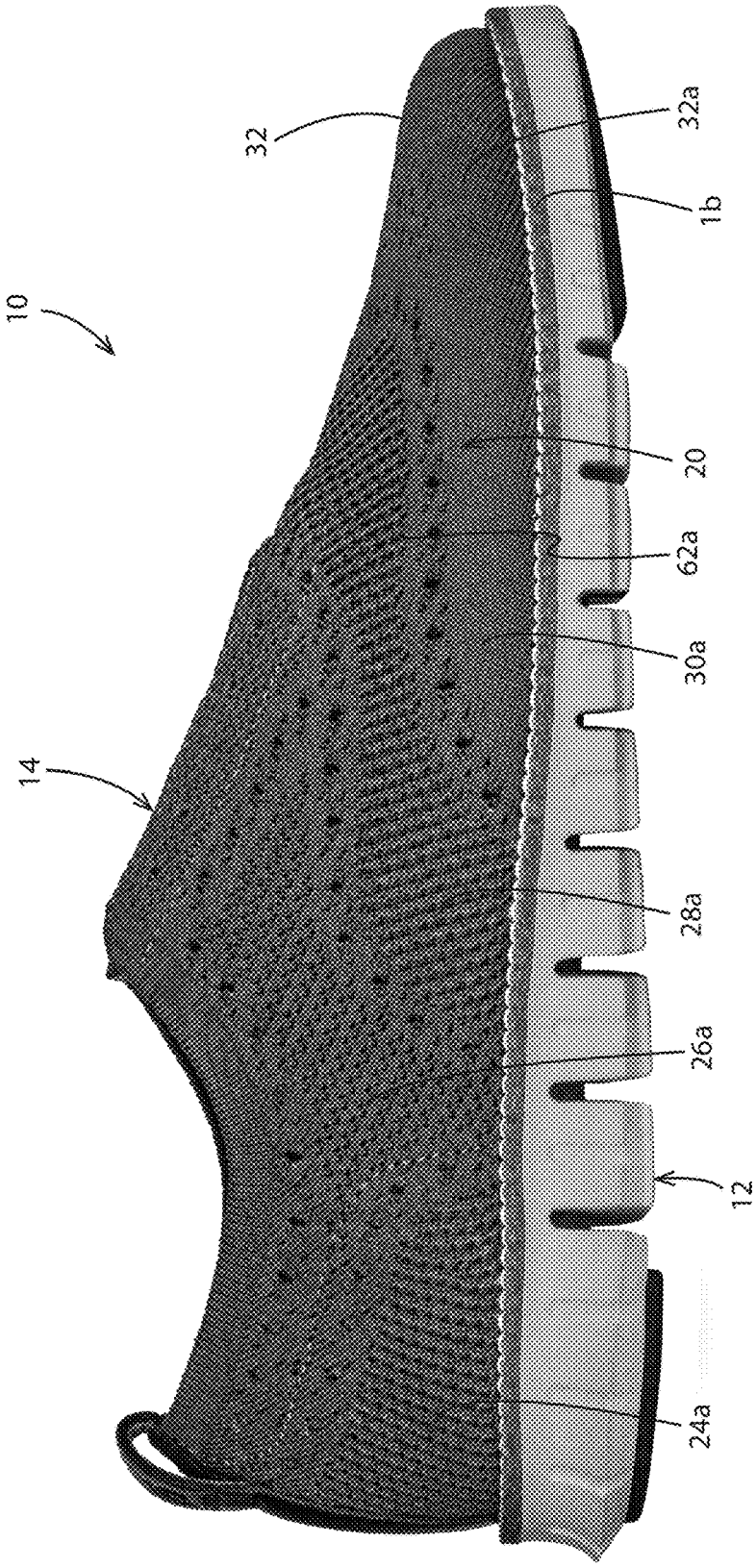
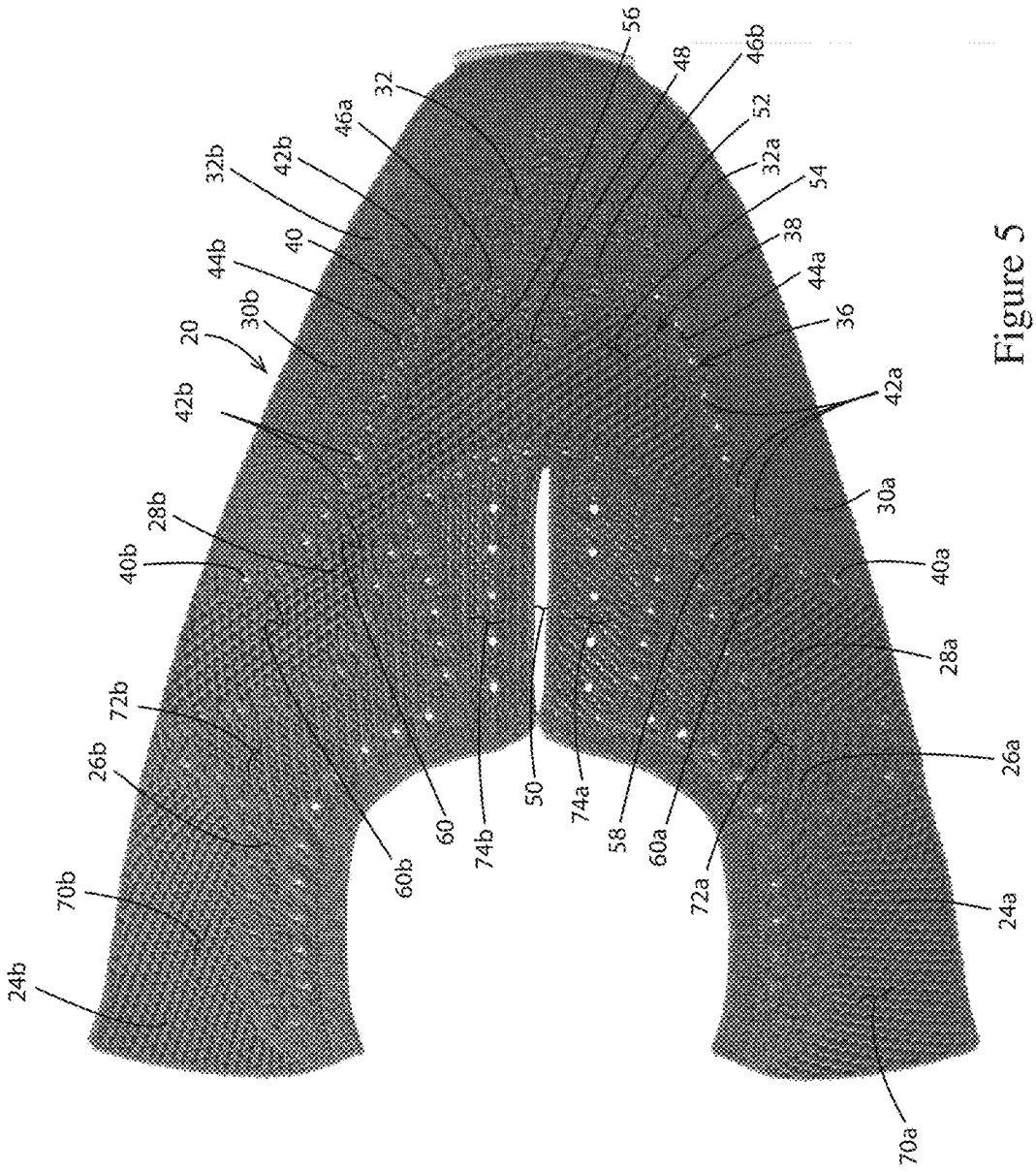


Figure 4


56
48
46b
32
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32a
42b
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44b
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42b
30a
28b
40a
40b
28a
72b
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60b
72a
70b
24a
24b
70a

Figure 5

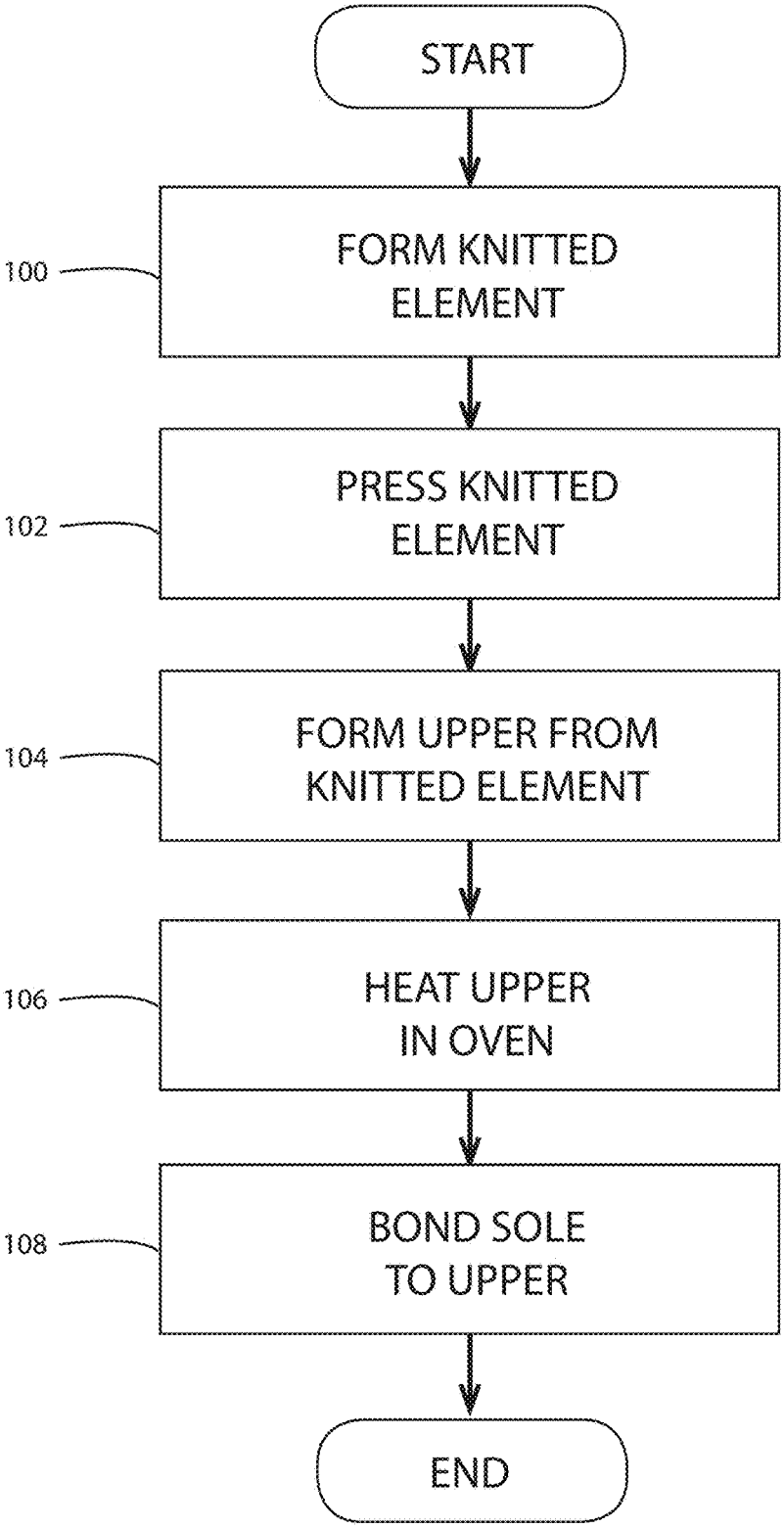
START
100
FORM KNITTED ELEMENT
102
PRESS KNITTED ELEMENT
104
FORM UPPER FROM KNITTED ELEMENT
106
HEAT UPPER IN OVEN
108
BOND SOLE TO UPPER
END

Figure 6

SHOE HAVING KNIT WINGTIP UPPER

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation of U.S. patent application Ser. No. 14/205,672, filed Jul. 8, 2016, which is hereby incorporated by reference in its entirety.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable.

APPENDIX

Not Applicable.

BACKGROUND OF THE INVENTION

Field of the Invention

This invention pertains to shoes having knit uppers.

SUMMARY

One aspect of the invention is a shoe comprising a knit upper and a sole secured to the upper. The knit upper has a knitted element. The knitted element is formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The upper has a knitted upper lateral side region and a knitted upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting process. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting process. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process. The knitted element includes a wingtip pattern. The wingtip pattern comprises portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions. The upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively are knitted with the wingtip pattern during the knitting process.

Another aspect of the invention is a shoe comprising a knit upper and a sole secured to the upper. The knit upper has a knitted element formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The upper has a knitted upper lateral side region and a knitted upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting process. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting process. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process. The knitted element includes a line of broguing. The upper toe region is knitted with the line of broguing during the knitting process. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area.

Another aspect of the invention is a method of manufacturing an upper for an article of footwear. The method comprises knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The knitted element includes a line of broguing. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting step. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting step. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step. The upper toe region is knitted with the line of broguing during the knitting step. The first and second areas are knitted during the knitting step.

Another aspect of the invention is a method of manufacturing an article of footwear having a knitted upper and a sole. The method comprises knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot

region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The upper lateral side region includes the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region. The upper medial side region includes the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region. The knitted element comprises a first area of a jersey stitch knit and a second area of a pointelle stitch knit. The first area is at least in the upper toe region. The second area is at least in the upper lateral and medial metatarsal regions. The method further comprises attaching the sole to the upper. The upper toe region is seamlessly knitted with the upper medial and lateral ball regions during the knitting step. The upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region during the knitting step. The upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step. The first and second areas are knitted during the knitting step.

Further features and advantages, as well as the operation, are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an exemplary embodiment of a shoe of the present disclosure.

FIG. **2** is a top plan view of the shoe of FIG. **1**.

FIG. **3** is a medial side view of the shoe of FIG. **1**.

FIG. **4** is a lateral side view of the shoe of FIG. **1**.

FIG. **5** is a plan view of a knitted element to be formed into a part of an upper of the shoe of FIG. **1**.

FIG. **6** is a flow diagram of a method of making the shoe of FIG. **1** according to an exemplary embodiment of the present disclosure.

Reference numerals in the written specification and in the figures indicate corresponding items.

DETAILED DESCRIPTION

An embodiment of a shoe in accordance with the present invention is indicated by reference numeral **10** in FIGS. **1-4**. The shoe **10** comprises a sole, generally indicated at **12**, a knit upper, generally indicated at **14**, and a welt, generally indicated at **16**. The sole **12** and welt **16** are secured to the upper **14**. The shoe **10** extends forward from a heel end **18** to a toe end **19**. The knit upper **14** has a knitted element **20** and a tongue **22** secured to the knitted element. The knitted element **20** is shown alone in FIG. **5** and shown as part of the assembled shoe in FIGS. **1-5**.

The knitted element **20** is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element **20** comprises a knitted upper heel region **24**, a knitted upper lateral midfoot region **26***a*, a knitted upper medial midfoot region **26***b*, a knitted upper metatarsal region **28**, a knitted upper lateral ball region **30***a*, a knitted upper medial ball region **30***b*, and a knitted upper toe region **32**. The upper heel region **24** includes a knitted upper lateral heel region **24***a* and a knitted upper medial heel region **24***b*. The upper metatarsal region **28** includes a knitted upper lateral metatarsal region **28***a* and a knitted upper medial metatarsal region **28***b*. The knitted upper toe region **32** includes a knitted upper lateral toe region **32***a* and a knitted upper medial toe region **32***b*. The upper **14** has a knitted upper lateral side region **14***a* and a knitted upper medial side region **14***b*. The upper lateral side region **14***a* includes the upper lateral heel region **24***a*, the upper lateral midfoot region **26***a*, the upper lateral metatarsal region **28***a*, the upper lateral ball region **30***a*, and the upper lateral toe region **32***a*. The upper medial side region **14***b* includes the upper medial heel region **24***b*, the upper medial midfoot region **26***b*, the upper medial metatarsal region **28***b*, the upper medial ball region **30***b*, and the upper medial toe region **32***b*. The upper toe region **32** is seamlessly knitted with the upper lateral and medial ball regions **30***a*, **30***b* during the knitting process. The upper lateral and medial ball regions **30***a*, **30***b* are seamlessly knitted with the upper lateral and medial metatarsal regions **28***a*, **28***b* during the knitting process. The upper lateral and medial metatarsal regions **28***a*, **28***b* are seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting process.

The knitted element includes a first wingtip pattern, generally indicated at **36**, and a second wingtip pattern, generally indicated at **38**. Each of the first and second wingtip patterns **36**, **38** comprises portions of at least the upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the first and second wingtip patterns **36**, **38** during the knitting process.

The first wingtip pattern **36** comprises a line of broguing **40** comprising a lateral line of broguing **40***a* and a medial line of broguing **40***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the lateral and medial lines of broguing **40***a*, **40***b*. The lateral line of broguing **40***a* comprises a wing-shaped curved line of holes **42***a*. The lateral line of broguing **40***a* comprises a lateral side broguing portion **44***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central broguing portion **46***a* extending rearward from the upper toe region **32**. The lateral side broguing portion **44***a* and the central broguing portion **46***a* are each comprised of some of the holes **42***a* of the lateral line of broguing **40***a*. The medial line of broguing **40***b* comprises a wing-shaped curved line of holes **42***b*. The medial line of broguing **40***b* comprises a medial side broguing portion **44***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central broguing portion **46***b* extending rearward from the upper toe region **32**. The medial side broguing portion **44***b* and the central broguing portion **46***b* are each comprised of some of the holes **42***b* of the medial line of broguing **40***b*. The central broguing portions **46***a*, **46***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **48**. The upper **14** further comprises a throat **50**. The apex **48** points rearwardly toward the throat **50** of the upper **14**. Preferably, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are in the knitting element via the knitting process as opposed to being formed by removal of material such as by cutting or punching.

The knitted element **20** comprises a first area, generally indicated at **52**, of a first type of knit structure and a second area, generally indicated at **54**, of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area **52** is generally

forward of the second area **54**. The first area **52** has a rear boundary **56** and the second area **54** has a forward boundary **58**. The rear boundary **56** of the first area **52** and the forward boundary **58** of the second area **54** is coincident and coextensive with each other and define a boundary line **60** between the first and second areas **52**, **54**. The second wingtip pattern **38** comprises the boundary line **60**. The first wingtip pattern **36** is forward of and adjacent the second wingtip pattern **38**. Also, the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the boundary line **60**. As such the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the rear boundary **56** of the first area **52**, and adjacent the forward boundary **58** of the second area **54**. The boundary line **60** has a lateral boundary line **60***a* and a medial boundary line **60***b*. The lateral boundary line **60***a* comprises a wing-shaped curved line having a lateral side portion **62***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central portion **64***a* extending rearward from the upper toe region **32**. The medial boundary line **60***b* comprises a wing-shaped curved line having a medial side portion **62***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central portion **64***b* extending rearward from the upper toe region **32**. The central portions **64***a*, **64***b* of the lateral and medial boundary lines **60***a*, **60***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **66**. The apex **66** points rearwardly toward the throat **50** of the upper **14**.

The first type of knit structure (that is, the knit structure of the first area **52**) may be more tightly knit than the second type of knit structure (that is, the knit structure of the second area **54**). In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. The knitted element **20** may be knitted with one or more yarns, such as polyester yarns, nylon yarns, cotton yarns, and spandex yarns. In one embodiment, the knitted element **20** is knitted of polyester covered spandex yarn and hot melt yarn, such that in the finished knitted element, the polyester covered spandex yarn constitutes at least 50% by mass (and more preferably at least 60% by mass), and the hot melt yarn constitutes at least 15% by mass (and more preferably at least 20% by mass but not more than 30% by mass). The hot melt yarn is knitted with the polyester covered spandex yarn during the knitting process. Preferably, the polyester covered spandex yarn has a linear density of between about 120 denier and about 180 denier, and the hot melt yarn has a linear density of between about 80 denier and about 120 denier. In addition to the polyester covered spandex yarn and the hot melt yarn, the knitted element **20** may be knitted with stretch yarn, with the stretch yarn preferably constituting at least 5% by mass of the knitted upper. If stretch yarn is included, it is preferably limited (but need not be limited) to the topline area of the knitted element **20** to provide a stretch function primarily in the ankle region of the upper **14** of the shoe **10**. Preferably, the polyester covered spandex yarn includes a double layer of polyester. Also preferably, the stretch yarn is spandex yarn. In another embodiment, the knitted element **20** is formed by knitting hot melt yarn with polyester yarn during the knitting process such that polyester yarn constitutes at least 50% by mass of the knitted element and the hot melt yarn constitutes at least 15% by mass of the knitted element.

FIG. **6** is a flow diagram of a method of making the shoe **10** of FIGS. **1-5**. In step **100**, the knitted element **20** is formed via a knitting machine, such as a CNC knitting machine, as a unitary one-piece construction. During the knitting step **100**, the upper lateral and medial heel regions **24***a*, **24***b* are knitted, the upper lateral and medial midfoot regions **26***a*, **26***b* are knitted, the upper lateral and medial metatarsal regions **28***a*, **28***b* are knitted, the upper lateral and medial ball regions **30***a*, **30***b* are knitted, and the upper lateral and medial toe regions **32***a*, **32***b* are knitted. By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed separately and then sewn or bonded together. As such, the upper toe region **32** is seamlessly knitted with the upper medial and lateral ball regions **30***a*, **30***b* during the knitting step, the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region **28** during the knitting step, the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting step, and the upper lateral and medial midfoot regions are seamlessly knitted with the upper lateral and medial heel regions **24***a*, **24***b* during the knitting step.

The knitted element **20** is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area **52** is of the first type of knit structure (e.g., jersey stitch knit) and the second area **54** is of the second type of knit structure (e.g., pointelle stitch knit). Also, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are formed via the knitting step, as opposed to being formed via removal of material (e.g., punching, cutting, etc.) after the knitting step. As shown in FIG. **5**, the knitted element **20** also includes lateral and medial heel areas **70***a*, **70***b* of the second type of knit structure (e.g., pointelle stitch knit), lateral and medial midfoot areas **72***a*, **72***b* of the second type of knit structure (e.g., pointelle stitch knit), and lateral and medial eyestay areas **74***a*, **74***b* of the second type of knit structure (e.g., pointelle stitch knit). Broguing holes forming lines of broguing (the same or similar in form and construction to the lateral and medial lines of broguing **40***a*, **40***b*) are between the lateral heel area **70***a* and the lateral midfoot area **72***a*, between the lateral midfoot area and the lateral eyestay area **74***a*, between the lateral midfoot region and the second area **52**, between the lateral eyestay area and the second area, between the medial heel area **70***b* and the medial midfoot area **72***b*, between the medial midfoot area and the medial eyestay area **74***b*, between the medial midfoot region and the second area, and between the medial eyestay area and the second area.

After the knitted element **20** is knitted via the knitting step **100**, the knitted element is pressed with a hot press during a pressing step, indicated at reference number **102** in FIG. **6**.

During step **104**, the upper **14** is formed by attaching a strobel board **80** (see FIG. **2**)) to the knitted element **20**, attaching the tongue **22** to the knitted element, and attaching the upper lateral heel region **24***a* to the upper medial heel region **24***b*. A heel counter **82** (see FIG. **1**) may also be attached to the inner surface of the upper lateral and medial heel regions **24***a*, **24***b*. The upper **14** is then placed around a last at step **106**. Adhesive is applied to the underside of the strobel board **80**, and the upper **14** is passed via a conveyer through an oven (or heat tunnel). The oven heats the adhesive and also heats the hot melt yarn of the knitted element **20**. The heating and subsequent cooling of the hot melt yarn causes the hot melt yarn to affix to the other yarns (e.g., to the polyester yarn or polyester covered spandex yarn) so that the upper **14** conforms to the shape of the last. The sole **12** and welt **16** are bonded via the adhesive to the strobel board **80** and bottom periphery of the knitted element at step **108**.

An inner surface of the knitted element **20** (i.e., the surface facing the inside of the shoe **10**) may be lined or unlined. In an unlined configuration, the inner surface of the knitted element **20** is devoid of a lining (other than the heel counter **82** or eyelet reinforcement adjacent the throat) and such inner surface of the knitted element defines at least a majority of a foot receiving cavity of the shoe. In a completely lined configuration, a lining is between the inner surface of the knitted element and the foot receiving cavity of the shoe such that the foot receiving cavity of the shoe is in part defined by the lining (instead of by the inner surface of the knitted element).

In view of the foregoing, it should be appreciated that the invention has several advantages over the prior art.

As various modifications could be made in the constructions and methods herein described and illustrated without departing from the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative rather than limiting. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims appended hereto and their equivalents

It should also be understood that when introducing elements of the present invention in the claims or in the above description of exemplary embodiments of the invention, the terms "comprising," "including," and "having" are intended to be open-ended and mean that there may be additional elements other than the listed elements. Additionally, the term "portion" should be construed as meaning some or all of the item or element that it qualifies. Moreover, use of identifiers such as first, second, and third should not be construed in a manner imposing any relative position or time sequence between limitations.

What is claimed is:

1. A shoe comprising:

a knit upper;

a sole secured to the upper;

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting process, the knitted kupper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions;

the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the wingtip pattern comprising the boundary line, the boundary line having a medial boundary line and a lateral boundary line, the medial boundary line comprising a wing-shaped curved line having a medial side portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the lateral boundary line comprising a wing-shaped curved line having a lateral side portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the rearwardly extending central portion of the medial boundary line converging toward the rearwardly extending central portion of the lateral boundary line.

2. A shoe as set forth in claim **1** wherein the upper further comprises a throat, and wherein the apex points toward the throat.

3. A shoe as set forth in claim **1** wherein the first type of knit structure is more tightly knit than the second type of knit structure.

4. A shoe as set forth in claim **1** wherein the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit.

5. A shoe as set forth in claim **1** wherein the knitted element comprises covered spandex yarn and hot melt yarn, the hot melt yarn being knitted with the covered spandex yarn during the knitting process.

6. A shoe as set forth in claim **5** wherein the hot melt yarns constitute at least 15% by mass of the knitted element.

7. A shoe as set forth in claim **6** wherein the covered spandex yarn constitute at least 50% by mass of the knitted element.

8. A shoe as set forth in claim **7** wherein the covered spandex yarn comprises polyester covered spandex yarn.

9. A shoe as set forth in claim **8** wherein the knitted element further comprises stretch yarn, the stretch yarn constituting at least 5% by mass of the knitted element.

10. A shoe as set forth in claim **5** wherein the covered spandex yarn has a linear density of between about 120 denier and about 180 denier, and wherein the hot melt yarn has a linear density of between about 80 denier and about 120 denier.

11. A shoe as set forth in claim **1** wherein the knitted element comprises polyester yarn and hot melt yarn, the hot melt yarn being knitted with the polyester yarn during the knitting process.

12. A shoe as set forth in claim **1** wherein the knitted element comprises hot melt yarn, the hot melt yarn constituting at least 15% by mass of the knitted element.

13. A shoe comprising:

a knit upper;

a sole secured to the upper;

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the

knitted element comprising a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions;

the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the wingtip pattern comprising the boundary line, the boundary line having a medial boundary line and a lateral boundary line, the medial boundary line comprising a wing-shaped curved line having a medial side portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the lateral boundary line comprising a wing-shaped curved line having a lateral side portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the rearwardly extending central portion of the medial boundary line converging toward the rearwardly extending central portion of the lateral boundary line.

14. A shoe as set forth in claim **13** wherein the wingtip pattern comprises a medial line of broguing and a lateral line of broguing, the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions collectively being knitted with the medial and lateral lines of broguing, the medial line of broguing comprising a wing-shaped curved line of holes having a medial side broguing portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the lateral line of broguing comprising a wing-shaped curved line of holes having a lateral side broguing portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central broguing portion extending rearward from the upper toe region, the rearwardly extending central broguing portion of the medial line of broguing converging toward the rearwardly extending central broguing portion of the lateral line of broguing.

15. A shoe as set forth in claim **14** wherein the central broguing portions of the medial and lateral lines of broguing meet at a rearwardly pointing apex.

16. A shoe as set forth in claim **13** wherein the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit.

17. A shoe as set forth in claim **13** wherein the first type of knit structure is more tightly knit than the second type of knit structure.

18. A method of manufacturing an upper for an article of footwear, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region, the upper having a knitted upper lateral side region and a knitted upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting process, the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting process, the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting process, the knitted element including a wingtip pattern, the wingtip pattern being portions of at least the upper toe region, the upper lateral and medial ball regions, and the upper lateral and medial metatarsal regions, the knitted element comprising a first area of a first type of knit structure and a second area of a second type of knit structure, the second type of knit structure being different from the first type of knit structure, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the wingtip pattern comprising the boundary line, the boundary line having a medial boundary line and a lateral boundary line, the medial boundary line comprising a wing-shaped curved line having a medial side portion extending forward from at least the upper medial metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the lateral boundary line comprising a wing-shaped curved line having a lateral side portion extending forward from at least the upper lateral metatarsal region to the upper toe region and a central portion extending rearward from the upper toe region, the rearwardly extending central portion of the medial boundary line converging toward the rearwardly extending central portion of the lateral boundary line;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;

the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas and the wingtip pattern being seamlessly knitted during the knitting step.

19. A method as set forth in claim **18** wherein the knitted element includes a line of broguing adjacent the boundary line, the knitted element being knitted with the line of broguing during the knitting step.

20. A method as set forth in claim **18** wherein the knitted element includes a medial line of broguing and a lateral line of broguing, the medial line of broguing being adjacent the medial boundary line, the lateral line of broguing being adjacent the lateral boundary line, the medial line of broguing comprising a curved line of holes, the lateral line of broguing comprising a curved line of holes, the knitted element being knitted with the medial and lateral lines of broguing during the knitting step.

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;

the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

22. A method as set forth in claim **21** wherein the knitted element includes a line of broguing adjacent the boundary line, the knitted element being knitted with the line of broguing during the knitting step.

23. A method as set forth in claim **21** wherein the boundary line comprises a medial boundary line and a lateral boundary line, and wherein the knitted element includes a medial line of broguing and a lateral line of broguing, the medial line of broguing being adjacent the medial boundary line, the lateral line of broguing being adjacent the lateral boundary line, the medial line of broguing comprising a curved line of holes, the lateral line of broguing comprising a curved line of holes.

24. A method as set forth in claim **23** wherein the knitted element is knitted with the medial and lateral lines of broguing during the knitting step.

25. A method as set forth in claim **24** wherein the upper is knitted during the knitting step with at least first and second yarns, the first yarn being of a hot melt yarn, the second yarn being of a yarn other than a hot melt yarn.

26. A method as set forth in claim **25** further comprising:

placing the upper around a last;

applying heat to the upper while the upper is around the last to cause the hot melt yarn to affix to the second yarn.

27. A method as set forth in claim **21** wherein the knitted element further includes a knitted lateral eyestay area and a knitted medial eyestay area, the knitted upper lateral midfoot region including a knitted lateral midfoot area, the knitted upper medial midfoot region including a knitted medial midfoot area, and wherein broguing holes forming lines of broguing are between the lateral midfoot area and the lateral eyestay area and between the medial midfoot area and the medial eyestay area, wherein the knitted element is knitted with the broguing holes during the knitting step.

28. A method as set forth in claim **21** wherein the knitted upper lateral midfoot region includes a knitted lateral midfoot area and the knitted upper medial midfoot region includes a knitted medial midfoot area, and wherein broguing holes forming lines of broguing are between the lateral midfoot area and the second area and between the medial midfoot area and the second area, wherein the knitted element is knitted with the broguing holes during the knitting step.

* * * * *

Ex. C

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(12) **United States Patent**
Boys et al.

(10) **Patent No.: US 11,041,262 B2**
(45) **Date of Patent: *Jun. 22, 2021**

(54) **SHOE HAVING KNIT WINGTIP UPPER**

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(72) Inventors: **Jack Boys**, Greenland, NH (US); **Ann Bono**, Greenland, NH (US); **Aubert Shepherd**, Greenland, NH (US); **Mattias Verfl**, Greenland, NH (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/577,697**

(22) Filed: **Sep. 20, 2019**

(65) **Prior Publication Data**

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(51) **Int. Cl.**

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A43B 23/02	(2006.01)
A43B 23/04	(2006.01)
D04B 1/22	(2006.01)
A43B 1/04	(2006.01)
D04B 1/10	(2006.01)

(52) **U.S. Cl.**

CPC ***D04B 1/24*** (2013.01); ***A43B 1/04*** (2013.01); ***A43B 23/0205*** (2013.01); ***A43B 23/0245*** (2013.01); ***A43B 23/042*** (2013.01); ***D04B 1/104*** (2013.01); ***D04B 1/22*** (2013.01); *D10B 2401/041* (2013.01); *D10B 2403/032* (2013.01); *D10B 2501/043* (2013.01)

(58) **Field of Classification Search**

CPC .. D04B 1/10; D04B 1/104; D04B 1/24; A43B 23/0245; A43B 23/04; A43B 23/042

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D97,783	S	12/1935	Peterson
2,312,078	A	2/1943	Crannell
4,224,693	A	9/1980	Wehrmann et al.

(Continued)

FOREIGN PATENT DOCUMENTS

EP	1437057	A1	7/2004
EP	2649898	A1	10/2013

(Continued)

OTHER PUBLICATIONS

Anonymous, "The Ultimate Guide to Men's Shoes. Complete with Wardrobe Pairings.", Guys Footwear Archives—Manners & Mischief, Dec. 10, 2014, 11 pages, Retrieved from the Internet on Jan. 20, 2020 from URL: http://mannersandmischief.com/tag/guys-footwear/.

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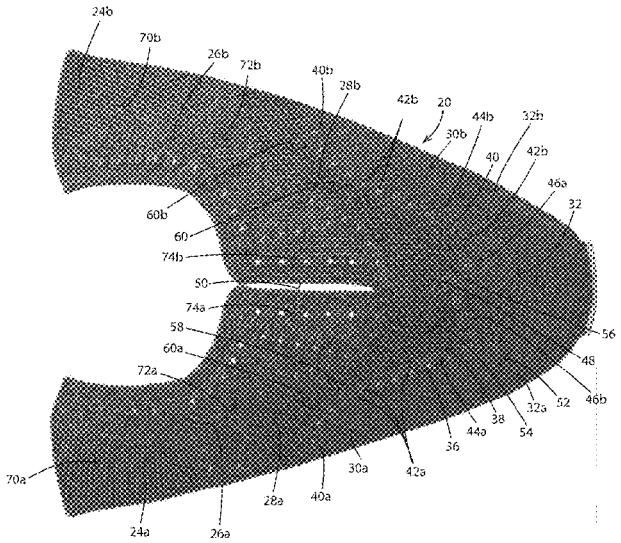
(74) *Attorney, Agent, or Firm* — Thompson Coburn LLP

(57) **ABSTRACT**

A shoe includes a knit upper and a sole secured to the knit upper. The knit upper has a first area of a jersey stitch knit and a second area of a pointelle stitch knit, a boundary line between the first and second areas, and a line of broguing adjacent the boundary line.

13 Claims, 6 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D266,455	S	10/1982	Famolare, Jr.
4,468,870	A	9/1984	Sternberg
4,584,783	A	4/1986	Dobbin
D293,386	S	12/1987	Kelley
4,785,558	A	11/1988	Shiomura
D335,385	S	5/1993	Kawabata
D337,870	S	8/1993	Valade
D394,739	S	6/1998	Carlson
D401,398	S	11/1998	Carlson
6,029,376	A	2/2000	Cass
D458,440	S	6/2002	Berluti
D458,738	S	6/2002	Berluti
D459,060	S	6/2002	Berluti
6,910,288	B2	6/2005	Dua
6,986,269	B2	1/2006	Dua
D550,933	S	9/2007	Hulbert
7,347,011	B2	3/2008	Dua et al.
D634,104	S	3/2011	Gwon
D689,673	S	9/2013	Kampff
D716,023	S	10/2014	Kamppff
D722,225	S	2/2015	Williams, Jr.
D745,771	S	12/2015	Cin
D783,975	S	4/2017	Schenone
D801,664	S	11/2017	Small
D809,263	S	2/2018	Boys et al.
D809,264	S	2/2018	Boys et al.
D809,265	S	2/2018	Boys et al.
D809,749	S	2/2018	Brito
D812,355	S	3/2018	Maier
D813,502	S	3/2018	Gerbase
D816,308	S	5/2018	Boys et al.
D817,609	S	5/2018	Boys et al.
9,961,962	B2	5/2018	Lee
D834,294	S	11/2018	Small
D840,664	S	2/2019	Small
D841,973	S	3/2019	Small
D845,591	S	4/2019	Frank
D846,850	S	4/2019	Sinclair
D849,374	S	5/2019	Hardy
10,426,227	B2	10/2019	Lee et al.
2004/0118018	A1	6/2004	Dua
2006/0277798	A1	12/2006	Reilly et al.
2012/0255201	A1	10/2012	Little
2013/0192311	A1	8/2013	Alford et al.
2014/0310985	A1	10/2014	Tran et al.
2015/0143720	A1	5/2015	Avar
2015/0272274	A1	10/2015	Berns et al.
2015/0342285	A1	12/2015	Huffman et al.
2015/0366293	A1	12/2015	Clarkson
2016/0286898	A1	10/2016	Manz et al.
2018/0008006	A1	1/2018	Boys et al.
2018/0255876	A1	9/2018	McGinnity et al.
2018/0317592	A1	11/2018	Rudolf et al.
2018/0325215	A1	11/2018	Taestensen et al.
2019/0208862	A1	7/2019	Poegl et al.
2019/0313738	A1	10/2019	Dorjgurkhem et al.

FOREIGN PATENT DOCUMENTS

KR	10-1367445	B1	2/2014
WO	2015038344	A1	3/2015

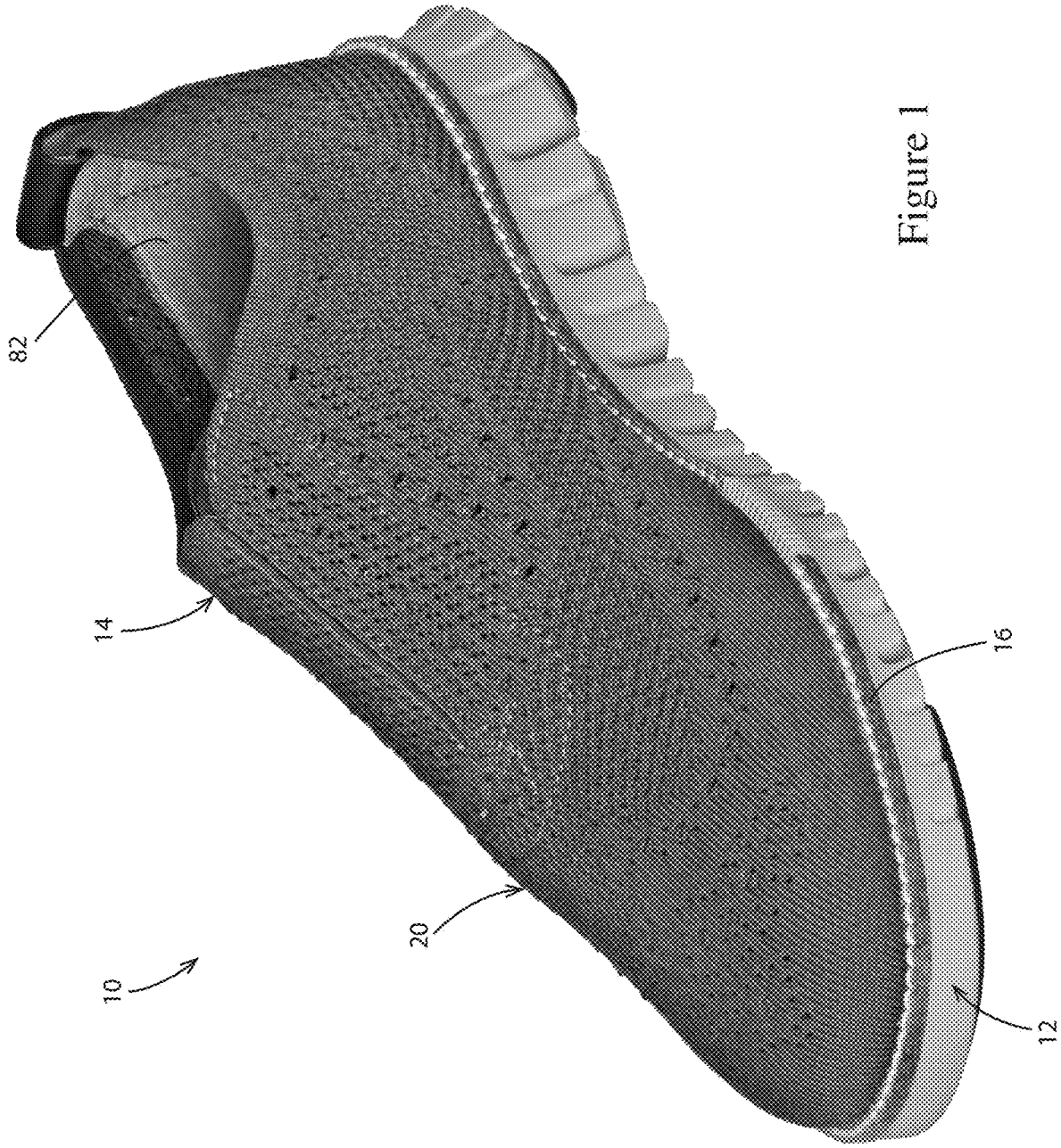


Figure 1

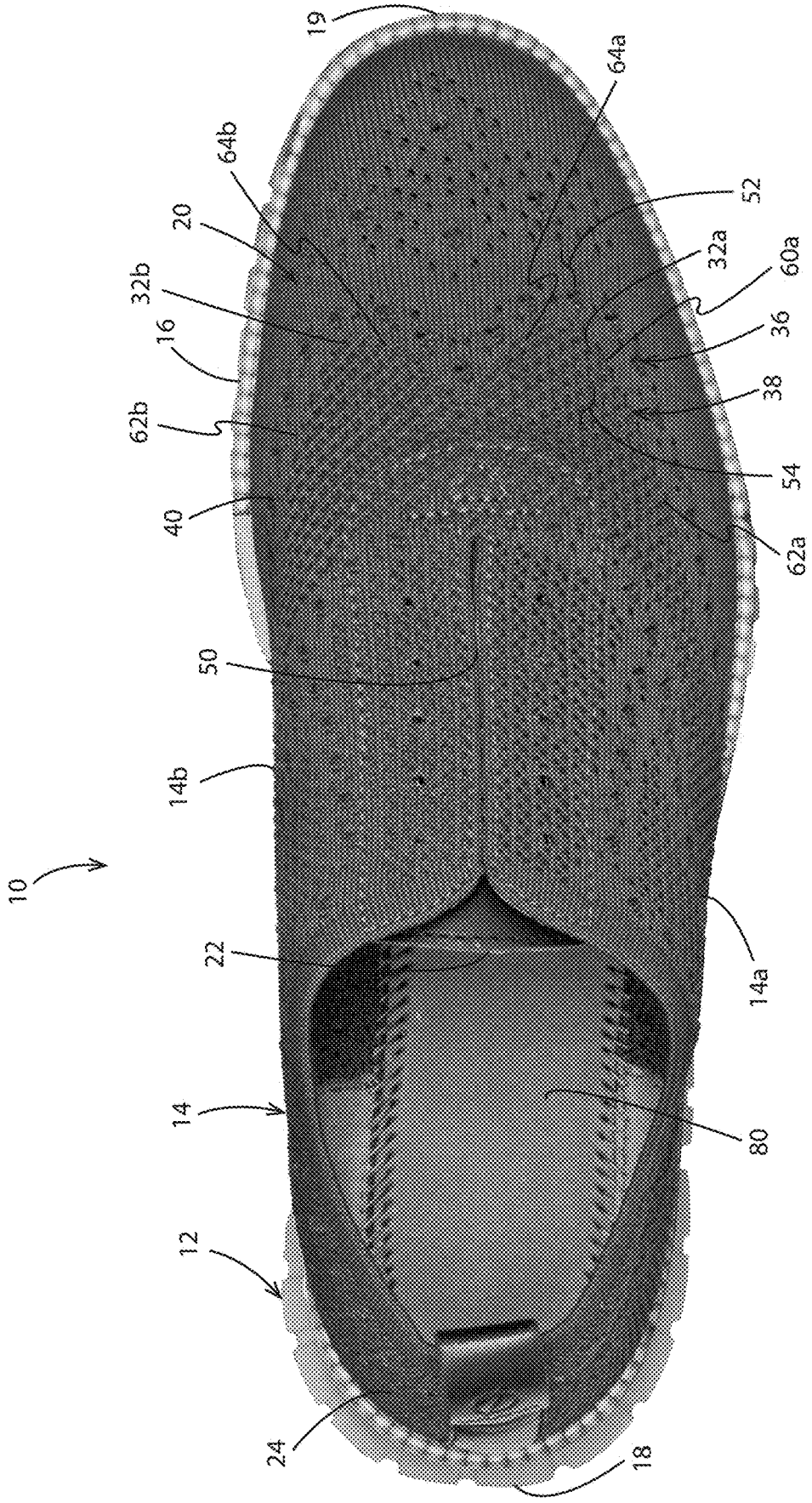

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Figure 2

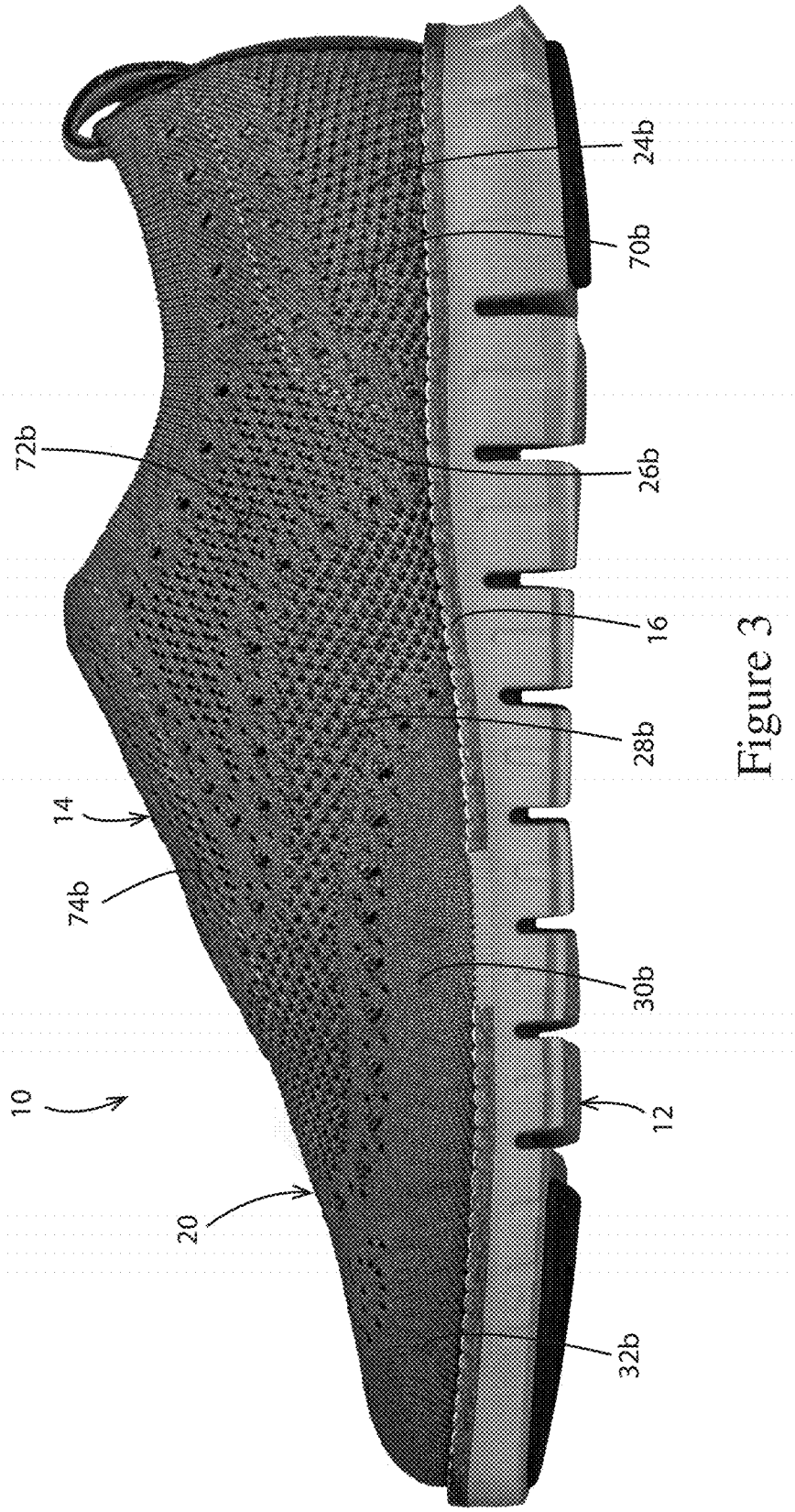

Figure 3

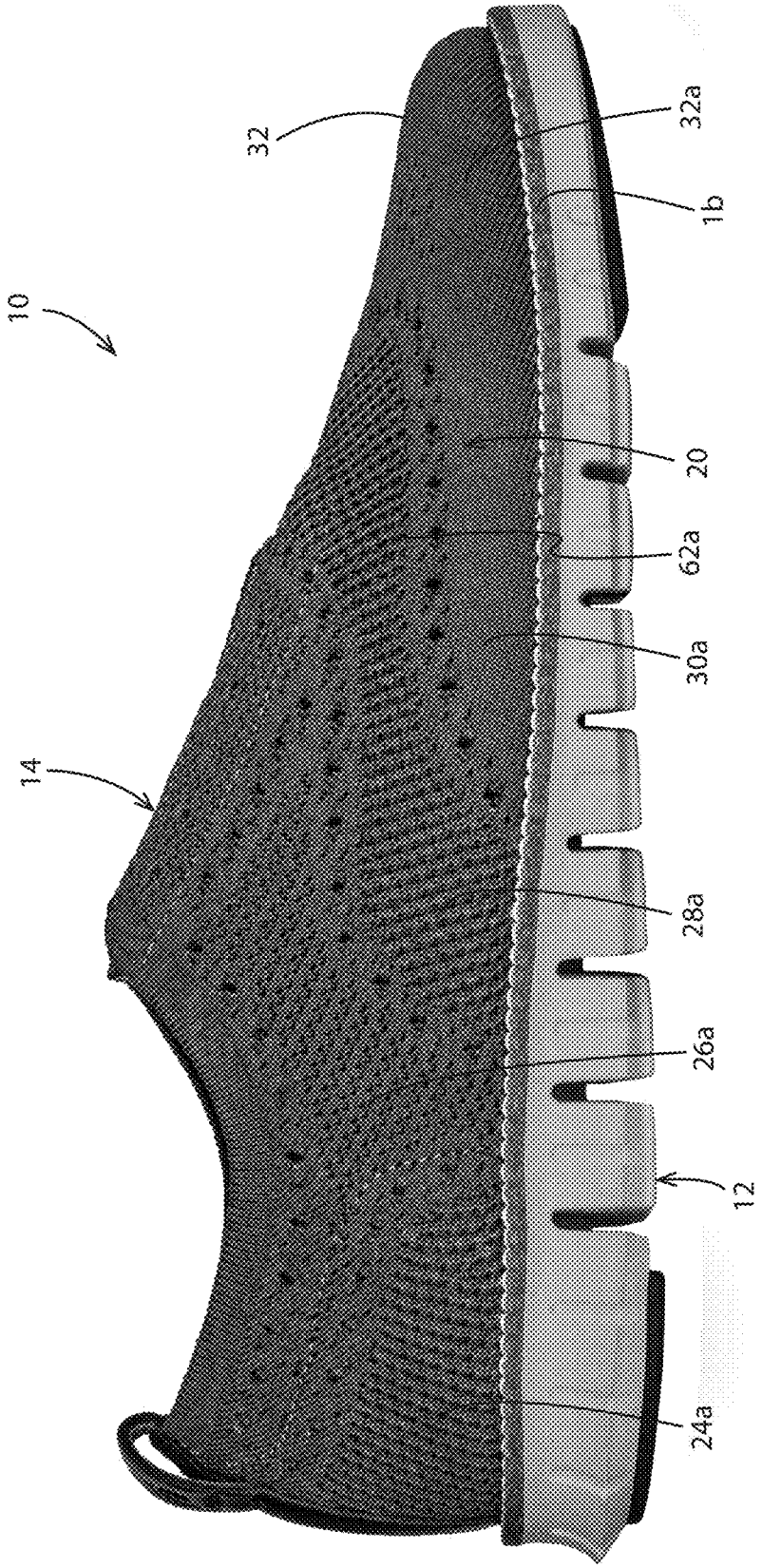

Figure 4

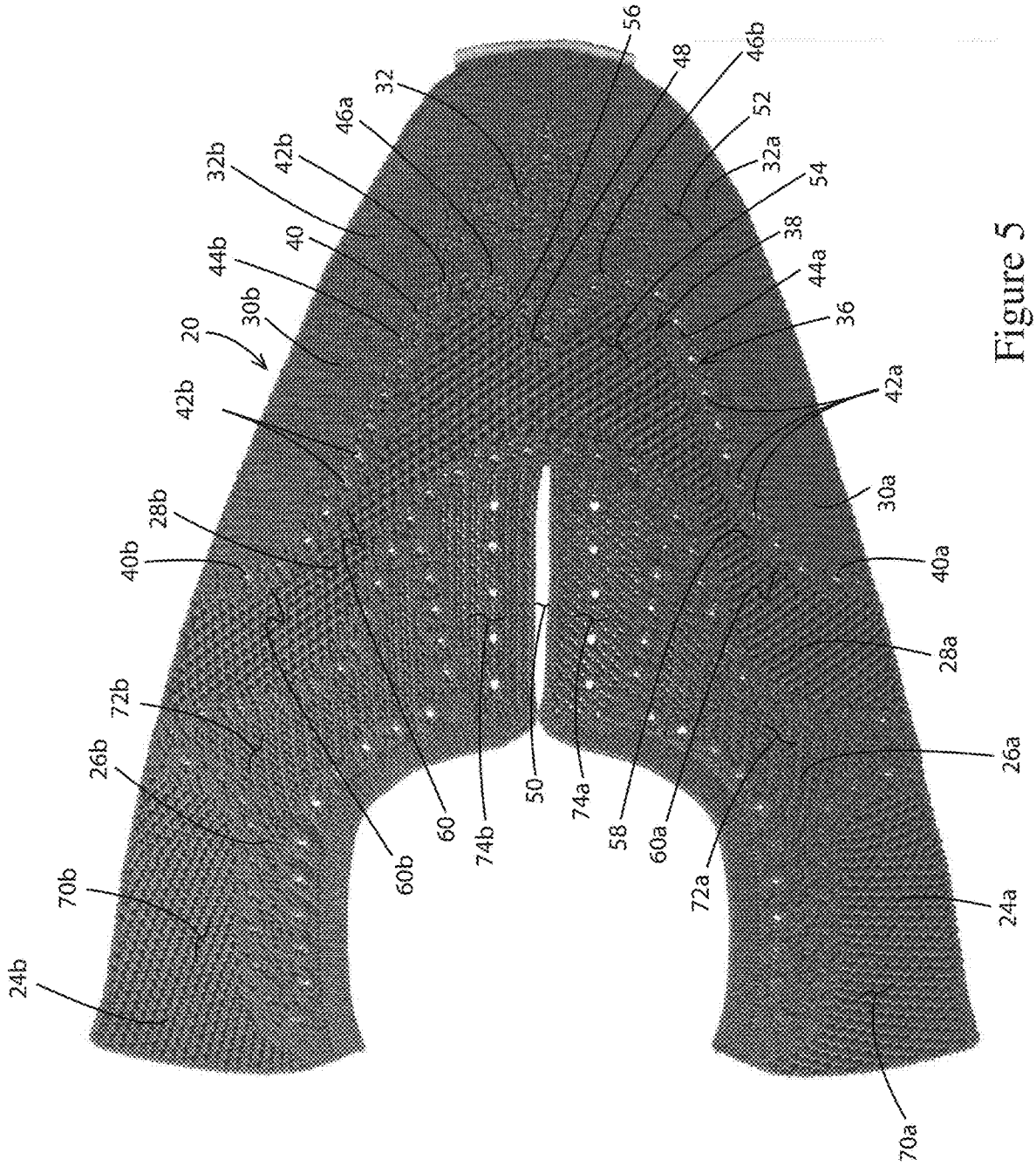
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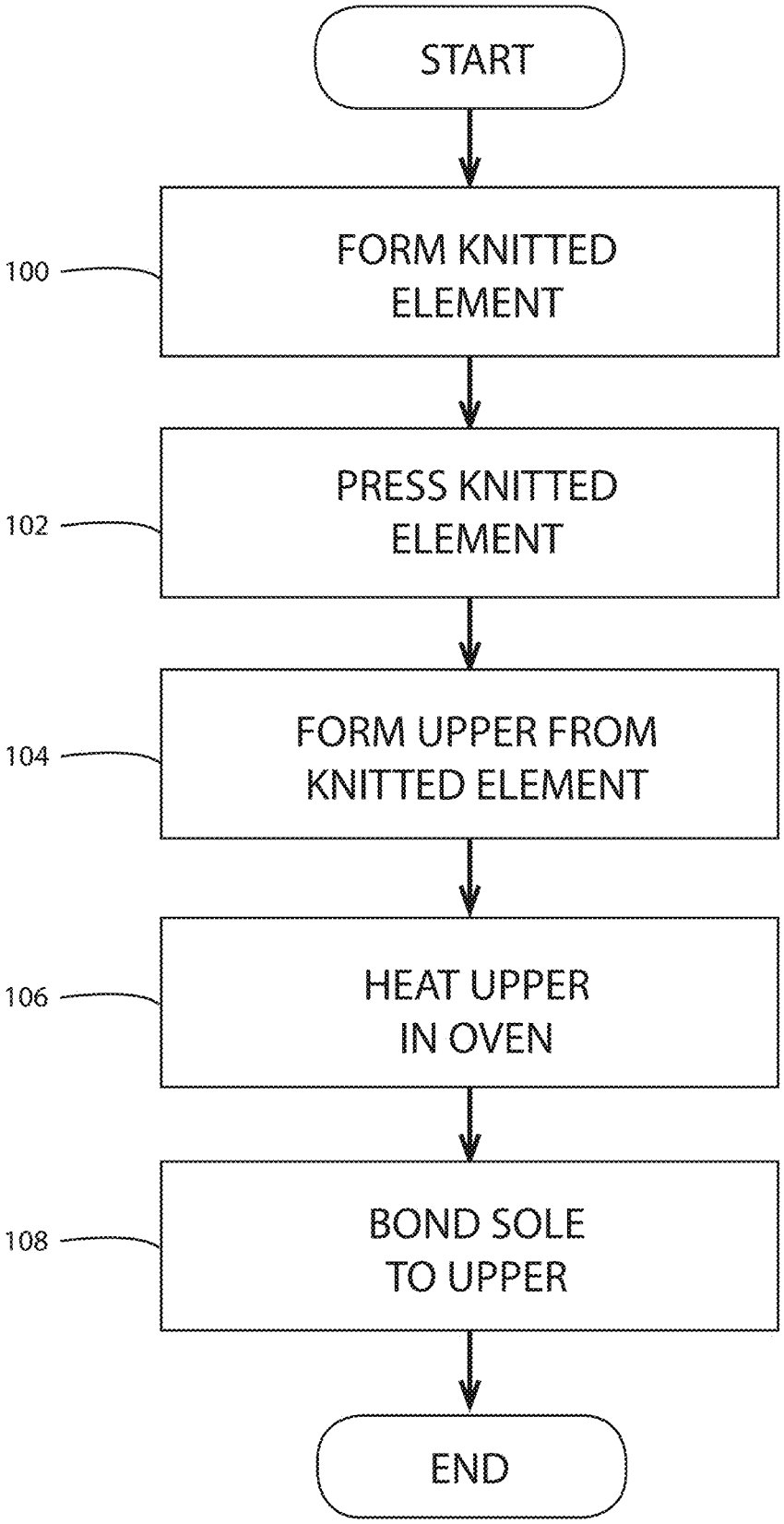
Figure 5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102
PRESS KNITTED ELEMENT
104
FORM UPPER FROM KNITTED ELEMENT
106
HEAT UPPER IN OVEN
108
BOND SOLE TO UPPER
END

Figure 6

SHOE HAVING KNIT WINGTIP UPPER

CROSS-REFERENCE TO RELATED APPLICATIONS

This is a continuation of U.S. patent application Ser. No. 16/409,970, filed May 13, 2019; which is a continuation of U.S. patent application Ser. No. 15/205,672, filed Jul. 8, 2016, each of which is hereby incorporated by reference in its entirety.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable.

APPENDIX

Not Applicable.

BACKGROUND OF THE INVENTION

Field of the Invention

This invention pertains to shoes having knit uppers.

SUMMARY

One aspect of the invention is a shoe comprising a knit upper and a sole secured to the knit upper. The knit upper has a knitted element. The knitted element is formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The knitted upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The knit upper has a knitted upper lateral side region and a knitted upper medial side region. The knitted upper lateral side region includes the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region and the knitted upper lateral ball region. The knitted upper medial side region includes the knitted upper medial midfoot region, the knitted upper medial metatarsal region and the knitted upper medial ball region. The knitted upper toe region is seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting process. The knitted upper medial and lateral ball regions are seamlessly knitted with the knitted upper metatarsal region during the knitting process. The knitted upper metatarsal region is seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting process. The knitted element includes a wingtip pattern. The wingtip pattern comprises portions of at least the knitted upper toe region, the knitted upper lateral and medial ball regions, and the knitted upper lateral and medial metatarsal regions. The knitted upper toe region, the knitted upper lateral and medial ball regions, and the knitted upper lateral and medial metatarsal regions collectively are knitted with the wingtip pattern during the knitting process.

Another aspect of the invention is a shoe comprising a knit upper and a sole secured to the knit upper. The knit upper has a knitted element formed of a unitary one-piece construction during a knitting process on a knitting machine. The knitted element comprises a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The knitted upper metatarsal region includes a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region. The knit upper has a knitted upper lateral side region and a knitted upper medial side region. The knitted upper lateral side region includes the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region and the knitted upper lateral ball region. The knitted upper medial side region includes the knitted upper medial midfoot region, the knitted upper medial metatarsal region and the knitted upper medial ball region. The knitted upper toe region is seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting process. The knitted upper medial and lateral ball regions are seamlessly knitted with the knitted upper metatarsal region during the knitting process. The knitted upper metatarsal region is seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting process. The knitted element includes a line of broguing. The knitted upper toe region is knitted with the line of broguing during the knitting process. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the knitted upper toe region. The second area is at least in the knitted upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area.

Another aspect of the invention is a method of manufacturing an upper for an article of footwear. The method comprises knitting with a knitting machine to form a knitted element of the knit upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The knitted upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The knitted upper lateral side region includes the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region and the knitted upper lateral ball region. The knitted upper medial side region includes the knitted upper medial midfoot region, the knitted upper medial metatarsal region and the knitted upper medial ball region. The knitted element includes a line of broguing. The line of broguing comprises a line of holes. The knitted element comprises a first area of a first type of knit structure and a second area of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area is at least in the knitted upper toe region. The second area is at least in the knitted upper lateral and medial metatarsal regions. The line of broguing being adjacent a rear boundary of the first area. The line of broguing being adjacent a forward boundary of the second area. The knitted upper toe region is seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting step. The knitted upper medial and lateral ball regions are seamlessly knitted with the knitted upper metatarsal region during the knitting step. The knitted upper metatarsal region is seamlessly knitted with the knitted

upper lateral and medial midfoot regions during the knitting step. The knitted upper toe region is knitted with the line of broguing during the knitting step. The first and second areas are knitted during the knitting step.

Another aspect of the invention is a method of manufacturing an article of footwear having a knitted upper and a sole. The method comprises knitting with a knitting machine to form a knitted element of the knit upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region. The knitted upper metatarsal region includes an upper lateral metatarsal region and an upper medial metatarsal region. The knitted element has an upper lateral side region and an upper medial side region. The knitted upper lateral side region includes the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region and the knitted upper lateral ball region. The knitted upper medial side region includes the knitted upper medial midfoot region, the knitted upper medial metatarsal region and the knitted upper medial ball region. The knitted element comprises a first area of a jersey stitch knit and a second area of a pointelle stitch knit. The first area is at least in the knitted upper toe region. The second area is at least in the knitted upper lateral and medial metatarsal regions. The method further comprises attaching the sole to the knitted upper. The knitted upper toe region is seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting step. The knitted upper medial and lateral ball regions are seamlessly knitted with the knitted upper metatarsal region during the knitting step. The knitted upper metatarsal region is seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting step. The first and second areas are knitted during the knitting step.

Further features and advantages, as well as the operation, are described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an exemplary embodiment of a shoe of the present disclosure.

FIG. **2** is a top plan view of the shoe of FIG. **1**.

FIG. **3** is a medial side view of the shoe of FIG. **1**.

FIG. **4** is a lateral side view of the shoe of FIG. **1**.

FIG. **5** is a plan view of a knitted element to be formed into a part of an upper of the shoe of FIG. **1**.

FIG. **6** is a flow diagram of a method of making the shoe of FIG. **1** according to an exemplary embodiment of the present disclosure.

Reference numerals in the written specification and in the figures indicate corresponding items.

DETAILED DESCRIPTION

An embodiment of a shoe in accordance with the present invention is indicated by reference numeral **10** in FIGS. **1-4**. The shoe **10** comprises a sole, generally indicated at **12**, a knit upper, generally indicated at **14**, and a welt, generally indicated at **16**. The sole **12** and welt **16** are secured to the upper **14**. The shoe **10** extends forward from a heel end **18** to a toe end **19**. The knit upper **14** has a knitted element **20** and a tongue **22** secured to the knitted element. The knitted element **20** is shown alone in FIG. **5** and shown as part of the assembled shoe in FIGS. **1-5**.

The knitted element **20** is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element **20** comprises a knitted upper heel region **24**, a knitted upper lateral midfoot region **26***a*, a knitted upper medial midfoot region **26***b*, a knitted upper metatarsal region **28**, a knitted upper lateral ball region **30***a*, a knitted upper medial ball region **30***b*, and a knitted upper toe region **32**. The upper heel region **24** includes a knitted upper lateral heel region **24***a* and a knitted upper medial heel region **24***b*. The upper metatarsal region **28** includes a knitted upper lateral metatarsal region **28***a* and a knitted upper medial metatarsal region **28***b*. The knitted upper toe region **32** includes a knitted upper lateral toe region **32***a* and a knitted upper medial toe region **32***b*. The upper **14** has a knitted upper lateral side region **14***a* and a knitted upper medial side region **14***b*. The upper lateral side region **14***a* includes the upper lateral heel region **24***a*, the upper lateral midfoot region **26***a*, the upper lateral metatarsal region **28***a*, the upper lateral ball region **30***a*, and the upper lateral toe region **32***a*. The upper medial side region **14***b* includes the upper medial heel region **24***b*, the upper medial midfoot region **26***b*, the upper medial metatarsal region **28***b*, the upper medial ball region **30***b*, and the upper medial toe region **32***b*. The upper toe region **32** is seamlessly knitted with the upper lateral and medial ball regions **30***a*, **30***b* during the knitting process. The upper lateral and medial ball regions **30***a*, **30***b* are seamlessly knitted with the upper lateral and medial metatarsal regions **28***a*, **28***b* during the knitting process. The upper lateral and medial metatarsal regions **28***a*, **28***b* are seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting process.

The knitted element includes a first wingtip pattern, generally indicated at **36**, and a second wingtip pattern, generally indicated at **38**. Each of the first and second wingtip patterns **36**, **38** comprises portions of at least the upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the first and second wingtip patterns **36**, **38** during the knitting process.

The first wingtip pattern **36** comprises a line of broguing **40** comprising a lateral line of broguing **40***a* and a medial line of broguing **40***b*. The upper toe region **32**, the upper lateral and medial ball regions **30***a*, **30***b*, and the upper lateral and medial metatarsal regions **28***a*, **28***b* collectively are knitted with the lateral and medial lines of broguing **40***a*, **40***b*. The lateral line of broguing **40***a* comprises a wing-shaped curved line of holes **42***a*. The lateral line of broguing **40***a* comprises a lateral side broguing portion **44***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central broguing portion **46***a* extending rearward from the upper toe region **32**. The lateral side broguing portion **44***a* and the central broguing portion **46***a* are each comprised of some of the holes **42***a* of the lateral line of broguing **40***a*. The medial line of broguing **40***b* comprises a wing-shaped curved line of holes **42***b*. The medial line of broguing **40***b* comprises a medial side broguing portion **44***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central broguing portion **46***b* extending rearward from the upper toe region **32**. The medial side broguing portion **44***b* and the central broguing portion **46***b* are each comprised of

some of the holes **42***b* of the medial line of broguing **40***b*. The central broguing portions **46***a*, **46***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **48**. The upper **14** further comprises a throat **50**. The apex **48** points rearwardly toward the throat **50** of the upper **14**. Preferably, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are in the knitting element via the knitting process as opposed to being formed by removal of material such as by cutting or punching.

The knitted element **20** comprises a first area, generally indicated at **52**, of a first type of knit structure and a second area, generally indicated at **54**, of a second type of knit structure. The second type of knit structure is different from the first type of knit structure. The first area **52** is generally forward of the second area **54**. The first area **52** has a rear boundary **56** and the second area **54** has a forward boundary **58**. The rear boundary **56** of the first area **52** and the forward boundary **58** of the second area **54** is coincident and coextensive with each other and define a boundary line **60** between the first and second areas **52**, **54**. The second wingtip pattern **38** comprises the boundary line **60**. The first wingtip pattern **36** is forward of and adjacent the second wingtip pattern **38**. Also, the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the boundary line **60**. As such the lateral and medial lines of broguing **40***a*, **40***b* are adjacent the rear boundary **56** of the first area **52**, and adjacent the forward boundary **58** of the second area **54**. The boundary line **60** has a lateral boundary line **60***a* and a medial boundary line **60***b*. The lateral boundary line **60***a* comprises a wing-shaped curved line having a lateral side portion **62***a* extending forward from at least the upper lateral metatarsal region **28***a* to the upper toe region **32**, and a central portion **64***a* extending rearward from the upper toe region **32**. The medial boundary line **60***b* comprises a wing-shaped curved line having a medial side portion **62***b* extending forward from at least the upper medial metatarsal region **28***b* to the upper toe region **32**, and a central portion **64***b* extending rearward from the upper toe region **32**. The central portions **64***a*, **64***b* of the lateral and medial boundary lines **60***a*, **60***b* converge rearwardly toward each other, and meet to constitute a rearwardly pointing apex **66**. The apex **66** points rearwardly toward the throat **50** of the upper **14**.

The first type of knit structure (that is, the knit structure of the first area **52**) may be more tightly knit than the second type of knit structure (that is, the knit structure of the second area **54**). In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. The knitted element **20** may be knitted with one or more yarns, such as polyester yarns, nylon yarns, cotton yarns, and spandex yarns. In one embodiment, the knitted element **20** is knitted of polyester covered spandex yarn and hot melt yarn, such that in the finished knitted element, the polyester covered spandex yarn constitutes at least 50% by mass (and more preferably at least 60% by mass), and the hot melt yarn constitutes at least 15% by mass (and more preferably at least 20% by mass but not more than 30% by mass). The hot melt yarn is knitted with the polyester covered spandex yarn during the knitting process. Preferably, the polyester covered spandex yarn has a linear density of between about 120 denier and about 180 denier, and the hot melt yarn has a linear density of between about 80 denier and about 120 denier. In addition to the polyester covered spandex yarn and the hot melt yarn, the knitted element **20** may be knitted with stretch yarn, with the stretch yarn preferably constituting at least 5% by mass of the knitted upper. If stretch yarn is included, it is preferably limited (but need not be limited) to the topline area of the knitted element **20** to provide a stretch function primarily in the ankle region of the upper **14** of the shoe **10**. Preferably, the polyester covered spandex yarn includes a double layer of polyester. Also preferably, the stretch yarn is spandex yarn. In another embodiment, the knitted element **20** is formed by knitting hot melt yarn with polyester yarn during the knitting process such that polyester yarn constitutes at least 50% by mass of the knitted element and the hot melt yarn constitutes at least 15% by mass of the knitted element.

FIG. **6** is a flow diagram of a method of making the shoe **10** of FIGS. **1-5**. In step **100**, the knitted element **20** is formed via a knitting machine, such as a CNC knitting machine, as a unitary one-piece construction. During the knitting step **100**, the upper lateral and medial heel regions **24***a*, **24***b* are knitted, the upper lateral and medial midfoot regions **26***a*, **26***b* are knitted, the upper lateral and medial metatarsal regions **28***a*, **28***b* are knitted, the upper lateral and medial ball regions **30***a*, **30***b* are knitted, and the upper lateral and medial toe regions **32***a*, **32***b* are knitted. By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed separately and then sewn or bonded together. As such, the upper toe region **32** is seamlessly knitted with the upper medial and lateral ball regions **30***a*, **30***b* during the knitting step, the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region **28** during the knitting step, the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions **26***a*, **26***b* during the knitting step, and the upper lateral and medial midfoot regions are seamlessly knitted with the upper lateral and medial heel regions **24***a*, **24***b* during the knitting step.

The knitted element **20** is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area **52** is of the first type of knit structure (e.g., jersey stitch knit) and the second area **54** is of the second type of knit structure (e.g., pointelle stitch knit). Also, the holes **42***a*, **42***b* of the lateral and medial lines of broguing **40***a*, **40***b* are formed via the knitting step, as opposed to being formed via removal of material (e.g., punching, cutting, etc.) after the knitting step. As shown in FIG. **5**, the knitted element **20** also includes lateral and medial heel areas **70***a*, **70***b* of the second type of knit structure (e.g., pointelle stitch knit), lateral and medial midfoot areas **72***a*, **72***b* of the second type of knit structure (e.g., pointelle stitch knit), and lateral and medial eyestay areas **74***a*, **74***b* of the second type of knit structure (e.g., pointelle stitch knit). Broguing holes forming lines of broguing (the same or similar in form and construction to the lateral and medial lines of broguing **40***a*, **40***b*) are between the lateral heel area **70***a* and the lateral midfoot area **72***a*, between the lateral midfoot area and the lateral eyestay area **74***a*, between the lateral midfoot region and the second area **52**, between the lateral eyestay area and the second area, between the medial heel area **70***b* and the medial midfoot area **72***b*, between the medial midfoot area and the medial eyestay area **74***b*, between the medial midfoot region and the second area, and between the medial eyestay area and the second area.

After the knitted element **20** is knitted via the knitting step **100**, the knitted element is pressed with a hot press during a pressing step, indicated at reference number **102** in FIG. **6**. During step **104**, the upper **14** is formed by attaching a strobel board **80** (see FIG. **2**)) to the knitted element **20**, attaching the tongue **22** to the knitted element, and attaching the upper lateral heel region **24***a* to the upper medial heel

region **24***b*. A heel counter **82** (see FIG. **1**) may also be attached to the inner surface of the upper lateral and medial heel regions **24***a*, **24***b*. The upper **14** is then placed around a last at step **106**. Adhesive is applied to the underside of the strobel board **80**, and the upper **14** is passed via a conveyer through an oven (or heat tunnel). The oven heats the adhesive and also heats the hot melt yarn of the knitted element **20**. The heating and subsequent cooling of the hot melt yarn causes the hot melt yarn to affix to the other yarns (e.g., to the polyester yarn or polyester covered spandex yarn) so that the upper **14** conforms to the shape of the last. The sole **12** and welt **16** are bonded via the adhesive to the strobel board **80** and bottom periphery of the knitted element at step **108**.

An inner surface of the knitted element **20** (i.e., the surface facing the inside of the shoe **10**) may be lined or unlined. In an unlined configuration, the inner surface of the knitted element **20** is devoid of a lining (other than the heel counter **82** or eyelet reinforcement adjacent the throat) and such inner surface of the knitted element defines at least a majority of a foot receiving cavity of the shoe. In a completely lined configuration, a lining is between the inner surface of the knitted element and the foot receiving cavity of the shoe such that the foot receiving cavity of the shoe is in part defined by the lining (instead of by the inner surface of the knitted element).

In view of the foregoing, it should be appreciated that the invention has several advantages over the prior art.

It should also be understood that when introducing elements of the present invention in the claims or in the above description of exemplary embodiments of the invention, the terms "comprising," "including," and "having" are intended to be open-ended and mean that there may be additional elements other than the listed elements. Additionally, the term "portion" should be construed as meaning some or all of the item or element that it qualifies. Moreover, use of identifiers such as first, second, and third should not be construed in a manner imposing any relative position or time sequence between limitations.

As various modifications could be made in the constructions and methods herein described and illustrated without departing from the scope of the invention, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative rather than limiting. Thus, the breadth and scope of the present invention should not be limited by any of the above-described exemplary embodiments, but should be defined only in accordance with the following claims appended hereto and their equivalents.

What is claimed is:

1. A method of manufacturing an article of footwear having a knit upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the knit upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, a knitted upper toe region, a knitted upper lateral side region including the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region, and the knitted upper lateral ball region, a knitted upper medial side region including the knitted upper medial midfoot region, the knitted upper medial metatarsal region, and the knitted upper medial ball region, a first area of a jersey stitch knit being at least in the knitted upper toe region, and a second area of a pointelle stitch knit being at least in the knitted upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, and a line of broguing adjacent the boundary line; and

attaching the sole to the knit upper;

the knitted upper toe region being seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting step,

the knitted upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step,

the knitted upper metatarsal region being seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting step, and

the first and second areas being knitted during the knitting step.

2. A method as set forth in claim **1**, further comprising

a medial boundary line and a lateral boundary line of the boundary line being formed during the knitting step; and

a medial line of broguing and a lateral line of broguing of the line of broguing being formed during the knitting step;

the medial line of broguing being adjacent the medial boundary line, the lateral line of broguing being adjacent the lateral boundary line, the medial line of broguing comprising a curved line of holes, and the lateral line of broguing comprising a curved line of holes.

3. A method as set forth in claim **1**, wherein the knit upper is knitted during the knitting step with at least first and second yarns, the first yarn being of a hot melt yarn, the second yarn being of a yarn other than a hot melt yarn.

4. A method as set forth in claim **3**, further comprising:

placing the knit upper around a last;

applying heat to the knit upper while the knit upper is around the last to cause the hot melt yarn to affix to the second yarn.

5. A method as set forth in claim **1**, wherein

the knitted element further includes a knitted lateral eyestay area and a knitted medial eyestay area, each knitted during the knitting step;

the knitted upper lateral midfoot region includes a knitted lateral midfoot area knitted during the knitting step;

the knitted upper medial midfoot region includes a knitted medial midfoot area knitted during the knitting step; and

the knitted element includes additional lines of broguing between the lateral midfoot area and the lateral eyestay area and between the medial midfoot area and the medial eyestay area, the additional lines of broguing being formed during the knitting step.

6. A method as set forth in claim **1**, wherein

the knitted upper lateral midfoot region includes a knitted lateral midfoot area knitted during the knitting step;

the knitted upper medial midfoot region includes a knitted medial midfoot area knitted during the knitting step; and

the knitted element includes additional lines of broguing between the lateral midfoot area and the second area

and between the medial midfoot area and the second area, the additional lines of broguing being formed during the knitting step.

7. A shoe comprising:

a knit upper;

a sole secured to the knit upper;

the knit upper having a knitted element, the knitted element being formed of a unitary one-piece construction during a knitting process on a knitting machine, the knitted element comprising a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, a knitted upper toe region and a line of broguing;

the knitted upper metatarsal region including a knitted upper lateral metatarsal region and a knitted upper medial metatarsal region,

the knitted element having a knitted upper lateral side region and a knitted upper medial side region, the knitted upper lateral side region including the knitted upper lateral midfoot region, the knitted upper lateral metatarsal region, and the knitted upper lateral ball region, the knitted upper medial side region including the knitted upper medial midfoot region, the knitted upper medial metatarsal region, and the knitted upper medial ball region,

the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the knitted upper toe region, the second area being at least in the knitted upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas, the boundary line being adjacent the line of broguing; and

the knitted upper toe region being seamlessly knitted with the knitted upper medial and lateral ball regions during the knitting process,

the knitted upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting process,

the knitted upper metatarsal region being seamlessly knitted with the knitted upper lateral and medial midfoot regions during the knitting process, and

the first and second areas being knitted during the knitting process.

8. A shoe as set forth in claim **7**, wherein the boundary line comprises a medial boundary line and a lateral boundary line, and wherein the line of broguing includes a medial line of broguing and a lateral line of broguing, the medial line of broguing being adjacent the medial boundary line, the lateral line of broguing being adjacent the lateral boundary line, the medial line of broguing comprising a curved line of holes, and the lateral line of broguing comprising a curved line of holes.

9. A shoe as set forth in claim **7**, wherein the knit upper is knitted during the knitting process with at least first and second yarns, the first yarn being of a hot melt yarn, the second yarn being of a yarn other than a hot melt yarn.

10. A shoe set forth in claim **9**, further comprising the hot melt yarn being affixed to the second yarn by heat applied to the knit upper while the knit upper is positioned around a last.

11. A shoe as set forth in claim **7**, wherein the knitted element further includes a knitted lateral eyestay area and a knitted medial eyestay area, the knitted upper lateral midfoot region including a knitted lateral midfoot area, the knitted upper medial midfoot region including a knitted medial midfoot area, and wherein broguing holes forming additional lines of broguing are between the lateral midfoot area and the lateral eyestay area and between the medial midfoot area and the medial eyestay area, wherein the knitted element is knitted with the broguing holes during the knitting process.

12. A shoe as set forth in claim **7**, wherein the knitted upper lateral midfoot region includes a knitted lateral midfoot area and the knitted upper medial midfoot region includes a knitted medial midfoot area, and wherein broguing holes forming additional lines of broguing are between the lateral midfoot area and the second area and between the medial midfoot area and the second area, wherein the knitted element is knitted with the broguing holes during the knitting process.

13. A shoe as set forth in claim **7**, wherein the knitted element further includes a knitted upper heel region formed during the knitting process.

* * * * *

Ex. D

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Boys

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(54) **SHOE MIDSOLE**

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(**) Term: **15 Years**

(21) Appl. No.: **29/542,318**

(22) Filed: **Oct. 13, 2015**

(51) **LOC (10) Cl.** **02-04**

(52) **U.S. Cl.**
USPC **D2/947**; D2/953; D2/960

(58) **Field of Classification Search**
USPC ..... D2/902, 906, 908, 916, 918, 925, D2/946–962, 977; 36/3 B, 22 R, 24.5, 25 R, 36/28, 32 R, 34 R, 59 C, 67 A, 103
CPC A43B 13/00; A43B 13/02; A43B 13/023; A43B 13/026; A43B 13/04; A43B 13/08; A43B 13/10; A43B 13/12; A43B 13/14; A43B 13/141; A43B 13/143; A43B 13/16; A43B 13/18; A43B 13/181; A43B 13/187; A43B 13/189; A43B 13/20; A43B 13/22; A43B 13/223; A43B 13/24; A43B 13/28; A43B 13/30; A43B 13/32; A43B 13/34; A43B 13/36
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D120,248	S *	4/1940	Sbicca	D2/950
2,394,704	A	2/1946	Loewer	
D157,034	S *	1/1950	Eldon	D2/902
D190,162	S	4/1961	Hubbard	
D235,701	S *	7/1975	Famolare	D2/947
D265,018	S *	6/1982	Vermonet	D2/954
D266,798	S *	11/1982	Famolare, Jr.	D2/950
4,364,190	A	12/1982	Yonkers	
D268,221	S *	3/1983	Argyropoulos	D2/950
D268,299	S *	3/1983	Argyropoulos	D2/960
4,680,877	A *	7/1987	Fink	A43B 7/06 36/3 B
D294,537	S	3/1988	Le	
4,785,557	A	11/1988	Kelley et al.	
4,918,838	A *	4/1990	Chang	A43B 1/0018 36/28
D321,584	S *	11/1991	Mitsui	D2/977
D325,288	S *	4/1992	Richard	D2/977
5,216,824	A	6/1993	Blissett et al.	
D368,576	S	4/1996	Assous	
D385,691	S *	11/1997	Egelja	D2/946
D394,143	S	5/1998	Sink	
D398,743	S	9/1998	Rask	
D399,345	S	10/1998	Koh	
5,918,385	A	7/1999	Sessa	
D415,607	S *	10/1999	Merceron	D2/951
D430,723	S	9/2000	Kim	
D432,292	S *	10/2000	Kim	D2/902
D434,547	S *	12/2000	Kim	D2/902

(Continued)

Primary Examiner — T. Chase Nelson
(74) *Attorney, Agent, or Firm* — Thompson Coburn LLP; Alan Norman

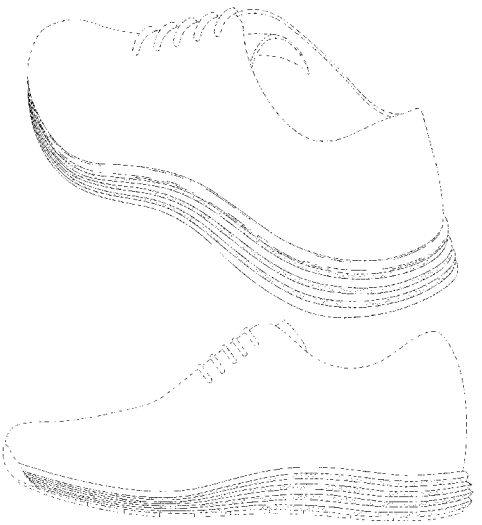
(57) **CLAIM**

The ornamental design for a shoe midsole, as shown and described.

DESCRIPTION

FIG. **1** is a perspective view of a shoe midsole showing the new design;
FIG. **2** is a lateral side elevational view thereof;
FIG. **3** is a medial side elevational view thereof;
FIG. **4** is a bottom plan view thereof;
FIG. **5** is a top plan view thereof;
FIG. **6** is a front elevational view thereof; and,
FIG. **7** is a rear elevational view thereof.
The broken lines are for the purpose of illustrating environmental structure; the broken lines form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

D466,278	S	*	12/2002	Smith, III	D2/977
D476,800	S		7/2003	Fuerst	
D498,901	S		11/2004	Hawker et al.	
D509,049	S		9/2005	McClaskie	
D511,617	S	*	11/2005	Matis	D2/947
7,047,670	B2	*	5/2006	Marvin	A43B 13/20 36/28
D554,840	S	*	11/2007	McClaskie	D2/953
D564,741	S	*	3/2008	Covatch	D2/953
D565,283	S		4/2008	Smith et al.	
7,353,625	B2	*	4/2008	Ellis	A43B 7/144 36/28
D568,594	S		5/2008	Ringholz	
D576,393	S	*	9/2008	Kaufman	D2/947
D579,649	S	*	11/2008	McDowell	D2/970
D593,741	S	*	6/2009	Vico	D2/951
D611,692	S		3/2010	Bizzo	
7,752,772	B2	*	7/2010	Hatfield	A43B 7/1415 36/29
D623,835	S		9/2010	Tzenos	
D624,291	S	*	9/2010	Henderson	D2/946
D632,876	S		2/2011	Choi	
D634,108	S		3/2011	Tzenos	
D636,567	S	*	4/2011	Raysse	D2/946
7,941,938	B2	*	5/2011	Yu	A43B 7/1415 36/25 R
D643,189	S	*	8/2011	Teteriatnikov	D2/946
D643,602	S		8/2011	Teteriatnikov	
D659,958	S	*	5/2012	Birkinhead	D2/946
D660,568	S		5/2012	Blakeslee	
D662,698	S	*	7/2012	Pulli	D2/947
D663,927	S	*	7/2012	Teng-Lee	D2/947
D666,795	S	*	9/2012	Shaffer	D2/947
D667,619	S		9/2012	Blakeslee	
D669,255	S	*	10/2012	Birkinhead	D2/947
D671,306	S		11/2012	Tzenos	
D671,723	S		12/2012	Teteriatnikov	
D672,123	S		12/2012	Williams, Jr.	
D675,003	S		1/2013	Leon et al.	
D680,308	S	*	4/2013	Hardman	D2/947
D684,348	S		6/2013	Castellon	
D685,166	S	*	7/2013	Hatfield	D2/947
D685,567	S		7/2013	Dolce	
D690,088	S		9/2013	Hardman	
D692,217	S	*	10/2013	Fogg	D2/947
D693,553	S		11/2013	McClaskie	
D694,497	S	*	12/2013	Taylor	D2/947
D694,498	S	*	12/2013	Carboy	D2/947
D694,499	S	*	12/2013	Williams, Jr.	D2/947
8,607,474	B2	*	12/2013	Spanks	A43B 1/0027 36/11.5
D696,852	S	*	1/2014	Madore	D2/972
8,732,986	B2		5/2014	Miner	
D707,949	S	*	7/2014	VanHook	D2/972
D709,676	S		7/2014	Iachini	
D710,579	S	*	8/2014	Williams, Jr.	D2/947
D713,625	S	*	9/2014	Raasch	D2/947
D713,626	S		9/2014	Raasch	
D714,035	S	*	9/2014	O'Connor	D2/947
D714,037	S	*	9/2014	Della Valle	D2/950
D717,034	S	*	11/2014	Bramani	D2/951
D723,773	S	*	3/2015	Raysse	D2/947
D725,356	S		3/2015	Miner	
D730,034	S		5/2015	Henderson	
D730,035	S		5/2015	Henderson	
D731,767	S	*	6/2015	Lan	D2/947
D735,453	S	*	8/2015	Monroy	D2/951
D735,462	S	*	8/2015	Pauk	D2/972
D737,039	S	*	8/2015	Pauk	D2/972
D737,040	S	*	8/2015	Pauk	D2/972
D740,007	S		10/2015	Lan	
D742,107	S	*	11/2015	Kasprzak	D2/951
D743,153	S	*	11/2015	Taylor	D2/947
D746,560	S	*	1/2016	Verfl	D2/947
D747,083	S	*	1/2016	Verfl	D2/947
D747,600	S	*	1/2016	Greenhalgh	D2/977
D748,383	S	*	2/2016	Raysse	D2/947
2005/0016021	A1	*	1/2005	Marvin	A43B 13/14 36/29
2005/0217140	A1		10/2005	Melis	
2006/0048412	A1		3/2006	Kerrigan	
2007/0169379	A1	*	7/2007	Hazenberg	A43B 13/125 36/102
2008/0141563	A1		6/2008	Meschan	
2009/0045546	A1		2/2009	Schindler et al.	
2011/0232130	A1		9/2011	Boudreau et al.	
2012/0005920	A1	*	1/2012	Alvear	A43B 13/125 36/28
2012/0096744	A1	*	4/2012	Goodsmith	A43B 3/108 36/103
2013/0125424	A1	*	5/2013	Lee	A43B 7/081 36/25 R
2013/0232821	A1		9/2013	Schindler et al.	
2013/0247422	A1		9/2013	Holt et al.	
2014/0059883	A1	*	3/2014	Adeagbo	A43B 13/187 36/28
2014/0150298	A1		6/2014	Crowley et al.	
2014/0259789	A1	*	9/2014	Dojan	A43B 1/0018 36/103
2014/0305006	A1		10/2014	Azoulay	
2015/0016021	A1		1/2015	Lane et al.	
2015/0101215	A1		4/2015	Henderson et al.	
2015/0143722	A1		5/2015	Faggin et al.	
2015/0150339	A1	*	6/2015	Van Hook	A43B 13/187 36/84
2015/0342300	A1	*	12/2015	Cin	A43B 13/386 36/103

* cited by examiner

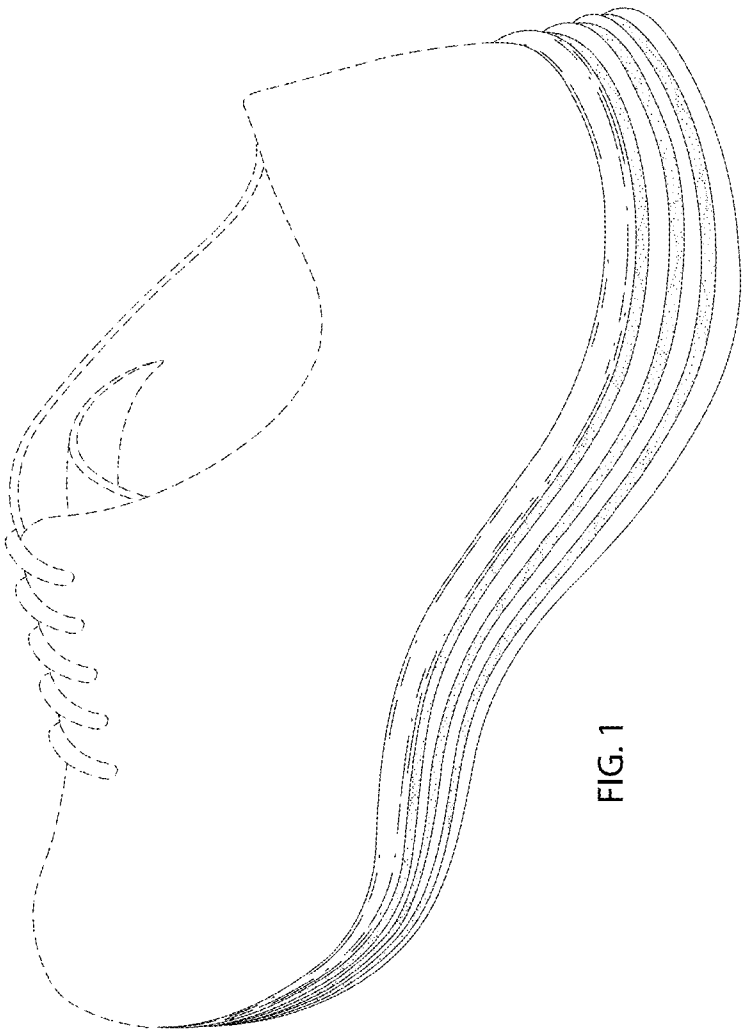


FIG. 1

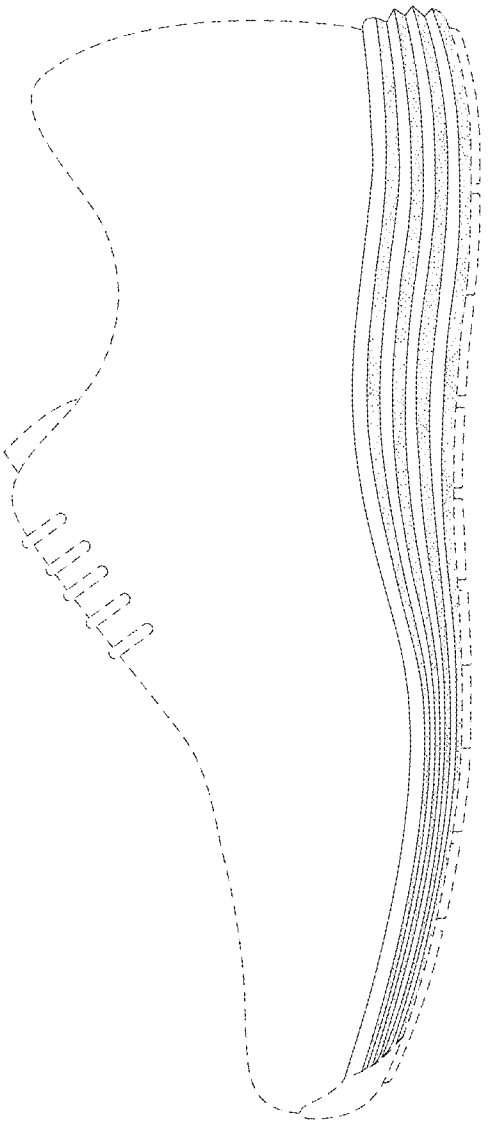


FIG. 2

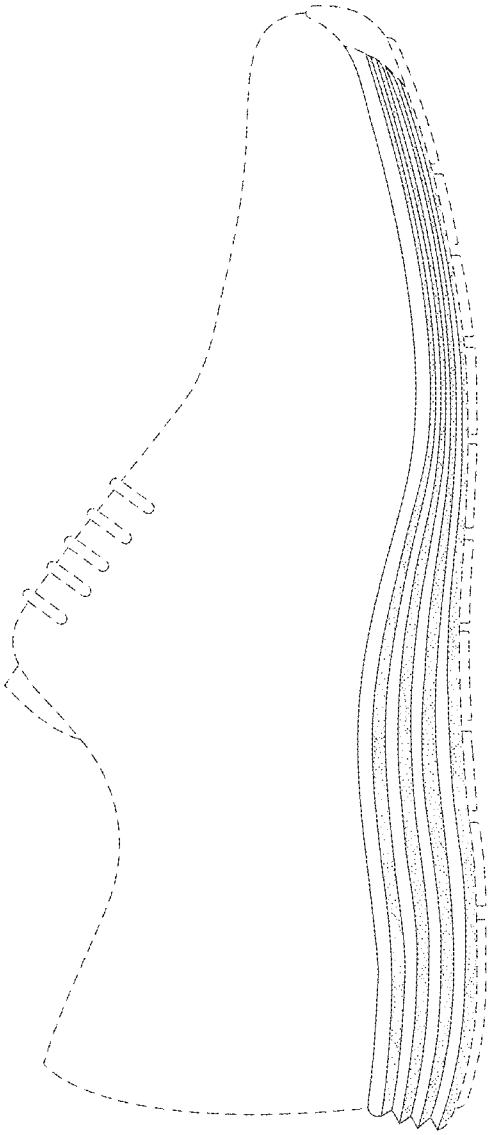


FIG. 3

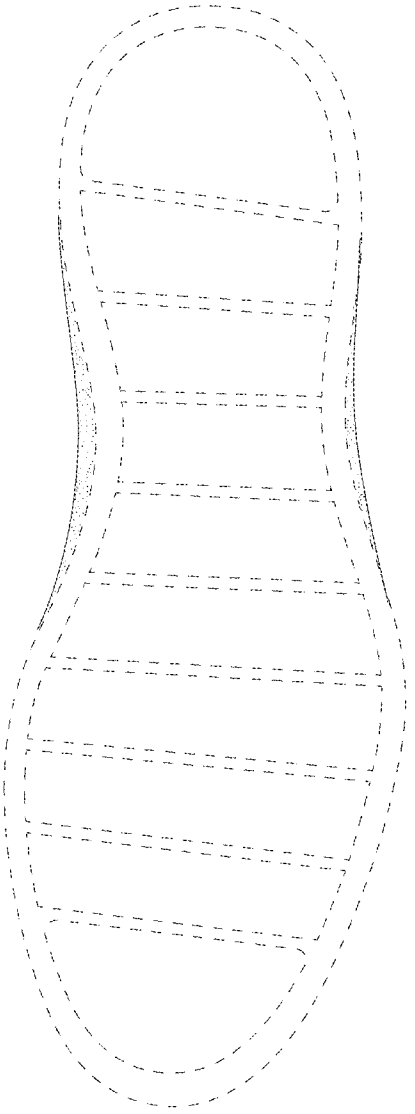


FIG. 4

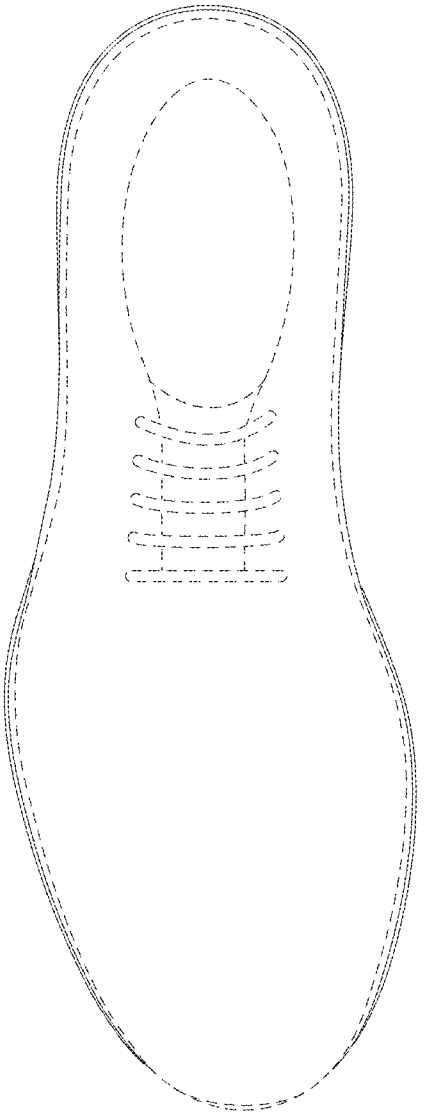


FIG. 5

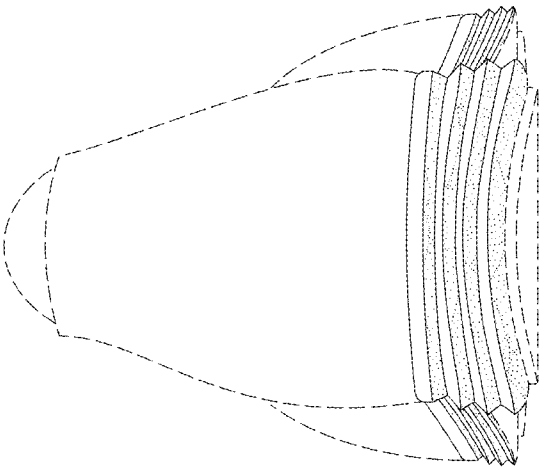


FIG. 7

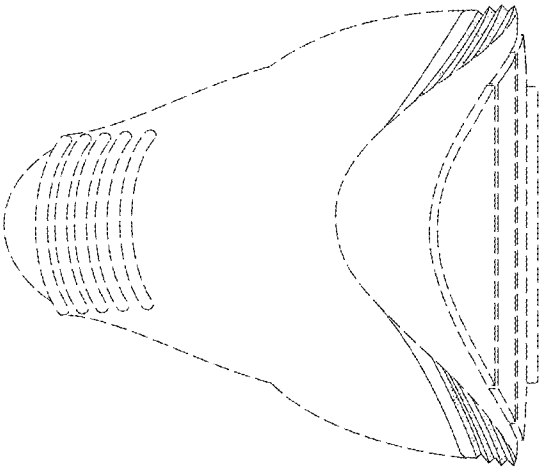


FIG. 6

Ex. E

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September 8, 2023

VIA ELECTRONIC MAIL – jason.xu@rimonlaw.com

Mr. Jason Xu
Rimon Law
1990 K Street, NW Suite 420
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Re: Infringement of Cole Haan's Patents (56503-220828)

Mr. Xu:

We represent Cole Haan LLC in intellectual property matters. Top Glory Trading Group Inc., as owner of the Bruno Marc brand and seller of Bruno Marc shoes, is infringing several Cole Haan patents, as explained in further detail below.

The manufacture, use, sale, offer for sale, or importation into the United States of the following shoes constitutes infringement of the following Cole Haan United States patents:

Infringing Shoes	**Asserted Patents**
	• 10,327,511 • 10,443,163
Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers	

	• 10,327,511 • 10,443,163
Men's Slip-on Sneakers Casual Loafers Lightweight Breathable Air Cushion Walking Shoes	
	• 10,327,511 • 10,443,163
Men's Walking Shoes Air Cushion Fashion Sneakers	

Each of the above-identified shoes infringes at least claim 21 of the '511 patent. Claim 21 of the '511 patent states:

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region

including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

Additionally, each of the above-identified shoes infringes at least claim 21 of the ’163 patent. Claim 21 of the ’163 patent states:

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;

the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

To resolve this matter amicably, Cole Haan insists that Bruno Marc immediately: (1) cease making, using, selling, offering for sale, and importing into the United States all identified infringing shoes (and any other shoes that are encompassed by Cole Haan’s patents); (2) recall any and all of the infringing shoes; (3) provide an accounting of all infringing shoes sold to date and any remaining inventory; and (4) propose how Bruno Marc intends to make Cole Haan whole for these infringements.

Please let us know by September 15, 2023, whether Bruno Marc intends to comply with the requirements identified in this letter. Cole Haan reserves its rights to seek all remedies available to Cole Haan.

Very truly yours,

Thompson Coburn LLP

By
Alan H. Norman
Partner

Carina Cao
Top Glory Trading Group Inc.
legal@mirmiles.com

Alan H. Norman
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St.Louis,MO 63101
anorman@thompsoncoburn.com

September 15, 2023

Subject: **reply to letter from Cole Haan LLC.**

Mr. Norman:

Top Glory Trading Group, Inc. as the owner of the Bruno Marc brand and seller of Bruno Marc shoes, what follows is the reply：

1. All the shoes sold by Top Glory Trading Group Inc. are designed, developed and produced solely and independently by itself, without any reference to shoes of other brands. In response to questions from Cole Haan's letter, we would like to negotiate with Cole Haan LLC in good faith and try to find the resolution.

2.After comparing our products with your claims, we believe that the first type of shoes mentioned in the letter is non-infringing, the specific explaination is attached in point 3. For the second and third type of shoes mentioned in the letter, there is a possibility of infringement.We are willing to take remedial measures as follows:

We have stopped selling the following two products since September 13th and stated that they would no longer be sold in the future.

	• 10,327,511 • 10,443,163
Men's Slip-on Sneakers Casual Loafers Lightweight Breathable Air Cushion Walking Shoes	
	• 10,327,511 • 10,443,163
Men's Walking Shoes Air Cushion Fashion Sneakers	

3.Regarding the first type of shoe mentioned in the letter, after comparison, we believe that we did not infringe the patent rights of US10327511 and US10443163, as explained in further detail below.

1） Claim 21 of the US10327511 patent states:

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region****, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;*

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

2） Claim 21 of the US10443163 patent states:

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region****, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the*

first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;

the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

3）Figures of Patent US10327511 or US10443163:

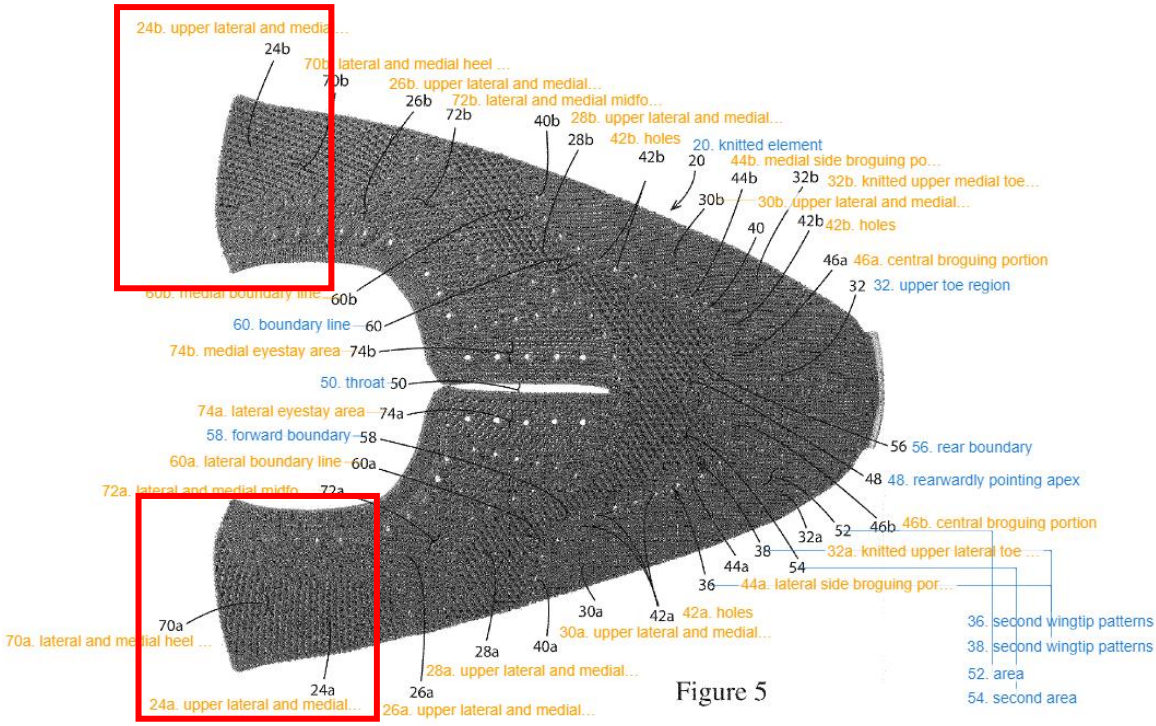


Figure 5

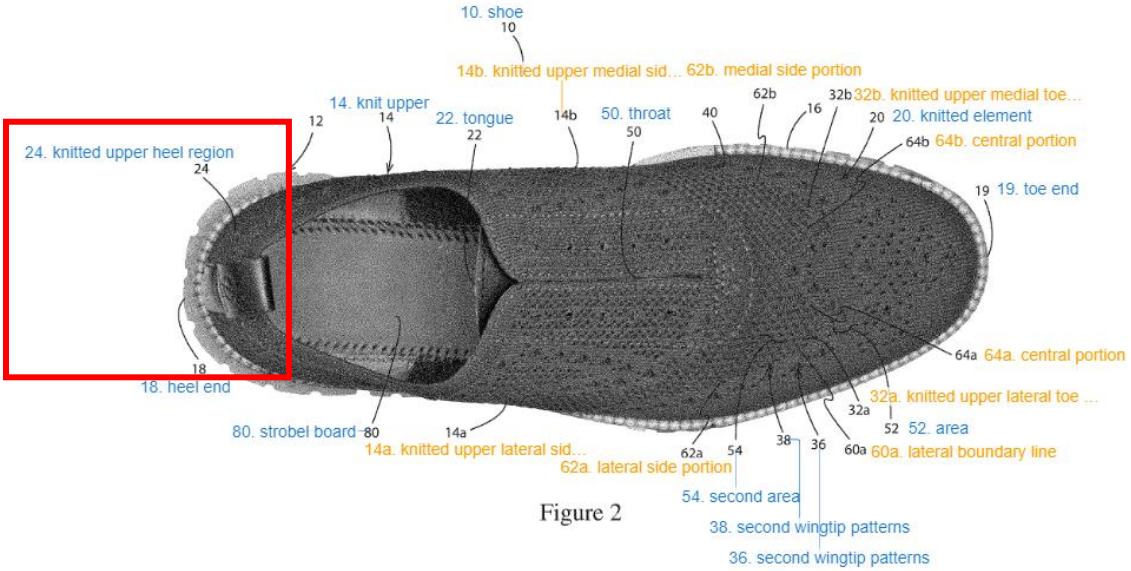
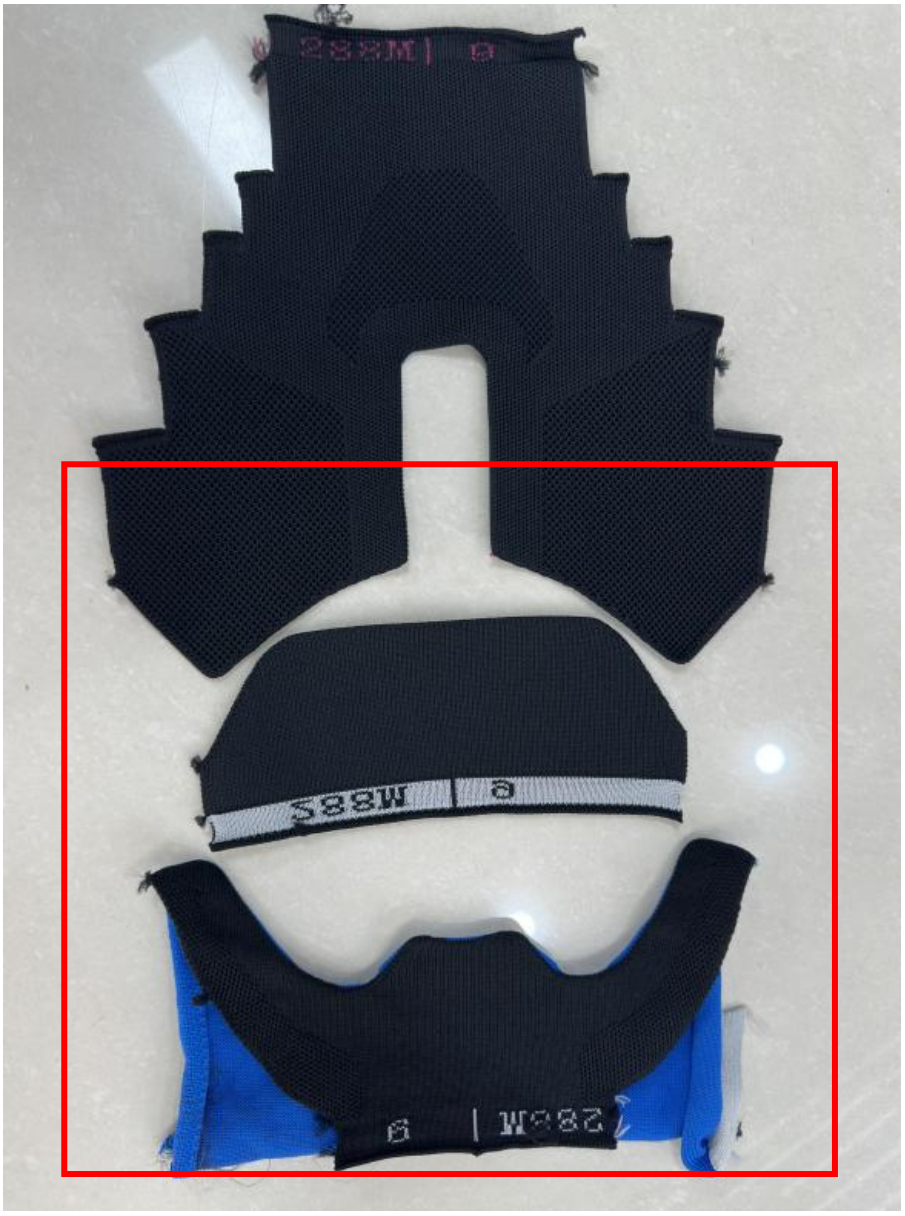


Figure 2

4） The upper structure of the first type of shoes mentioned in the letter.

▲Pictures of complete shoes



▲Fabric count and structure of the upper when taken apart

▲Schematic diagram of the placement of the fabric before the combination of the upper

The schematic diagram has intuitively shown that the heel of the shoe is not integrated with the other parts of the upper. This is inconsistent with the content protected by the claims of patents US10327511 or US10443163, which protect the shoe upper (including the heel) integrally formed from woven materials. So our behaviour of producing or selling the first type of shoes does not result in patent infringement of the patent rights of US10327511 or US10443163.

To sum up, we are willing to remove the commodity and promise to no longer sell the second and third type of products mentioned in the letter that may be considered infringing. However, with

respect to the first type of shoes mentioned in the letter, we consider that the shoes are non-infringing and we does not infringe the patents rights of US103275 11 and US10443163.

Very truly yours,

Top Glory Trading Group Inc.

Carina Cao

By

Carina Cao

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September 22, 2023

VIA ELECTRONIC MAIL – legal@mirmiles.com

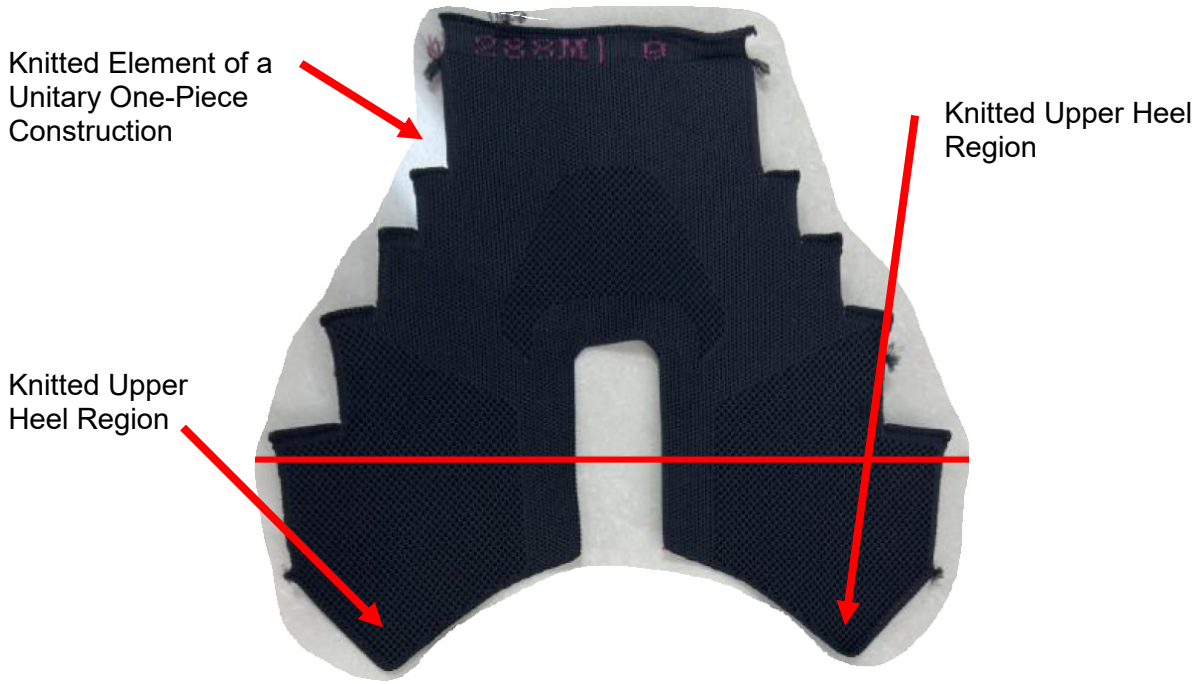
Carina Cao
Top Glory Trading Group Inc.

Re: Infringement of Cole Haan's Patents (56503-220828)

Ms. Cao:

Thank you for your letter of September 15, 2023. As to the Bruno Marc Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers, Top Glory's noninfringement position misunderstands the requirements of the claims. Claim 21 of the '511 patent requires "knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction" that comprises the various regions and structures set forth in claim 21. Claim 21 does not require that the entire upper be a unitary one-piece knitted element or that the unitary one-piece knitted element extend from the sole toe end to the sole heel end, it merely requires that the upper comprise a one-piece knitted element meeting the limitations of claim 21. Claim 21 of the '163 patent is identical in this respect.

As shown below, Top Glory's own images show that the shoe infringes claim 21 of both the '511 and '163 patents.



The basis for Top Glory's noninfringement argument seems to be that, because there is a separate heel component, the upper is not a unitary knitted element having all of the required regions due to an alleged lack of a heel region—Top Glory does not appear to dispute the existence of any other regions or structures of the knitted element. But the fact that the Top Glory shoe comprises separate components, including a separate heel component, is irrelevant. The rear most portion of the knitted element shown above constitutes a heel region; nothing in the claim requires the unitary member to extend to the heel end of the shoe. As shown above, the unitary knitted element comprises all of the required regions and structures, including the upper heel region. Accordingly, the Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers infringe the '511 and '163 patents.

Cole Haan is willing to resolve this matter amicably. While Cole Haan appreciates Bruno Marc's agreement to cease sales of the Men's Slip-On Sneakers Casual Loafers Lightweight Breathable Air Cushion Walking Shoes, and the Men's Walking Shoes Air Cushion Fashion Sneakers, Bruno Marc must also cease sales of the Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers. Further, Bruno Marc must also (1) recall any and all of the infringing shoes; (2) provide an accounting of all infringing shoes sold to date and any remaining inventory; and (3) propose how Bruno Marc intends to make Cole Haan whole for these infringements. Once such requirements are met, Cole Haan will be in a position to propose the terms on which it would resolve this matter.

Please let us know by September 27, 2023, whether Bruno Marc intends to comply with the requirements identified in this letter. Cole Haan reserves its rights to seek all remedies available to Cole Haan.

Very truly yours,

Thompson Coburn LLP

Alan H Norman

By
Alan H. Norman
Partner

Carina Cao
Top Glory Trading Group Inc.
legal@mirmiles.com

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anorman@thompsoncoburn.com

September 27, 2023

Subject: **reply to letter from Cole Haan LLC.**

Mr. Norman:

Top Glory Trading Group, Inc. as the owner of the Bruno Marc brand and seller of Bruno Marc shoes, what follows is the reply：

1. We believe that the first type of shoes is non-infringing for the following reasons and we are not willing to remove the commodity from our online store ：

Claim 21 of the US10327511：

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;

the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

Content of the specification corresponding to claim 21 is as follows：

The knitted element 20 is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element 20 comprises a knitted upper heel region 24, a

knitted upper lateral midfoot region 26a, a knitted upper medial midfoot region 26b, a knitted upper metatarsal region 28, a knitted upper lateral ball region 30a, a knitted upper medial ball region 30b, and a knitted upper toe region 32. The upper heel region 24 includes a knitted upper lateral heel region 24a and a knitted upper medial heel region 24b. The upper metatarsal region 28 includes a knitted upper lateral metatarsal region 28a and a knitted upper medial metatarsal region 28b. The knitted upper toe region 32 includes a knitted upper lateral toe region 32a and a knitted upper medial toe region 32b. The upper 14 has a knitted upper lateral side region 14a and a knitted upper medial side region 14b. The upper lateral side region 14a includes the upper lateral heel region 24a, the upper lateral midfoot region 26a, the upper lateral metatarsal region 28a, the upper lateral ball region 30a, and the upper lateral toe region 32a. The upper medial side region 14b includes the upper medial heel region 24b, the upper medial midfoot region 26b, the upper medial metatarsal region 28b, the upper medial ball region 30b, and the upper medial toe region 32b. The upper toe region 32 is seamlessly knitted with the upper lateral and medial ball regions 30a, 30b during the knitting process. The upper lateral and medial ball regions 30a, 30b are seamlessly knitted with the upper lateral and medial metatarsal regions 28a, 28b during the knitting process. The upper lateral and medial metatarsal regions 28a, 28b are seamlessly knitted with the upper lateral and medial midfoot regions 26a, 26b during the knitting process.

The first type of knit structure (that is, the knit structure of the first area 52) may be more tightly knit than the second type of knit structure (that is, the knit structure of the second area 54). In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. The knitted element 20 may be knitted with one or more yarns, such as polyester yarns, nylon yarns, cotton yarns, and spandex yarns. In one embodiment, the knitted element 20 is knitted of polyester covered spandex yarn and hot melt yarn, such that of the finished knitted element, the polyester covered spandex yarn constitutes at least 50% by mass (and more preferably at least 60% by mass), and the hot melt yarn constitutes at least 15% by mass (and more preferably at least 20% by mass but not more than 30% by mass).

Diagram：

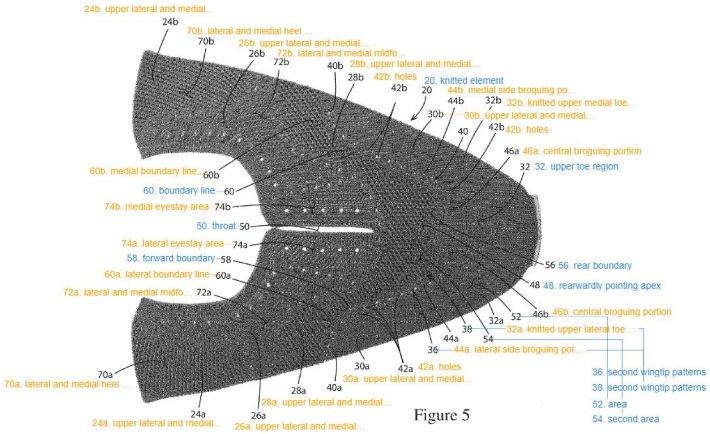

Figure 5

Claim 21 of the US10327511, along with the specification and accompanying drawings, clearly states the claim is protecting a knitted element which is formed of a unitary one-piece construction during a knitting process on a knitting machine. And the knitted element covers the

heel part of the shoe. Meanwhile there are two weaving methods for knitting elements, one is flat needle, and another is mesh.

2.Claim 21 of the US10443163：

21. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:

knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;

attaching the sole to the upper;

the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;

the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;

the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;

the first and second areas being knitted during the knitting step.

Content of the specification corresponding to claim 21 is as follows：

The knitted element 20 is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element 20 comprises a knitted upper heel region 24, a knitted upper lateral midfoot region 26a, a knitted upper medial midfoot region 26b, a knitted upper metatarsal region 28, a knitted upper lateral ball region 30a, a knitted upper medial ball region 30b, and a knitted upper toe region 32. The upper heel region 24 includes a knitted upper lateral heel region 24a and a knitted upper medial heel region 24b. The upper metatarsal region 28 includes a knitted upper lateral metatarsal region 28a and a knitted upper medial metatarsal region 28b. The knitted upper toe region 32 includes a knitted upper lateral toe region 32a and a knitted upper medial toe region 32b. The upper 14 has a knitted upper lateral side region 14a and a knitted upper medial side region 14b. The upper lateral side region 14a includes the upper lateral heel region 24a, the upper lateral midfoot region 26a, the upper lateral metatarsal region 28a, the upper lateral ball region 30a, and the upper lateral toe region 32a. The upper medial side region 14b includes the upper medial heel region 24b, the upper medial midfoot region 26b, the upper medial metatarsal region 28b, the upper

medial ball region 30b, and the upper medial toe region 32b. The upper toe region 32 is seamlessly knitted with the upper lateral and medial ball regions 30a, 30b during the knitting process. The upper lateral and medial ball regions 30a, 30b are seamlessly knitted with the upper lateral and medial metatarsal regions 28a, 28b during the knitting process. The upper lateral and medial metatarsal regions 28a, 28b are seamlessly knitted with the upper lateral and medial midfoot regions 26a, 26b during the knitting process.

The first type of knit structure (that is, the knit structure of the first area 52) may be more tightly knit than the second type of knit structure (that is, the knit structure of the second area 54). In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. The knitted element 20 may be knitted with one or more yarns, such as polyester yarns, nylon yarns, cotton yarns, and spandex yarns. In one embodiment, the knitted element 20 is knitted of polyester covered spandex yarn and hot melt yarn, such that of the finished knitted element, the polyester covered spandex yarn constitutes at least 50% by mass (and more preferably at least 60% by mass), and the hot melt yarn constitutes at least 15% by mass (and more preferably at least 20% by mass but not more than 30% by mass).

Claim 21 of the US10443163, along with the specification and accompanying drawings, clearly states the claim is protecting a knitted element which is formed of a unitary one-piece construction during a knitting process on a knitting machine. And the knitted element covers the heel part of the shoe. Meanwhile there are two weaving methods for knitting elements, one is flat needle, and another is mesh.

3.The schematic diagram has intuitively shown that the heel of the shoe is not integrated with the other parts of the upper. This is inconsistent with the content protected by the claims of patents US10327511 or US10443163, which protect the shoe upper (including the heel) integrally formed from woven materials. So our behaviour of producing or selling the first type of shoes does not result in patent infringement of the patent rights of US10327511 or US10443163.

▲Pictures of complete shoes

▲Fabric count and structure of the upper when taken apart

4.We consider that patent rights of US10327511 and US10443163 are unstable for the following reasons:

1）Comparison document 1：US7347011B2

2）Comparison document 2：US2312078A

3）Comparison document 3：KR300681267S

4）Comparison document 4：CN105246362B

5）Comparison document 5：US20220298682A1

According to section 103 of 35 U.S.C. ,the combination of five Comparison documents above has indicated a lack of Inventiveness in patent of US10327511 and US10443163 .

5.We have to declare again that all the shoes sold by Top Glory Trading Group Inc. are designed, developed and produced solely and independently by itself, without any reference to shoes of other brands. In response to questions from Cole Haan's letter, we would like to negotiate with Cole Haan LLC in good faith and try to find the resolution .

Very truly yours,

Top Glory Trading Group Inc.

Carina Cao

By

Carina Cao

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December 6, 2023

VIA ELECTRONIC MAIL – legal@mirmiles.com

Carina Cao
Top Glory Trading Group Inc.

Re: Infringement of Cole Haan's Patents (56503-220828)

Ms. Cao:

Thank you for your letter of September 27, 2023. Bruno Marc's recitation of portions of claim 21 and the specification is unavailing. Claim 21 of the '511 and '163 patents merely require the knitted element have a knitted heel region. In other words it requires only that the knitted element extend into the heel region. Claim 21 does not require that the knitted element cover the heel region entirely or extend to the heel end, nor does it prohibit the presence of other knitted pieces. Further, it is improper to import limitations from the specification into the claims. *See e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005). Accordingly, the Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers infringe both the '511 and '163 patents. And the cited prior art does not render the '511 and '163 patents invalid.

Cole Haan is willing to resolve this matter amicably. Bruno Marc must (1) cease sales of the Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers, (2) recall any and all of the infringing shoes; (3) provide an accounting of all infringing shoes sold to date and any remaining inventory; and (4) propose how Bruno Marc intends to make Cole Haan whole for these infringements.

Please let us know by December 15, 2023, whether Bruno Marc intends to comply with the requirements identified in this letter. Cole Haan reserves its rights to seek all remedies available to Cole Haan.

Very truly yours,

Thompson Coburn LLP

Alan H Norman

By
Alan H. Norman
Partner

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December 25, 2023

Subject: **reply to letter from Cole Haan LLC.**

Mr. Norman:

Top Glory Trading Group, Inc.（we) as the owner of the Bruno Marc brand and seller of Bruno Marc shoes, what follows is the reply：

1. Claim 21 of the '511 and '163 has clearly clarified the patentable subject matter : ***a unitary one-piece construction comprising a knitted upper heel region***, as follows:

Claim 21 of the '511 patent：
21. A method of manufacturing an article of footwear having
a knitted upper and a sole, the method comprising:
knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,*** *the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;*

attaching the sole to the upper;
the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;
the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;
the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;
the first and second areas being knitted during the knitting step.

Claim 21 of the '163 patent：
21. A method of manufacturing an article of footwear having
a knitted upper and a sole, the method comprising:
knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region****, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;*
attaching the sole to the upper;
the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;
the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;
the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;
the first and second areas being knitted during the knitting step.

2. Our purpose of the quotation of Detailed Description is explain our understanding of Claim stipulated in United States Patent NO'511 and NO'163 . As we all know ,the Detailed Description is exactly the specification of reasonable interpretation of the claim according to Title 35 of the United States Code.

3. Assume that the reasonable interpretation of Claim is consistent with the statement in Letter You send to us on 7th,Dec, in any circumstance that the knitted element extend into heel region shall be included in range of above Claim whether the knitted element dosen't cover the heel region entirely or extend to the heel end, nor does it prohibit the presence of other knitted pieces.
Based on the assumption above, the range of Claim of the United States Patent NO'511 and NO'163 shall be unreasonably broad, which may resulted in loss of its novelty and eligibility because of disclosure of the existing technology mentioned (US 7347011B2) in accordance with 35 U.S.C. Section 102, .

Besides, there is no content of Detailed Description demonstrate or embodied Your point of view: "In other words it requires only that the knitted element extend into the heel region. Claim 21 does not require that the knitted element cover the heel region entirely or extend to the heel end, nor does it prohibit the presence of other knitted pieces." .We believe the point above is not legitimate..

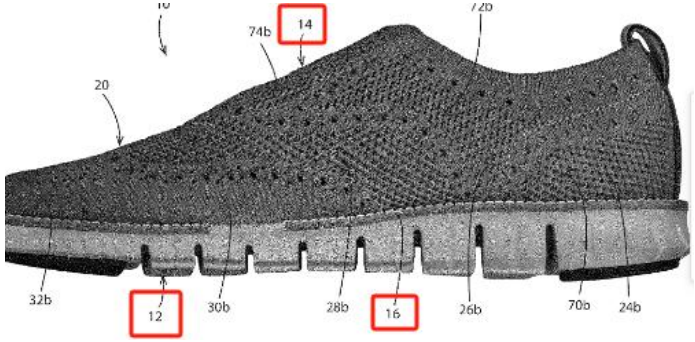
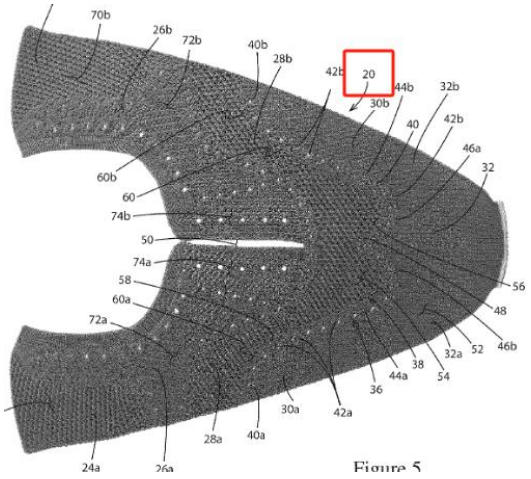
4. In order to support Our above argument , We make comparative analysis as following to show the similarity between Claim of the '511 and '163 and the existing technology mentioned US 7347011B2. In view of the claim 21 of both patents is identical, herein We will only take the Claim 21 as example :

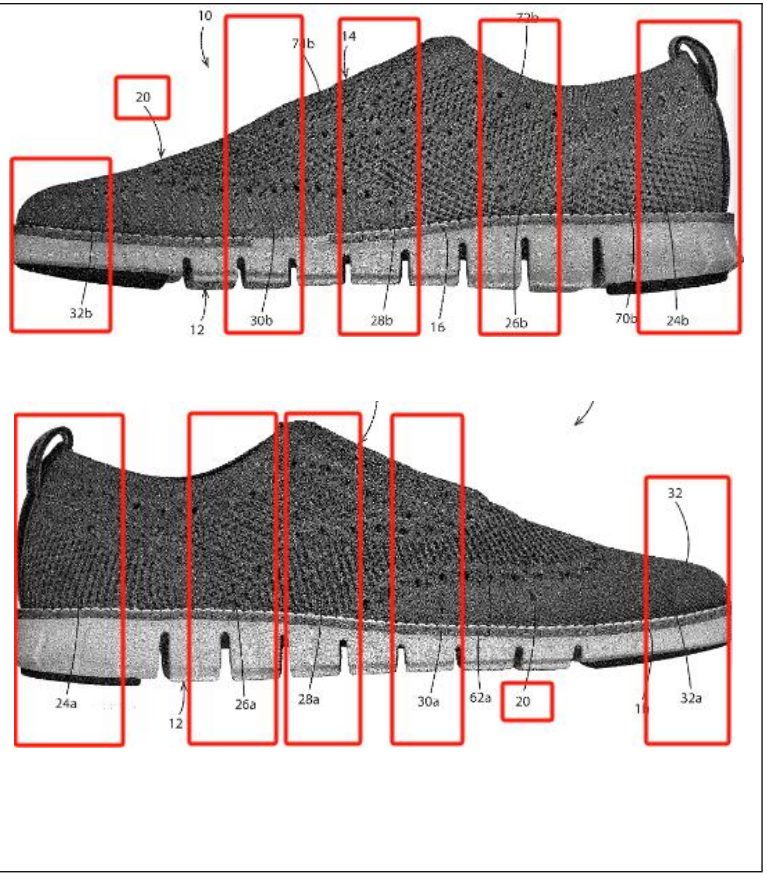
1）We specifically split the content of Claim21 into 18 parts in accordance with technical features as following to facilitate the analysis
21a.A method of manufacturing an article of footwear having
a knitted upper and a sole, the method comprising:
21b.knitting with a knitting machine to form a knitted element of the upper such that **the knitted element is of a unitary one-piece**
21c.**construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,**
21d.the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region,
21e.the knitted element having an upper lateral side region and an upper medial side region,
21f.the upper lateral side region including the upper lateral midfoot region,the upper lateral metatarsal region and the upper lateral ball region,
21g.the upper medial side region including the upper medial midfoot region,the upper medial metatarsal region and the upper medial ball region,
21h.the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit,
21i.the first area being at least in the upper toe region,

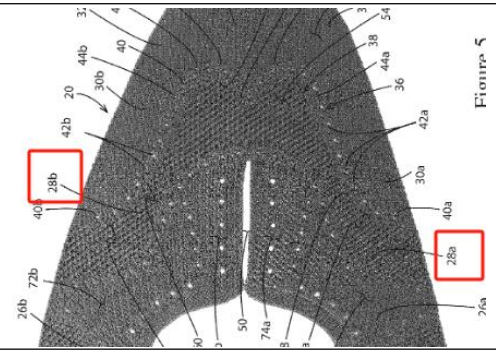
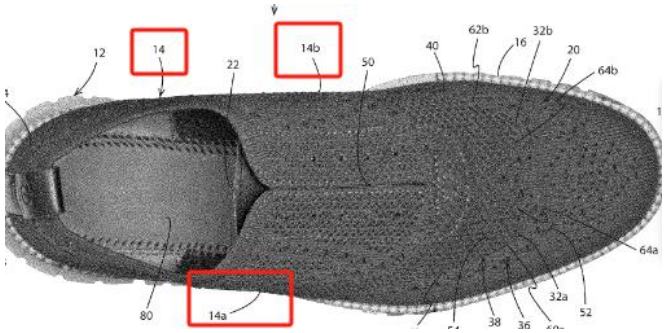
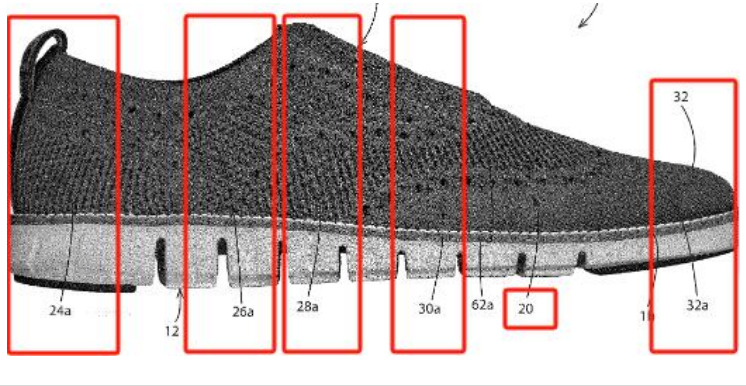
21j.the second area being at least in the upper lateral and medial metatarsal regions,
21k.the first area having a rear boundary,
21l.the second area having a forward boundary,
21m.the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;
21n.attaching the sole to the upper;
21o.the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;
21p.the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;
21q.the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;
21r.the first and second areas being knitted during the knitting step.

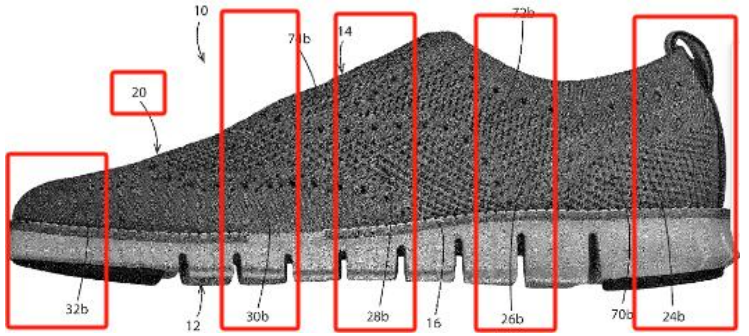
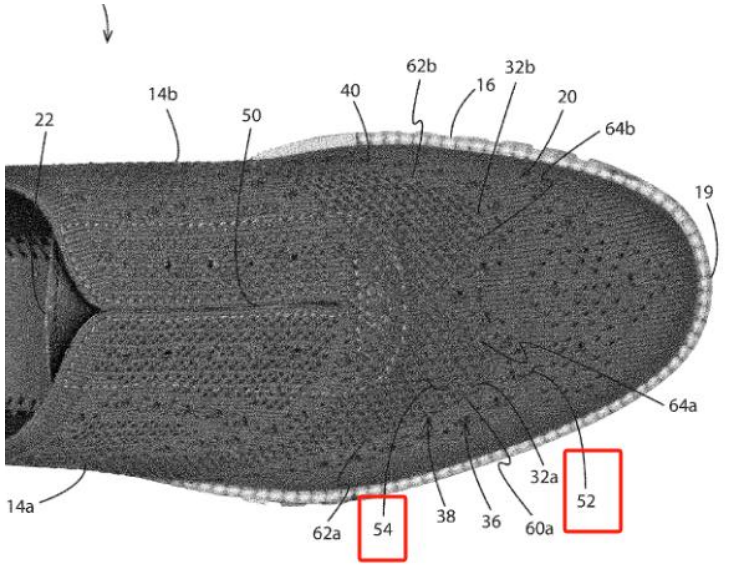
2）We will specify our interpretation of Claim 21 based on the corresponding description and the accompanying Diagram

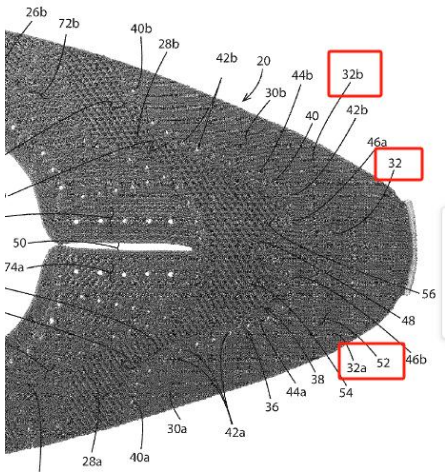
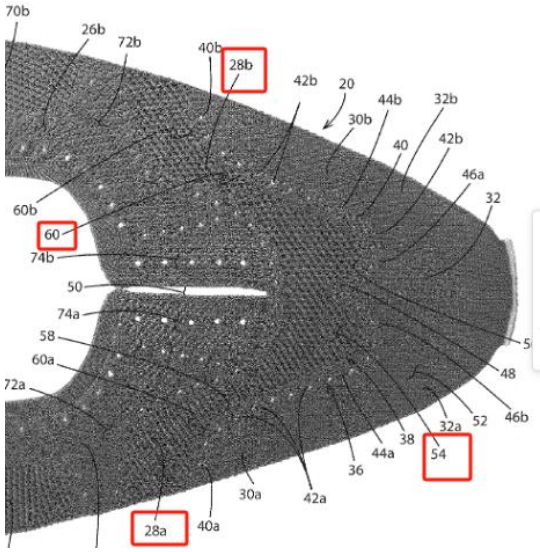
Exhibit A		
US10443163		
Claim 21	Contents of the instructions	Diagram

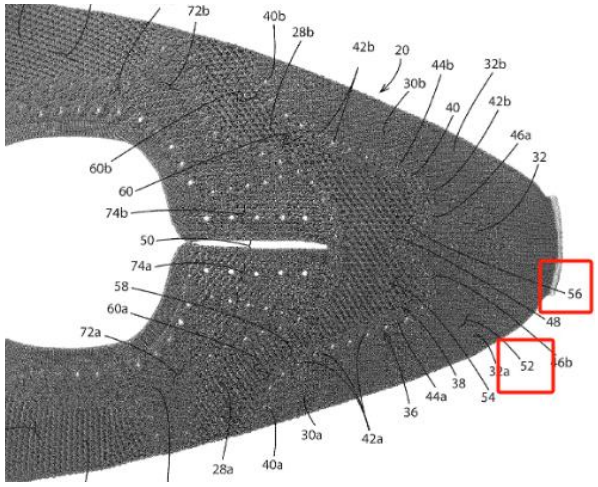
21a. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:	Row 48, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.	
21b. knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece	Row 53, Column 3: The knitted element 20 is shown alone in FIG. 5. Row 5, Column 6: By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed separately and then sewn or bonded together.	 Figure 5

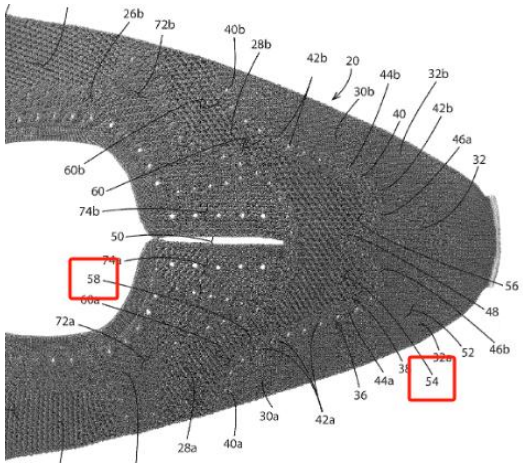
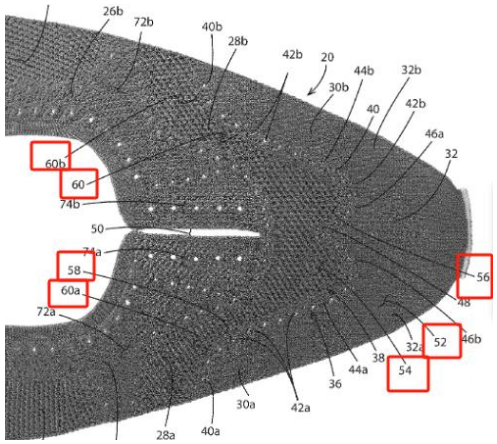
21c. construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,	Row 56, Column 3: The knitted element 20 is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element 20 comprises a knitted upper heel region 24, a knitted upper lateral midfoot region 26a, a knitted upper medial midfoot region 26b, a knitted upper metatarsal region 28, a knitted upper lateral ball region 30a, a knitted upper medial ball region 30b, and a knitted upper toe region 32.	

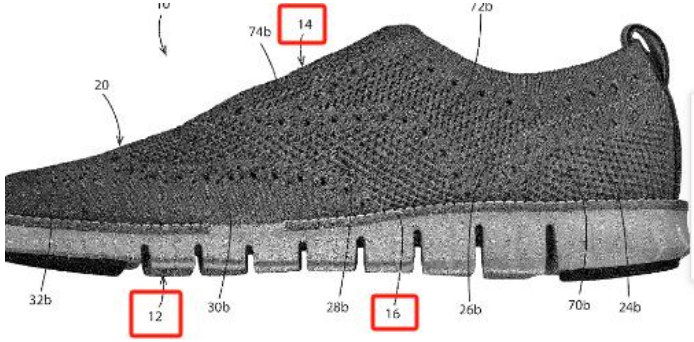
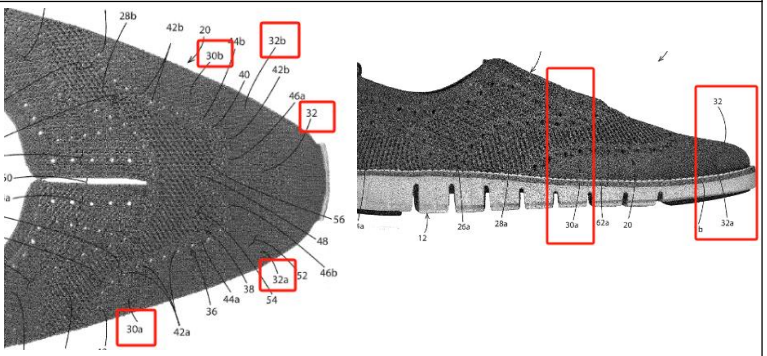
21d. the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region,	Row 65, Column 3: The **upper metatarsal region 28** includes a knitted upper lateral metatarsal region 28a and a knitted upper medial metatarsal region 28b.	
21e. the knitted element having an upper lateral side region and an upper medial side region,	Row 3, Column 4: The **upper 14** has a knitted **upper lateral side region 14a** and a knitted **upper medial side region 14b.**	
21f. the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region,	Row 4, Column 4: The **upper lateral side region 14a** includes the upper lateral heel region 24a, the upper lateral midfoot region 26a, the upper lateral metatarsal region 28a, the upper lateral ball region 30a, and the upper lateral toe region 32a.	

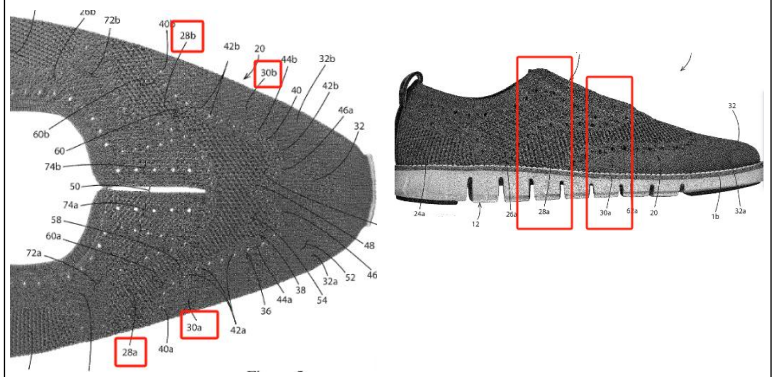
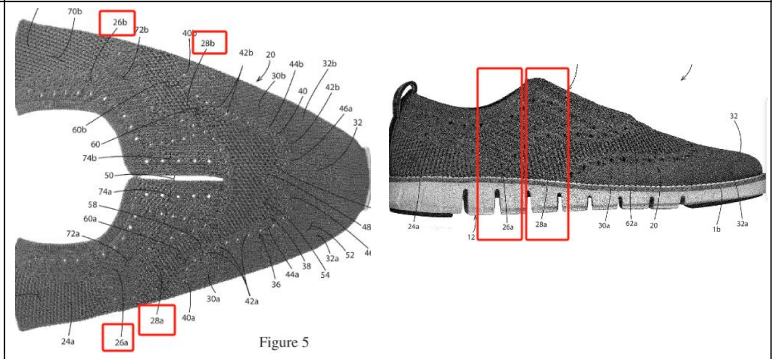
21g. the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region,	Row 8, Column 4: The **upper medial side region 14b** includes the upper medial heel region 24b, the upper medial midfoot region 26b, the upper medial metatarsal region 28b, the upper medial ball region 30b, and the upper medial toe region 32b.	
21h. the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit,	Row 63, Column 4: The knitted element 20 comprises **a first area**, generally indicated at **52**, of a first type of knit structure and **a second area**, generally indicated at **54**, of a second type of knit structure. Row 32, Column 5: In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. Row 21, Column 6: As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).	

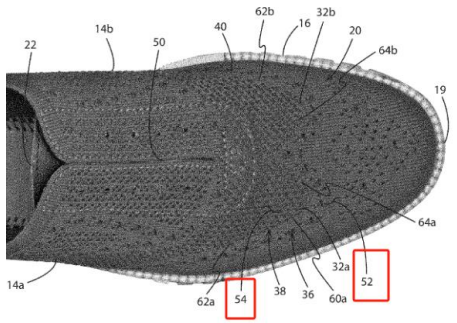
21i. the first area being at least in the upper toe region,	Row 3, Column 5: The rear boundary 56 of the first area 52 and the forward boundary 58 of the second area 54 is coincident and coextensive with each other and define a boundary line 60 between the first and second areas 52, 54. The second wingtip pattern 38 comprises the boundary line 60. The first wingtip pattern 36 is forward of and adjacent the second wingtip pattern 38. Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54. The boundary line 60 has a lateral boundary line 60a and a medial boundary line 60b. The lateral boundary line 60a comprises a wing-shaped curved line having a lateral side portion 62a extending forward from at least the upper lateral metatarsal region 28a to the upper toe region 32, and a central portion 64a extending rearward from the upper toe region 32. The medial boundary line 60b comprises a wing-shaped curved line having	
21j. the second area being at least in the upper lateral and medial metatarsal regions,		

	a medial side portion 62b extending forward from at least the upper medial metatarsal region 28b to the upper toe region 32, and a central portion 64b extending rearward from the upper toe region 32.	
21k. the first area having a rear boundary,	Row 1, Column 5: The first area 52 has a rear boundary 56. Row 9, Column 5: Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54.	

211. the second area having a forward boundary,	Row 2, Column 5: the second area 54 has a forward boundary 58 Row 9, Column 5: Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54.	
21m. the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;	Row 3, Column 5: The rear boundary 56 of the first area 52 and the forward boundary 58 of the second area 54 is coincident and coextensive with each other and define a boundary line 60 between the first and second areas 52, 54.	

21n. attaching the sole to the upper;	Row 48, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.	
21o. the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;	Row 10, Column 6: As such, the upper toe region 32 is seamlessly knitted with the upper medial and lateral ball regions 30a, 30b during the knitting step	

21p. the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;	Row 12, Column 6: the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region 28 during the knitting step,	
21q. the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;	Row 14, Column 6: the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions 26a, 26b during the knitting step,	 Figure 5

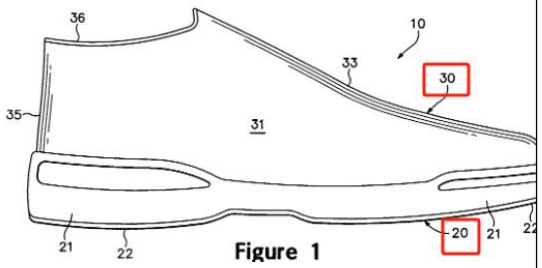
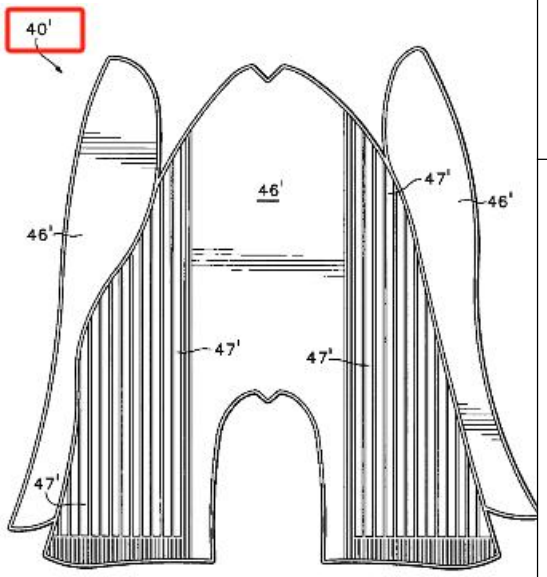
21r. the first and second areas being knitted during the knitting step.	Row 20, Column 6: The knitted element 20 is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).	

In conclusion,We believe that our argument the knitted element should be molded in unitary one piece, as been described in claim 21, is reasonable.

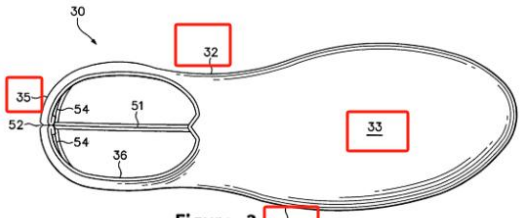
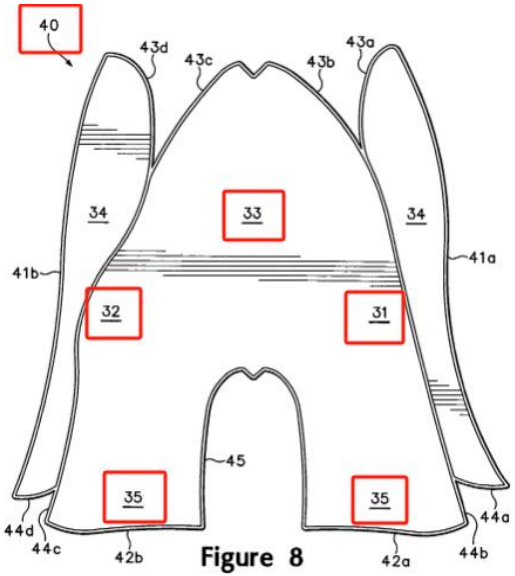
3) Based on the analysis and argument above,we will make comparative analysis of Claim21 and Claim of US patent No.US7347011B2 as following.

PS.The '511 and '163 patents have been filed on the date of 2016-07-08; US patent No.US7347011B2 has been filed on the date of 2004-03-03.

	Exhibit B		
Claim 21 of the US10443163	Reference 1 - US7347011B2		
Claim	Contents of the instructions	Diagram	Conclusion

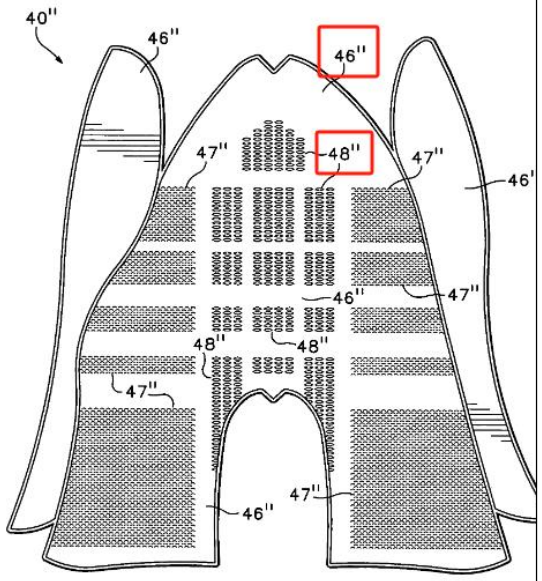
21a. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:	Row 40, Column 4: The primary elements of footwear 10 are depicted in FIG. 1 as being a sole structure 20 and an upper 30. Upper 30 is at least partially formed from a textile element 40 that defines an interior void for comfortably receiving a foot and securing a position of the foot relative to sole structure 20. In some embodiments, textile element 40 may form substantially all of upper 30, or textile element 40 may only be a portion of an upper.	 Figure 1 	Technology described in Claim 21 has been publicly disclosed
21b. knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece	Row 35, Column 5: Upper 30 is at least partially formed from textile element 40, which forms regions 31-35, and may also include laces or other elements associated with a conventional upper for footwear. Textile element 40 is a single material element that is formed to exhibit a unitary (i.e., one-piece) construction, and textile element 40 is formed or otherwise shaped to extend around the foot. Row 41, Column 6: Textile element 40 is a single material element with a unitary construction, as discussed above. As defined for purposes of		A one-piece knitted upper is part of Reference 1 .

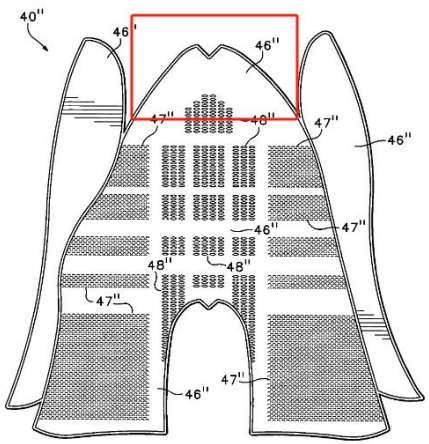
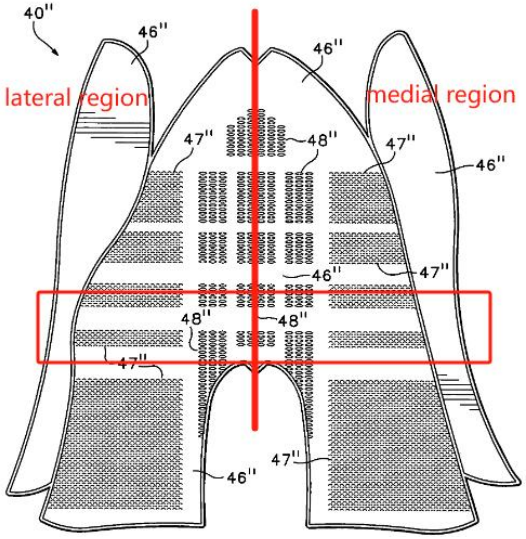
	the present invention, unitary construction is intended to express a configuration wherein portions of a textile element are not joined together by seams or other connections, as depicted with textile element 40 in FIG. 8. Although the various edges 41a-44d are joined together to form seams 51-54, the various portions of textile element 40 are formed as an unitary element without seams.		

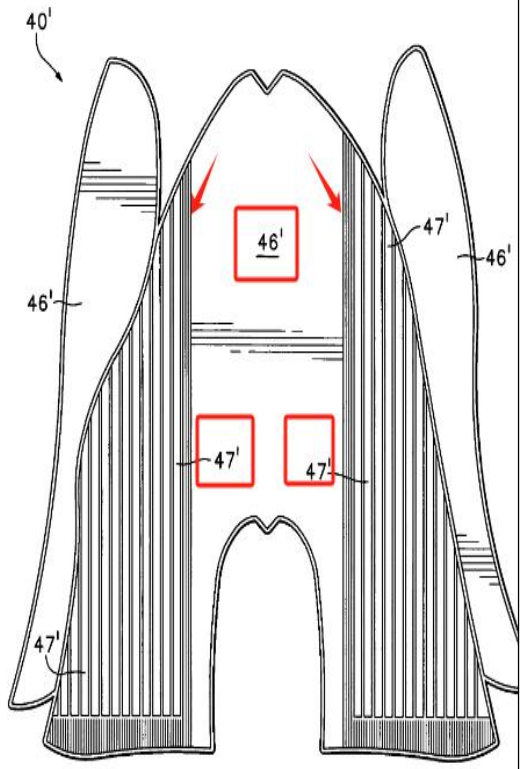
21c. construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,	Row 18, Column 5: Upper 30 is depicted in FIGS. 2-7 as having a lateral region 31, an opposite medial region 32, an instep region 33, a lower region 34, and a heel region 35. Lateral region 31 extends through a longitudinal length of footwear 10 and is generally configured to contact and cover a lateral side of the foot. Medial region 32 has a similar configuration that generally corresponds with a medial side of the foot. Instep region 33 is positioned between lateral region 31 and medial region 32, and instep region 33 extends over an instep area of the foot. Lower region 34 forms a bottom surface of upper 30 and also extends through the longitudinal length of footwear 10. Heel region 35 forms a rear portion of upper 30 and is generally configured to contact and cover a heel area of the foot. Row 35, Column 5: Upper 30 is at least partially formed from textile element 40, which forms regions 31-35, and may also include laces or other elements associated with a conventional upper for footwear. Textile element 40 is a single material element that is formed to exhibit a unitary (i.e., one-piece) construction, and textile element 40 is formed	 Figure 3  Figure 8	The regions of which separately comprised the one-piece knit molded upper in Reference 1 and the upper heel region, upper lateral midfoot region, upper medial midfoot region, upper metatarsal region, upper lateral ball region, upper medial ball region, and upper toe region in Claim 21 are both the same essential regions of any shoes' upper, which leading to the publicly diaclosure of technology

	or otherwise shaped to extend around the foot.		described in Claim 21
21d. the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region,			The inner and outer side regions of which comprised the upper in Reference 1 . And the “upper heel region, upper lateral midfoot

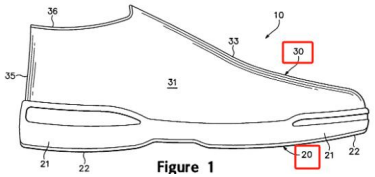
21e. the knitted element having an upper lateral side region and an upper medial side region,			region, upper medial midfoot region, upper metatarsal region, upper lateral ball region, upper medial ball region, and upper toe region" in Claim 21 are the same regions, which leading to disclosure of technology described in Claim 21.
21f. the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region,			
21g. the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region,			

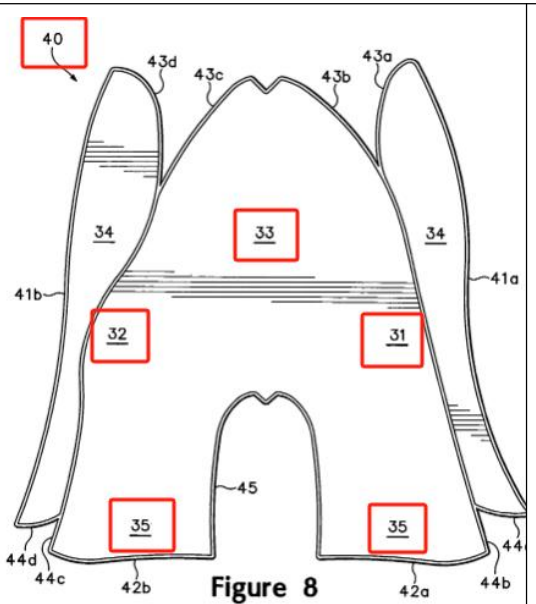
21h. the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit,	Row 38, Column 9: Textile element 40″ includes areas with three different textures. A first texture 46″ is generally smooth and has the configuration of various strips that extends laterally across areas corresponding with lateral region 31, medial region 32, and instep region 33. Various portions of textile element 40″ also include a second texture 47″, which is generally rough in comparison with first texture 46″. In addition, the area of textile element 40″ corresponding with instep region 33 includes a third texture 48″. Third texture 48″ is formed to include a plurality of apertures that extend through textile element 40″. The apertures may be formed by omitting stitches at specific locations during the wide-tube circular knitting process. Row 31, Column 9: Textile element 40' also exhibits smooth and textured areas. In contrast with the conventional upper, however, first texture 46' and second texture 47' are incorporated into a single, unitary element of textile.	 Figure 11	The smooth region 46 in Reference 1 is similar to the "a first area of a jersey stitch knit" in Claim 21, the texture region 48 in Reference 1 is similar tothe "a pointelle stitch knit" in Claim 21,which leading to disclosure of technology described in Claim 21.

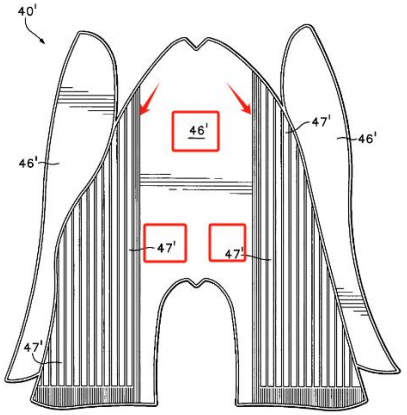
21i. the first area being at least in the upper toe region,	Row 38, Column 9: Textile element 40″ includes areas with three different textures. A first texture 46″ is generally smooth and has the configuration of various strips that extends laterally across areas corresponding with lateral region 31, medial region 32, and instep region 33. Various portions of textile element 40″ also include a second texture 47″, which is generally rough in comparison with first texture 46″. In addition, the area of textile element 40″ corresponding with instep region 33 includes a third texture 48″. Textures 46″-48″ may exhibit aesthetic differences, or the differences may be structural. The air-permeability of textile element 40″ may also vary in the different areas. Third texture 48″ is formed to include a plurality of apertures that extend through textile element 40″. The apertures may be formed by omitting stitches at specific locations during the wide-tube circular knitting process, and the apertures facilitate the transfer of air between the void within upper 20 and the area outside of upper 20.		The area of smooth texture extending into the entire upper in Reference 1 is similar to the ″upper toe region″ in claim 21 ,which leading to disclosure of technology in Claim 21.
21j. the second area being at least in the upper lateral and medial metatarsal regions,			The area with the pore texture in Reference 1 is similar to the “inner and outer sides of the upper” in Claim 21,which leading to disclosure of technology in Claim 21.

21k. the first area having a rear boundary, 211. the second area having a forward boundary,	Row 23, Column 9: Accordingly, textile element 40′ exhibits areas with different textures in a single element of textile material. Row 31, Column 9: Textile element 40′ also exhibits smooth and textured areas. In contrast with the conventional upper, however, first texture 46′ and second texture 47′ are incorporated into a single, unitary element of textile, rather than two separate elements that are stitched or otherwise joined together. Row 38, Column 9: Textile element 40″ includes areas with three different textures. A first texture 46″ is generally smooth and has the configuration of various strips that extends laterally across areas corresponding with lateral region 31, medial region 32, and instep region 33. Various portions of textile element 40″ also include a second texture 47″, which is generally rough in comparison with first texture 46″. In addition, the area of textile element 40″ corresponding with instep region 33 includes a third texture 48″. The different textures 46″-48″ are formed by merely varying the type of stitch formed by the wide-tube		The combination with embodiment and the drawings on left has indicated tha there are 2 boundaries between distinct regions .

21m. the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;	circular knitting machine at each location of textile element 40″. Textures 46″-48″ may exhibit aesthetic differences, or the differences may be structural. For example, the degree of stretch in areas with textures 46″-48″ may be different, or the wear resistance of the areas may vary depending upon the stitch utilized. The air-permeability of textile element 40″ may also vary in the different areas. Third texture 48″ is formed to include a plurality of apertures that extend through textile element 40″.Accordingly, the various stitches formed in textile element 40″, or one of textile elements 40 or 40′, may be utilized to vary the texture, physical properties, or aesthetics of footwear 10 within a single, unitary element of material.		and the rear boundary of the first area and the forward boundary of the second area are coincident.which leading to disclosure of technology in Claim 21.

21n. attaching the sole to the upper;	Row 38, Column 9: The primary elements of footwear 10 are depicted in FIG. 1 as being a sole structure 20 and an upper 30. Upper 30 is at least partially formed from a textile element 40 that defines an interior void for comfortably receiving a foot and securing a position of the foot relative to sole structure 20. In some embodiments, textile element 40 may form substantially all of upper 30, or textile element 40 may only be a portion of an upper.	Figure 1	Technology described in Claim 21 has been publicly disclosed
21o. the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;	Row 18, Column 5: Upper 30 is depicted in FIGS. 2-7 as having a lateral region 31, an opposite medial region 32, an instep region 33, a lower region 34, and a heel region 35. Lateral region 31 extends through a longitudinal length of footwear 10 and is generally configured to contact and cover a lateral side of the foot. Medial region 32 has a similar configuration		The regions comprised the one-piece knit molded upper in Reference 1 and the different region of upper in Claim 21 are the

21p. the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;	that generally corresponds with a medial side of the foot. Instep region 33 is positioned between lateral region 31 and medial region 32, and instep region 33 extends over an instep area of the foot. Lower region 34 forms a bottom surface of upper 30 and also extends through the longitudinal length of footwear 10. Heel region 35 forms a rear portion of upper 30 and is generally configured to contact and cover a heel area of the foot. Row 35, Column 5: Upper 30 is at least partially formed from textile element 40, which forms regions 31-35, and may also include laces or other elements associated with a conventional upper for footwear. Textile element 40 is a single material element that is formed to exhibit a unitary (i.e., one-piece) construction, and textile element 40 is formed or otherwise shaped to extend around the foot.	 Figure 8	same essential part of any shoes' upper, which leading to disclosure of technology described in Claim 21
21q. the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;			

21r. the first and second areas being knitted during the knitting step.	Row 23, Column 9: Accordingly, textile element 40′ exhibits areas with different textures in a single element of textile material. Row 31, Column 9: Textile element 40′ also exhibits smooth and textured areas. In contrast with the conventional upper, however, first texture 46′ and second texture 47′ are incorporated into a single, unitary element of textile, rather than two separate elements that are stitched or otherwise joined together.		The one piece knitted upper extended into the entire upper in Reference 1 is similar to the regions in Claims 21 , which leading to disclosure of technology in Claim 21.

5. We also fund that （i）some part of Claim of US patent '511 and '163 may has been disclosed in existing technology mentioned (US 7347011B2), （ii）some part of may Claim of US patent '511 and '163 may be considered as lacking of creativity because of the existence of US patent 7347011B2 and 2312078A according to 35 U.S.C. Section 103.

6. In view of the above, we believe it is practicable to file an invalidation action against the US patent '511 and '163 with the U.S. Federal Court on the grounds that the technology contained in Claim is not novel .Furthermore we are not willing to take such action facilely unless we believe we have no other choice or

method to protect our legal rights and our business has been badly impacted .Instead, we still prefer to negotiate and solve this problem with you in a friendly and harmonious way.

The above is all the replies, thank you very much for your letter.

Very truly yours,

Top Glory Trading Group Inc.

By

Carina Cao

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January 10, 2024

VIA ELECTRONIC MAIL – legal@mirmiles.com

Carina Cao
Top Glory Trading Group Inc.

Re: Infringement of Cole Haan's Patents (56503-220828)

Ms. Cao:

In your letter of December 25, you assert that the claim constructions of U.S. Pat. Nos. 10,327,511 and 10,443,163 are unreasonably broad, but you provide no reasoning for why such claim constructions are incorrect other than an assertion that such constructions would read on U.S. Pat. No. 7,347,011 (the '011 patent) and/or U.S. Pat. No. 2,312,078 (the '078 patent) and therefore render the '511 and '163 patents invalid. But, as set forth below, Bruno Marc's assertions of invalidity are incorrect and would fail.

First, during the prosecution of the '511 patent, the examiner cited a combination of the '011 patent and the '078 patent as the basis for obviousness rejections in a non-final office action. The examiner withdrew the rejections because, among other things, the combination did not disclose or suggest a "knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions." The '163 patent, which was subsequently issued by the same examiner, contains the same limitation and was issued over the prior art of record, including the '011 and '078 patents. In sum, the '011 and '078 patents, whether considered individually or in combination, do not render the '511 and '163 patents invalid.

Second, because the patents were considered by the examiner during prosecution, both patents are listed under the cited references on the face of both the '511 and '163 patents. Accordingly, the examiner is presumed to have considered such references and any invalidity argument must meet "the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents." *Shire LLC v. Amneal Pharms., LLC*, 802 F.3d 1301, 1307 (Fed. Cir. 2015). As explained above, Bruno Marc is not able to establish invalidity, let alone establish invalidity under the heightened standard required for invalidity arguments already considered by the United States Patent and Trademark Office.

To resolve this matter amicably, Bruno Marc must (1) cease sales of the Men's Casual Shoes Mesh Eco-Friendly Fashion Sneakers, (2) recall any and all of the infringing shoes; (3) provide an accounting of all infringing shoes sold to date and any remaining inventory; and (4) propose how Bruno Marc intends to make Cole Haan whole for these infringements.

Please let us know by January 24, 2024, whether Bruno Marc intends to comply with the requirements identified in this letter. Cole Haan reserves its rights to seek all remedies available to Cole Haan.

Very truly yours,

Thompson Coburn LLP

By
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January 24, 2024

Subject: **reply to letter from Cole Haan LLC.**

Mr. Norman:

Top Glory Trading Group, Inc.（we) as the owner of the Bruno Marc brand and seller of Bruno Marc shoes, what follows is the reply：

1.Firstly, we would like to reply on your understanding of the claims and what we have to stress is that the content of claims 21 of U.S. Pat. 10,327,511 and 10,443,163 patent themselves has explicitly pointed out: ***a unitary one-piece construction comprising a knitted upper heel region.***

Claim 21 of the '511 patent：
21. A method of manufacturing an article of footwear having
a knitted upper and a sole, the method comprising:
knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,*** *the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions;*
attaching the sole to the upper;
the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;
the upper medial and lateral ball regions being seamlessly knitted with the upper metatarsal region during the knitting step;
the upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;
the first and second areas being knitted during the knitting step.

Claim 21 of the '163 patent：
21. A method of manufacturing an article of footwear having

a knitted upper and a sole, the method comprising:
knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of ***a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region****, the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, the knitted element having an upper lateral side region and an upper medial side region, the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region, the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region, the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions, the first area having a rear boundary, the second area having a forward boundary, the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;*
attaching the sole to the upper;
the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;
the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;
the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;
the first and second areas being knitted during the knitting step.

Secondly, the corresponding specification of U.S. Pat. 10,327,511 ,U.S pat 10,443,163 patent also declared that *a unitary one-piece construction comprising a knitted upper heel region*:

Exhibit A	
US10443163	
Claim 21	Contents of the instructions
21a. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:	Row 48, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.
21b. knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted	Row 53, Column 3: The knitted element 20 is shown alone in FIG. 5. Row 5, Column 6: By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed

upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,	separately and then sewn or bonded together. Row 56, Column 3: The knitted element 20 is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element 20 comprises a knitted upper heel region 24, a knitted upper lateral midfoot region 26a, a knitted upper medial midfoot region 26b, a knitted upper metatarsal region 28, a knitted upper lateral ball region 30a, a knitted upper medial ball region 30b, and a knitted upper toe region 32.
21c. the knitted upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region,	Row 65, Column 3: The upper metatarsal region 28 includes a knitted upper lateral metatarsal region 28a and a knitted upper medial metatarsal region 28b.
21d. the knitted element having an upper lateral side region and an upper medial side region,	Row 3, Column 4: The upper 14 has a knitted upper lateral side region 14a and a knitted upper medial side region 14b.
21e. the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region,	Row 4, Column 4: The upper lateral side region 14a includes the upper lateral heel region 24a, the upper lateral midfoot region 26a, the upper lateral metatarsal region 28a, the upper lateral ball region 30a, and the upper lateral toe region 32a.

21f. the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region,	Row 8, Column 4: The upper medial side region 14b includes the upper medial heel region 24b, the upper medial midfoot region 26b, the upper medial metatarsal region 28b, the upper medial ball region 30b, and the upper medial toe region 32b.
21g. the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit,	Row 63, Column 4: The knitted element 20 comprises a first area, generally indicated at 52, of a first type of knit structure and a second area, generally indicated at 54, of a second type of knit structure. Row 32, Column 5: In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. Row 21, Column 6: As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).
21h. the first area being at least in the upper toe region,	Row 3, Column 5: The rear boundary 56 of the first area 52 and the forward boundary 58 of the second area 54 is coincident and coextensive with each other and define a boundary line 60 between the first and second areas 52, 54. The second wingtip pattern 38 comprises the boundary line 60. The first wingtip pattern 36 is forward of and adjacent the second wingtip pattern 38. Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines

21i. the second area being at least in the upper lateral and medial metatarsal regions,	of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54. The boundary line 60 has a lateral boundary line 60a and a medial boundary line 60b. The lateral boundary line 60a comprises a wing-shaped curved line having a lateral side portion 62a extending forward from at least the upper lateral metatarsal region 28a to the upper toe region 32, and a central portion 64a extending rearward from the upper toe region 32. The medial boundary line 60b comprises a wing-shaped curved line having a medial side portion 62b extending forward from at least the upper medial metatarsal region 28b to the upper toe region 32, and a central portion 64b extending rearward from the upper toe region 32.
21j. the first area having a rear boundary,	Row 1, Column 5: The first area 52 has a rear boundary 56. Row 9, Column 5: Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54.
21k. the second area having a forward boundary,	Row 2, Column 5: the second area 54 has a forward boundary 58 Row 9, Column 5: Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54.
21l. the rear boundary of the first area and the forward boundary of the second area being coincident and coextensive with each other and defining a boundary line between the first and second areas;	Row 3, Column 5: The rear boundary 56 of the first area 52 and the forward boundary 58 of the second area 54 is coincident and coextensive with each other and define a boundary line 60 between the first and second areas 52, 54.

21m. attaching the sole to the upper;	Row 48, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.
21n. the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;	Row 10, Column 6: As such, the upper toe region 32 is seamlessly knitted with the upper medial and lateral ball regions 30a, 30b during the knitting step
21o. the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;	Row 12, Column 6: the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region 28 during the knitting step,
21p. the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;	Row 14, Column 6: the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions 26a, 26b during the knitting step,

21q. the first and second areas being knitted during the knitting step.	Row 20, Column 6: The knitted element 20 is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).

Exhibit B	
US10327511	
Claim 21	Contents of the instructions
21a. A method of manufacturing an article of footwear having a knitted upper and a sole, the method comprising:	Row 46, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.
21b. knitting with a knitting machine to form a knitted element of the upper such that the knitted element is of a unitary one-piece construction comprising a knitted upper heel region, a knitted upper lateral midfoot region, a knitted upper medial midfoot region, a knitted upper metatarsal region, a knitted upper lateral ball region, a knitted upper medial ball region, and a knitted upper toe region,	Row 51, Column 3: The knitted element 20 is shown alone in FIG. 5. Row 3, Column 6: By being knitted as a as a unitary one-piece construction, it is to be understood these various regions of the knitted element are formed together via the knitting process, as opposed to the regions being formed separately and then sewn or bonded together. Row 54, Column 3: The knitted element 20 is formed of a unitary one-piece construction during a knitting process on a knitting machine (not shown). The knitted element 20 comprises a knitted upper heel region 24, a knitted upper lateral midfoot region 26a, a knitted upper medial midfoot region 26b, a knitted upper metatarsal region 28, a knitted upper lateral ball region 30a, a knitted upper medial ball region 30b, and a knitted upper toe region 32.

21c. the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region,	Row 63, Column 3: The upper metatarsal region 28 includes a knitted upper lateral metatarsal region 28a and a knitted upper medial metatarsal region 28b.
21d. the knitted element having an upper lateral side region and an upper medial side region,	Row 1, Column 4: The upper 14 has a knitted upper lateral side region 14a and a knitted upper medial side region 14b.
21e. the upper lateral side region including the upper lateral midfoot region, the upper lateral metatarsal region and the upper lateral ball region,	Row 2, Column 4: The upper lateral side region 14a includes the upper lateral heel region 24a, the upper lateral midfoot region 26a, the upper lateral metatarsal region 28a, the upper lateral ball region 30a, and the upper lateral toe region 32a.
21f. the upper medial side region including the upper medial midfoot region, the upper medial metatarsal region and the upper medial ball region,	Row 6, Column 4: The upper medial side region 14b includes the upper medial heel region 24b, the upper medial midfoot region 26b, the upper medial metatarsal region 28b, the upper medial ball region 30b, and the upper medial toe region 32b.

21g. the knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit,	Row 61, Column 4: The knitted element 20 comprises a first area, generally indicated at 52, of a first type of knit structure and a second area, generally indicated at 54, of a second type of knit structure. Row 32, Column 5: In this embodiment, the first type of knit structure is a jersey stitch knit and the second type of knit structure is a pointelle stitch knit. Row 19, Column 6: As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).
21h. the first area being at least in the upper toe region,	Row 1, Column 5: The rear boundary 56 of the first area 52 and the forward boundary 58 of the second area 54 is coincident and coextensive with each other and define a boundary line 60 between the first and second areas 52, 54. The second wingtip pattern 38 comprises the boundary line 60. The first wingtip pattern 36 is forward of and adjacent the second wingtip pattern 38. Also, the lateral and medial lines of broguing 40a, 40b are adjacent the boundary line 60. As such the lateral and medial lines of broguing 40a, 40b are adjacent the rear boundary 56 of the first area 52, and adjacent the forward boundary 58 of the second area 54. The boundary line 60 has a lateral boundary line 60a and a medial boundary line 60b. The lateral boundary line 60a comprises a wing-shaped curved line having a lateral side portion 62a extending forward from at least the upper lateral metatarsal region 28a to the upper toe region 32, and a central portion 64a extending rearward from the upper toe region 32. The medial boundary line 60b comprises a wing-shaped curved line having a medial side portion 62b extending forward from at least the upper medial metatarsal region 28b to the upper toe region 32, and a central portion 64b extending rearward from the upper toe region 32.
21i. the second area being at least in the upper lateral and medial metatarsal regions,	

21j. attaching the sole to the upper;	Row 46, Column 3: The shoe 10 comprises a sole, generally indicated at 12, a knit upper, generally indicated at 14, and a welt, generally indicated at 16. The sole 12 and welt 16 are secured to the upper 14.
21k. the upper toe region being seamlessly knitted with the upper medial and lateral ball regions during the knitting step;	Row 8, Column 6: As such, the upper toe region 32 is seamlessly knitted with the upper medial and lateral ball regions 30a, 30b during the knitting step
21l. the upper medial and lateral ball regions being seamlessly knitted with the knitted upper metatarsal region during the knitting step;	Row 10, Column 6: the upper medial and lateral ball regions are seamlessly knitted with the upper metatarsal region 28 during the knitting step,
21m. the knitted upper metatarsal region being seamlessly knitted with the upper lateral and medial midfoot regions during the knitting step;	Row 12, Column 6: the upper metatarsal region is seamlessly knitted with the upper lateral and medial midfoot regions 26a, 26b during the knitting step, the upper metatarsal region including an upper lateral metatarsal region and an upper medial metatarsal region, 26a、26b,

21n. the first and second areas being knitted during the knitting step.	Row 18, Column 6: The knitted element 20 is also knitted with a multiple of different types of knit structures during the knitting step. As described above, the first area 52 is of the first type of knit structure (e.g., jersey stitch knit) and the second area 54 is of the second type of knit structure (e.g., pointelle stitch knit).

In summary, ,our assertions are correct . Considering the Claim 21 of U.S. Pat. 10,327,511 and 10,443,163 patent protects " a unitary one-piece construction comprising a knitted upper heel region.",while the upper heel region of our shoes is not a part of a unitary one-piece construction ,there is no infringement happened as you asserted .

2. We are convinced that based on Comparative Document 1 US7347011B2 we may at least invalidate the independent claim 21 of U.S. Pat. 10,327,511 and 10,443,163 patent.

Regarding to your point that: "knitted element comprising a first area of a jersey stitch knit and a second area of a pointelle stitch knit, the first area being at least in the upper toe region, the second area being at least in the upper lateral and medial metatarsal regions."

We are sure that there is corresponding description in the comparative document 1 US7347011B2 is as follows.

Row 38, Column 9: Textile element 40″ includes areas with three different textures. A first texture 46″ is generally smooth and has the configuration of various strips that extends laterally across areas corresponding with lateral region 31, medial region 32, and instep region 33. Various portions of textile element 40″ also include a second texture 47″, which is generally rough in comparison with first texture 46″. In addition, the area of textile element 40″ corresponding with instep region 33 includes a third texture 48″.Third texture 48″ is formed to include a plurality of apertures that extend through textile element 40″. The apertures may be formed by omitting stitches at specific locations during the wide-tube circular knitting process.

Row 31, Column 9: Textile element 40' also exhibits smooth and textured areas. In contrast with the conventional upper, however, first texture 46' and second texture 47' are incorporated into a single, unitary element of textile.

Row 38, Column 9: Textile element 40″ includes areas with three different textures. A first texture 46″ is generally smooth and has the configuration of various strips that extends laterally across areas corresponding with lateral region 31, medial region 32, and instep region 33. Various portions of textile element 40″ also include a second texture 47″, which is generally rough in comparison with first texture 46″. In addition, the area of textile element 40″ corresponding with instep region 33 includes a third texture 48″. Textures 46″-48″ may exhibit aesthetic differences, or the differences may be structural. The air-permeability of textile element 40″ may also vary in the different areas. Third texture 48″ is formed to include a

plurality of apertures that extend through textile element 40″. The apertures may be formed by omitting stitches at specific locations during the wide-tube circular knitting process, and the apertures facilitate the transfer of air between the void within upper 20 and the area outside of upper 20.

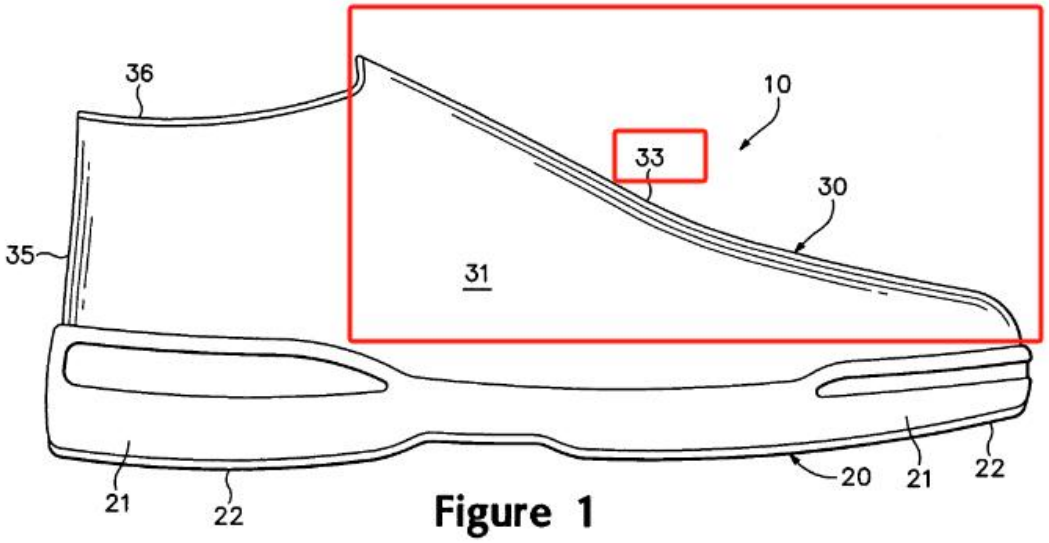

Figure 1

There is at least 2 areas of the knit upper which described in '511 and '163 patents are overlapped in Comparative Document 1.

One of area is " A first texture 46" which textured with relatively smooth texture, corresponding to "a first area of a jersey stitch knit" of claim 21 of the '511 and '163 patents.

another area is "Third texture 48," which textured with plurality of apertures, corresponding to "a pointelle stitch knit" in claim 21 of the '511 and '163 patents.

Because the area of A first texture 46 in Comparative Document 1 extends across the entire upper 33, and thus overlap "the first area being at least in the upper toe region" as described in claim 21 of the '511 and '163 Patents ".

And the area of "Third texture 48" in Comparative Document 1 across the upper and lined up on both the inner and outer sides of the upper. Therefore, it also overlap "the second area being at least in the upper lateral and medial metatarsal regions."as described in claim 21 of the '511 and '163 Patents .

In summary, each of features of claim 21 of the '511 and '163 patents can be found in Comparative Document 1, (the rest part of the analysis has been elaborated in the previous response, thus will not be repeated here), so we can reach the conclusion that claim 21 is not novel.

3. Additionally,We have noticed that
(i) the independent claim 1, independent claim 13, and independent claim 18 of the '163 patent all protect the upper with a wingtip pattern.
(ii) independent claim 1 of the '511 patent protects the upper with a wingtip pattern.
(iii) independent claim 17and independent claim 20 of the '511 patent all protect the upper with the line of broguing.

However ,Our products use no wingtip pattern and no brogue line. So there is no infringement of these above independent claims and dependent claims happened .

4. To summary, in the first place there is no infringement of the '511 and '163 patents happened because the heel of our product is not molded in one piece;in the second place the patent rights of claim 21 of the '511 and '163 patents are unstable.

The above is all the replies, thank you very much for your letter.

Very truly yours,
Top Glory Trading Group Inc.

By
Carina Cao