

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

SKECHERS U.S.A., INC. and SKECHERS  
U.S.A., INC. II,

Plaintiffs,

v.

MARC FISHER HOLDINGS LLC, ABG  
ROCKPORT LLC, and AUTHENTIC  
BRANDS GROUP LLC,

Defendants.

Case No.:

COMPLAINT FOR PATENT  
INFRINGEMENT

DEMAND FOR JURY TRIAL

Plaintiffs Skechers U.S.A., Inc. and Skechers U.S.A., Inc. II (collectively, “Skechers”) bring this action against Defendants Marc Fisher Holdings LLC, ABG Rockport LLC, and Authentic Brands Group LLC (“Marc Fisher,” “Rockport,” and “ABG,” respectively; collectively, “Defendants”) to address their infringement of certain Skechers intellectual property, and allege as follows:

**NATURE OF THE ACTION**

1. Since it began as a start-up shoe company with a single line of footwear in 1992, Skechers has grown to become the third-largest footwear company in the world. That growth has occurred in significant part because of innovations that enhance the quality, comfort and performance of its shoes. As a lifestyle and performance footwear company, Skechers is continuously developing new shoe designs and advancing the state of the art so that its shoes have the broadest consumer benefits and appeal.

2. To protect its innovations, Skechers has sought and been awarded patents from the United States Patent and Trademark Office. Over decades, Skechers has invested hundreds of

millions of dollars researching, creating, and promoting its new shoe designs and shoe innovations, supported by representatives including Mr. T, Martha Stewart, Snoop Dogg, Doja Cat, Willie Nelson, Sugar Ray Leonard, Ringo Starr, Britney Spears, Carrie Underwood, Meghan Trainor, Tony Romo, Brooke Burke, Kim Kardashian, Howie Long, and Robert Downey Jr. On the strength of its legally-protected innovations, Skechers has grown to sell its shoes in more than 170 countries and in its more than 5000 retail stores, as well as through its website and numerous third-party websites.

3. Of particular import here, the United States Patent Office has recognized the innovative nature of Skechers' "Slip-in" footwear, which among other things enables easier donning and removal by consumers, awarding patent protection to certain inventions discovered to be beneficial in connection with such shoes. Skechers invested substantial amounts of time, effort, and financial resources into the development of that pioneering shoe technology, which substantially improves the ownership experience for users of those shoes. Skechers' Slip-in footwear engineers, in particular, developed a shoe design that makes putting on and removing certain types of shoes substantially easier than in the past. Traditionally, when a user wanted to put on a sports shoe, the process often required bending over and using both hands, or using a shoe horn. Skechers' Slip-in footwear designs, however, can substantially facilitate the entry and exit of the foot from the shoe by among other things enabling beneficial deformations in and around the heel region of the shoe at desired times while also helping to comfortably and effectively secure the foot in the shoe during normal wear.

4. Skechers has manufactured and sold millions of pairs of shoes in styles embodying the patented technology that is the subject of this complaint. These shoes embody innovative,

patented technological developments pioneered by Skechers that, as explained above, significantly benefit Skechers' customers.

5. Following Skechers' success with its patented technology in the marketplace, Defendants began making and selling shoes that infringe Skechers' patent, in competition with Skechers. Defendants did so without even contacting Skechers to request a license to Skechers' intellectual property protecting the innovations used in those shoes. As demonstrated in more detail below, Rockport shoes infringe Skechers' utility patent claims protecting innovations associated with its Slip-in footwear technology. By this action, Skechers seeks to stop Defendants' patent infringement and obtain appropriate compensation for that infringement.

### **PARTIES**

6. Plaintiff Skechers U.S.A., Inc. is a corporation duly organized and existing under the laws of the State of Delaware with its principal place of business located at 228 Manhattan Beach Blvd., Manhattan Beach, California 90266.

7. Plaintiff Skechers U.S.A., Inc. II is a corporation duly organized and existing under the laws of the State of Virginia with its principal place of business located at 228 Manhattan Beach Blvd., Manhattan Beach, California 90266. Skechers U.S.A., Inc. II is a wholly-owned subsidiary of Skechers U.S.A., Inc.

8. On information and belief, Defendant Marc Fisher Holdings LLC is a corporation duly organized and existing under the laws of the State of Delaware with its principal place of business located at 777 West Putnam Avenue, Greenwich, CT 06830, with offices and showrooms in New York City.

9. On information and belief, Defendant ABG Rockport LLC is a corporation duly organized and existing under the laws of the State of Delaware with its principal place of business

located at 1411 Broadway, 21<sup>st</sup> Floor, New York, New York 10018. On information and belief, ABG Rockport LLC is a completely-controlled subsidiary of Authentic Brands Group LLC.

10. On information and belief, Defendant Authentic Brands Group LLC is a corporation duly organized and existing under the laws of the State of Delaware with its principal place of business located at 1411 Broadway, 21<sup>st</sup> Floor, New York, New York 10018. On information and belief, Authentic Brands Group LLC dominates and controls the activities of ABG Rockport LLC through at least ownership and shared officers and directors, including Jay Dubiner.

11. On information and belief, Defendants Marc Fisher and Rockport, at the direction of Defendant ABG, entered into a long-term licensing agreement and commercial partnership (the “Licensing Agreement”) in or around July 2023 whereby Marc Fisher is a key partner in the commercialization of all Rockport branded shoes, including the products accused of infringement in this litigation. On information and belief, as a result of the Licensing Agreement, Defendant Marc Fisher is responsible for the design, production, marketing, e-commerce, and wholesale of the products accused of infringement in this litigation. On information and belief, Marc Fisher has entered into similar licensing agreements and commercial partnerships with other entities affiliated with ABG Rockport through ABG.

### **JURISDICTION AND VENUE**

12. Jurisdiction in this Court arises under the provisions of 28 U.S.C. § 1331 (federal question), 28 U.S.C. § 1338(a) (any Act of Congress relating to patents or trademarks), and 35 U.S.C. §§ 101 *et seq.* and, in particular, § 271 (U.S. Patent Law).

13. This Court has personal jurisdiction over Defendants because they have committed and continue to commit acts of infringement in violation of 35 U.S.C. § 271 and place infringing products into the stream of commerce, with the knowledge or understanding that such products

are sold in the State of New York, including in this District. These acts by Defendants cause injury to Skechers within this District. On information and belief, Defendants Rockport and ABG have principal places of business located in this district. On information and belief, Defendants derive revenue from the sale of infringing products within this District, expect their actions to have consequences within this District, and derive revenue from interstate and international commerce.

14. Venue in this Court is proper under the provisions of 28 U.S.C. §§ 1391(b) and (c) and 1400(b) because Defendants transact business within this District and, among other things, offer for sale in this District products that infringe the Skechers patent at issue in this case. On information and belief, Defendants ABG and Rockport both have their principal places of business in this District. Further, Defendant ABG employs hundreds of individuals within this District. Further, Defendant Marc Fisher maintains corporate offices and showrooms in this District, specifically directs visitors to its website to its “showrooms and offices in New York City,” and employs hundreds of individuals in New York City, including those whose LinkedIn profiles list their location as such. Defendants do business in this District, including through their website Rockport.com, and a substantial portion of the events at issue, including but not limited to activities related to the Licensing Agreement and ABG’s domination and control of Rockport, have arisen in this District.

15. Defendant Marc Fisher also sells the accused products in this litigation through stores located in this District, including, as examples:

- DSW Designer Shoe Warehouse, 40 E 14th Street, New York, NY 10003
- Macy’s, 151 W 34th Street, New York, NY 10001
- Nordstrom NYC Flagship, 225 W 57th Street, New York, NY 10019

16. Similarly, Defendant Rockport also sells the accused products in this litigation through stores located in this District, including, as examples:

- DSW Designer Shoe Warehouse, 40 E 14th Street, New York, NY 10003
- DSW Designer Shoe Warehouse, 2134 Bartow Avenue, Bronx, NY 10475
- Macy's, 151 W 34th Street, New York, NY 10001

### **SKECHERS' PATENT RIGHTS**

17. Skechers invested substantial resources and effort into developing innovative technology associated with Slip-in footwear. This technology, which among other things facilitates easier entry into, and removal, of shoes, has been awarded patent protection by the U.S. Patent and Trademark Office.

18. Skechers owns all rights, title, and interest in and to U.S. Patent Number 12,011,064 B2 (the “ ’064 Patent”), including the right to seek damages for past, current, and future infringement thereof.

19. The ’064 Patent is titled “Footwear Counter for Easier Entry and Removal,” and names John Maxwell Weeks, Scott Kelley, Frank F. Chuang, Pei-Chun Liao, Johnson Tja, Hui Xie, and Kurt Stockbridge as co-inventors.

20. The ’064 Patent was duly and lawfully issued on June 18, 2024. The ’064 Patent has been in full force and effect since its issuance. A copy of the ’064 Patent is attached hereto as Exhibit 1.

### **FIRST CLAIM FOR RELIEF**

[Infringement of the ’064 Patent]

21. Skechers realleges and reincorporates by reference the full text of all the foregoing numbered paragraphs as if fully set forth herein.

22. The '064 Patent, among other things, states that it “generally relates to a heel counter or a component of a heel counter of a shoe, and in particular a heel counter that is designed to allow for easier entry of the wearer’s foot into the shoe.” Ex. 1 at 1:16–19.

23. As the '064 Patent explains, “[c]onventionally, when donning footwear such as sports shoes, the user must often use one or both hands or operate a shoe horn separate from the shoe to properly insert the foot into the shoe and secure the quarter from collapsing under the heel.” *Id.* at 1:23–27.

24. The '064 Patent states that in “one aspect of the invention, a heel cup may be uniformly molded with an upper portion, midportion, and lower portion . . . The midportion and lower portion may form a concave structure configured to receive the heel. The upper portion of the heel cup has a first configuration in its native state and is capable of distorting into a second configuration under a load of a user’s foot . . . . In the second configuration, at least part of the upper portion is lowered relative to the first configuration and the upper portion is capable of returning to the first configuration after the load of the user’s foot is removed.” *Id.* at 1:34–46.

25. Skechers is informed and believes, and thereon alleges, that Defendants have infringed and unless enjoined will continue to infringe one or more claims of the '064 Patent, in violation of 35 U.S.C. § 271, by, among other things, making, using, offering to sell, and selling within the United States, supplying or causing to be supplied in or from the United States, and importing into the United States, without authority or license, shoes that use the inventions described in the '064 Patent.

26. For example, Rockport shoes including but not limited to the Tristen Step Activated Slip On shoes (and for analogous reasons the Tristen Step Activated Lace-Up shoes) embody every limitation of at least Claim 1 of the '064 Patent, both literally and under the doctrine of equivalents,

as set forth below. The further descriptions below, which are based on an analysis of publicly-available information, are preliminary examples and non-limiting.

**CLAIM 1**

**["1. An article of footwear comprising:"]**

27. The Rockport Tristen Step Activated shoe is an article of footwear.



**["an upper and sole structure;"]**

28. The Rockport Tristen Step Activated shoe contains an upper and sole structure.

29. For example, the top portion of the shoe constitutes an upper and the bottom portion constitutes a sole structure.





**[“the upper defining a foot receiving shoe opening;”]**

30. The upper of the Rockport Tristen Step Activated shoe defines a foot receiving shoe opening.

31. For example, the top portion of the upper creates an opening into which a user’s foot is to be inserted.



**[“a heel cup attached to the upper and extending from the sole structure to at least a portion of the rear ankle collar of the upper;”]**

32. The Rockport Tristen Step Activated shoe contains a heel cup attached to the upper and extending from the sole structure to at least a portion of the rear heel collar of upper.

33. An example of this is shown graphically in the cross-section below.



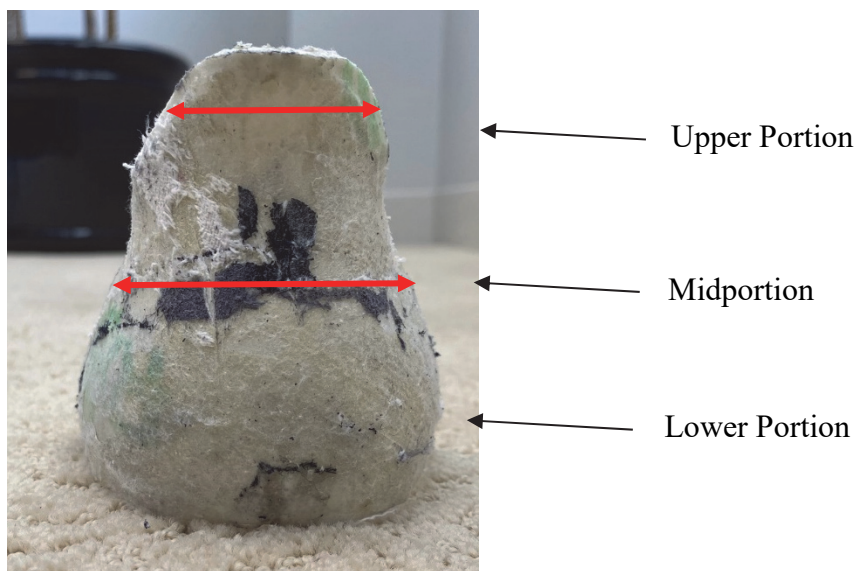
**[“the heel cup uniformly molded with an upper portion, midportion, and lower portion where in the upper portion has a smaller mediolateral length than the midportion,”]**

34. The Rockport Tristen Step Activated shoe has a uniformly molded heel cup with an upper portion, midportion, and lower portion where the upper portion has a smaller mediolateral length than the midportion.

35. For example, as shown in the side view image below, the heel cup is uniformly molded, and has an upper portion, midportion, and lower portion.



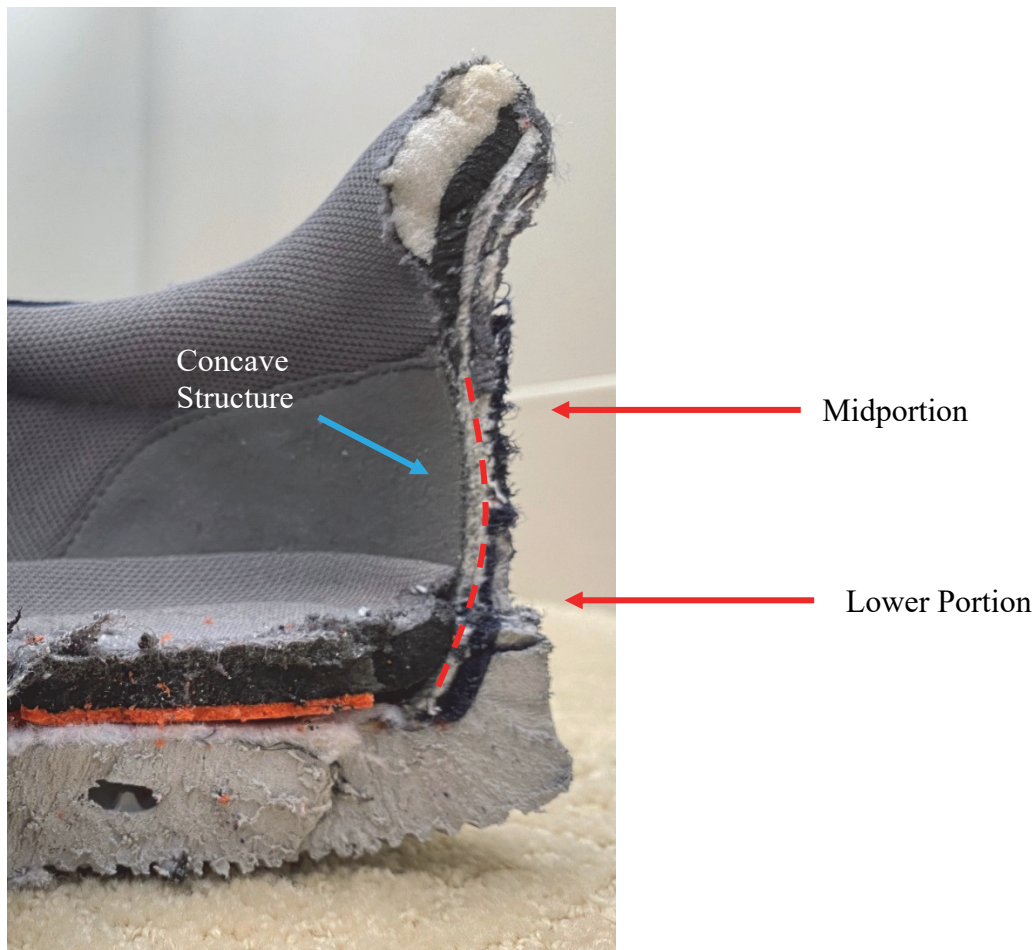
36. Further, as shown in the rear view image below, the upper portion of the heel cup has a smaller mediolateral length than the midportion.



**[“and the midportion and lower portion form a concave structure configured to receive the heel;”]**

37. The Rockport Tristen Step Activated shoe's heel cup has a midportion and lower portion which form a concave structure configured to receive the heel.

38. For example, as shown below, the concavity created at the base of the heel cup forms a portion of the shoe that is configured to receive the user's heel during normal wear.



**[“the heel cup having a rearward facing upper concavity with a first amplitude”]**

39. The heel cup of the Rockport Tristen Step Activated shoe has a rearward facing upper concavity with a first amplitude.

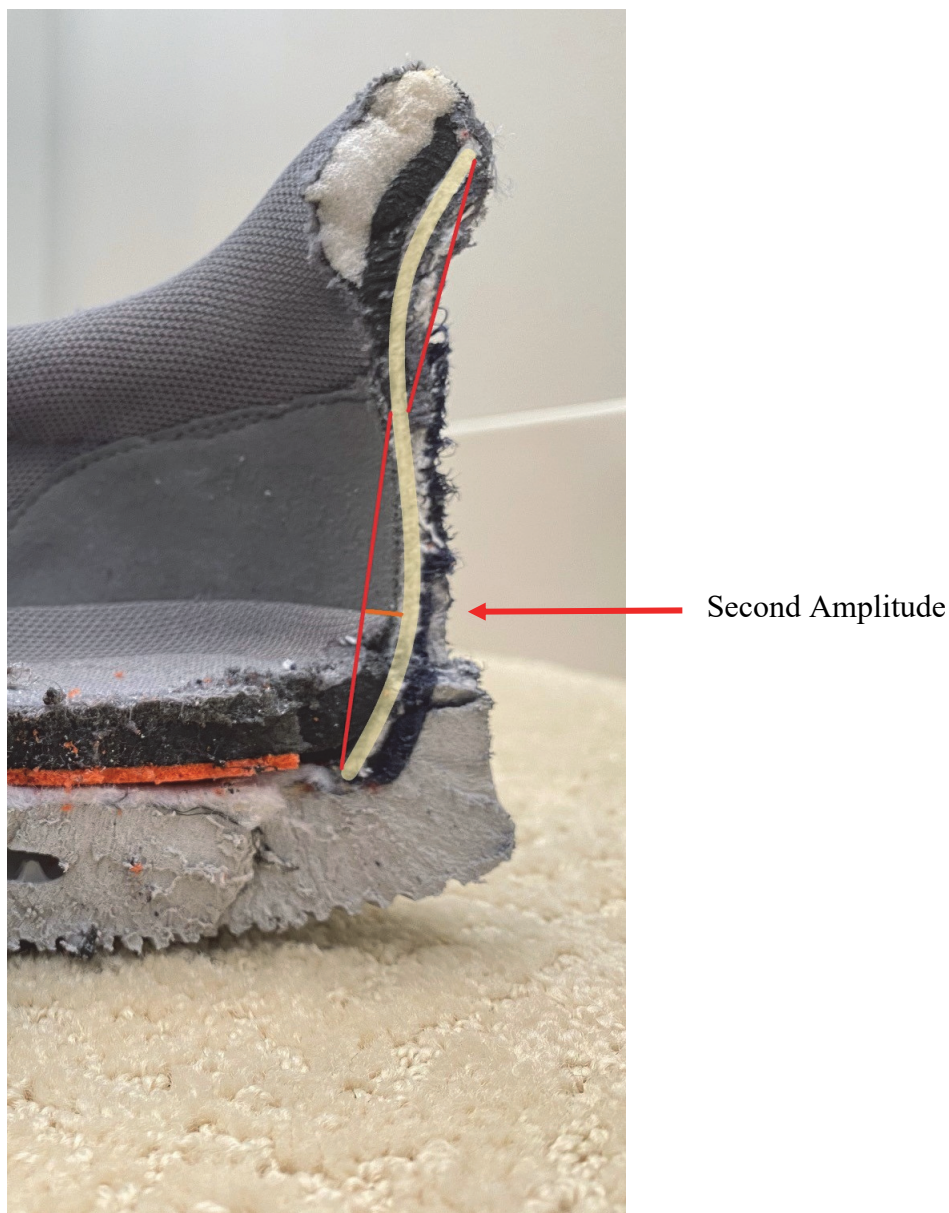
40. For example, the heel cup has an upper concavity with a first amplitude (in green) as illustrated below.



**[“the heel cup having a forward facing lower concavity with a second amplitude;”]**

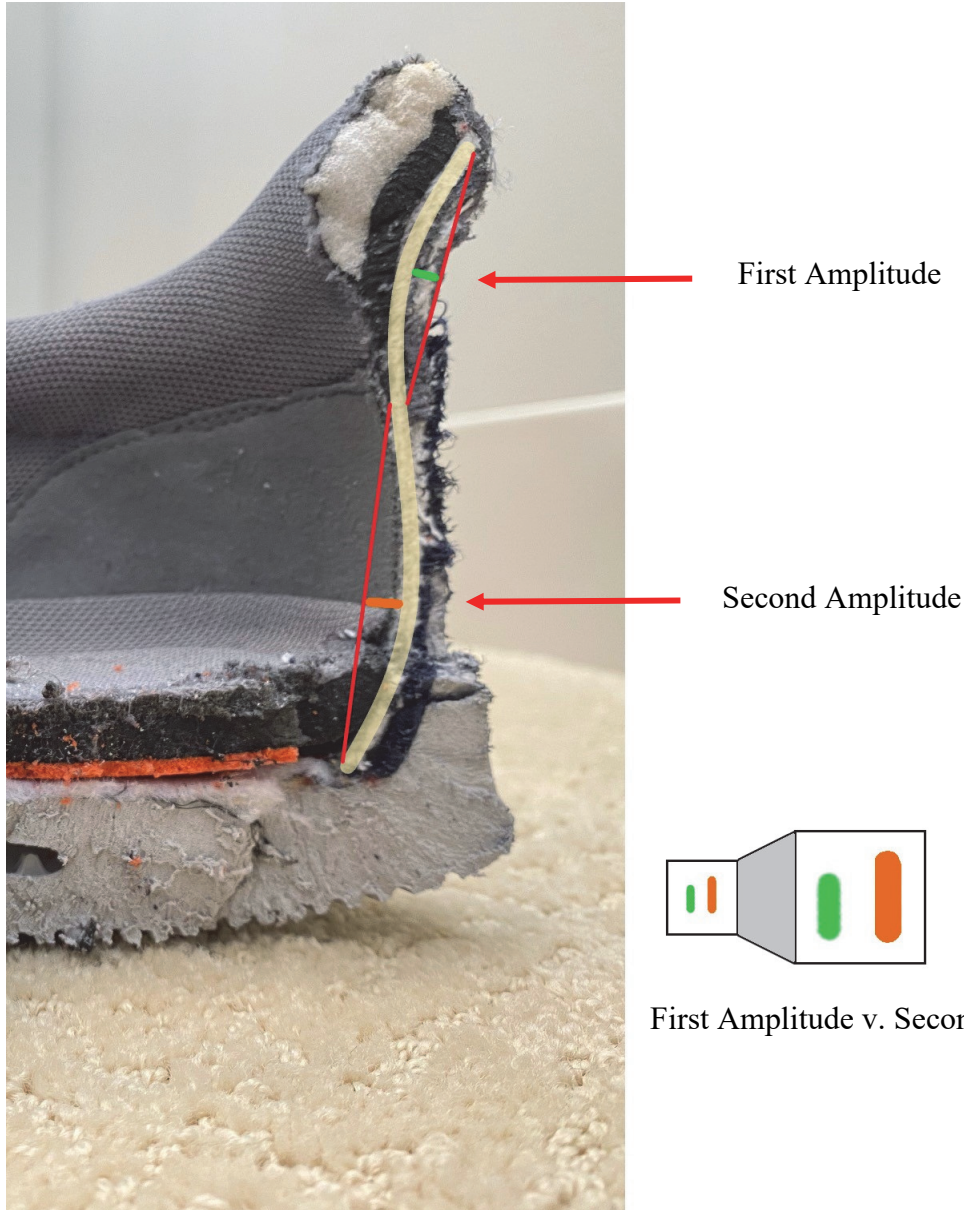
41. The heel cup of the Rockport Tristen Step Activated shoe has a forward facing lower concavity with a second amplitude.

42. For example, the heel cup has a lower concavity with a second amplitude (in orange) as illustrated below.



**[“the second amplitude being greater than the first amplitude;”]**

43. The amplitude of the lower concavity formed by the heel cup of the Rockport Tristen Step Activated shoe is greater than the amplitude of the upper concavity, as shown below.



**[“the upper portion having a first configuration;”]**

44. The Rockport Tristen Step Activated shoe’s upper has a first configuration.

45. For example, as shown below the Rockport Tristen Step Activated shoe sits in a first configuration when no outside influences act upon the shoe.

Upper  
Portion →



**[“the upper portion capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear;**

46. The Rockport Tristen Step Activated shoe's upper is capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear.

47. For example, as shown below, as a foot is being inserted into the shoe, the force of the user's foot can press upon the upper portion and deform it into a second configuration that is lower relative to the first configuration.

Upper  
Portion →





**[“wherein in the second configuration at least part of the upper portion is lowered relative to the first configuration;**

48. In the second configuration of the Rockport Tristen Step Activated shoe, at least part of the shoe’s upper portion is lowered relative its position in the first configuration.

49. For example, as shown below, the heel cup’s upper portion is lowered in the second configuration relative to its position in the first configuration.



**[“the upper portion capable of returning to the first configuration after the load of the user’s foot is removed;”]**

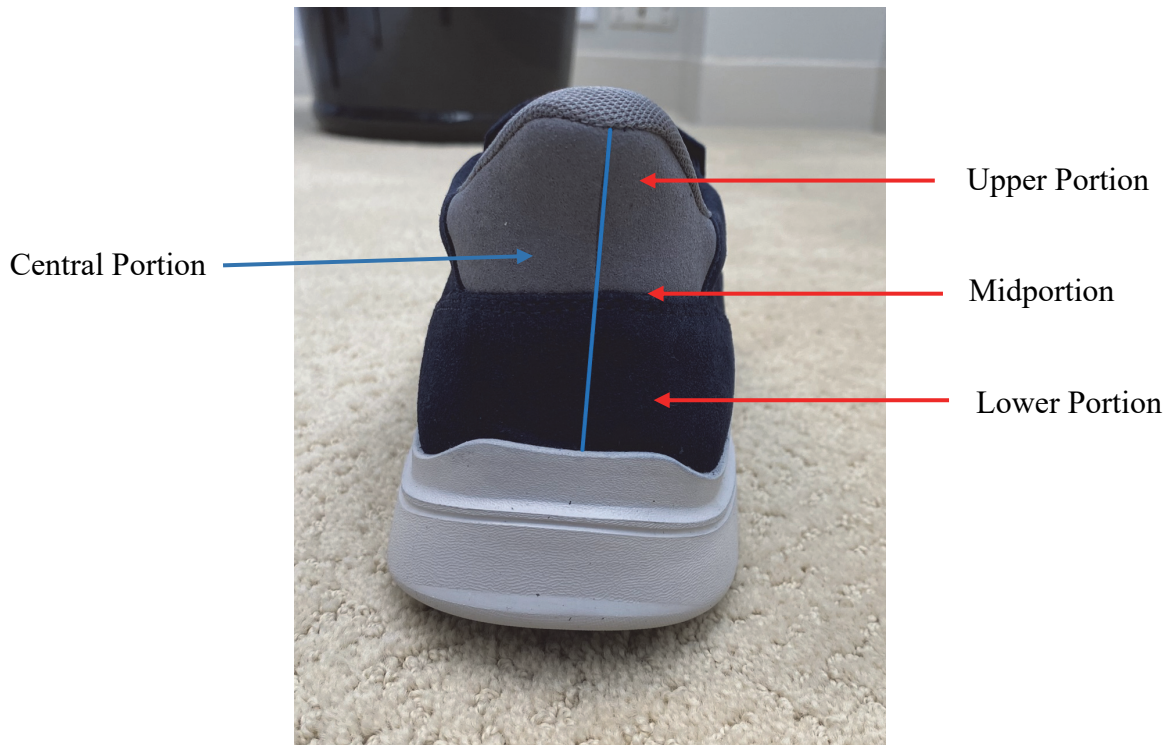
50. The Rockport Tristen Step Activated shoe’s upper is capable of returning to its first position after the load of the user’s foot is removed.

51. For example, once the foot is placed fully into the shoe or once a foot is removed from the shoe, the upper returns to its first position.

**[“the heel cup having an upper central portion, a mid-central portion, and lower central portion”]**

52. The Rockport Tristen Step Activated shoe's heel cup has an upper central portion, a mid-central portion, and a lower central portion.

53. For example, as shown below, the central portion of the heel cup has an upper portion, a midportion, and a lower portion.



**["the mid-central portion having a first thickness;"]**

54. The mid-central portion of the Rockport Tristen Step Activated shoe's heel cup has a first thickness.

55. For example, when measured with a digital caliper, the mid-central portion of the heel cup has a measurable thickness.



**[“the upper central portion having a second thickness;”]**

56. The upper central portion of the Rockport Tristen Step Activated shoe’s heel cup has a second thickness.

57. For example, when measured with a digital caliper, the upper central portion of the heel cup has a measurable second thickness.



**[“the lower central portion having a third thickness; and”]**

58. The lower central portion of the Rockport Tristen Step Activated shoe’s heel cup has a third thickness.

59. For example, when measured with a digital caliper, the lower central portion of the heel cup has a measurable third thickness.



**[“the first thickness is less than the second thickness and the third thickness.”]**

60. The first thickness of the Rockport Tristen Step Activated shoe’s heel cup is less than the second and third thickness.

61. For example, as shown below, when measured with a digital caliper, the thickness of the mid-central portion of the Rockport Tristen Step Activated shoe’s heel cup is less than the thicknesses of the upper and lower central portions.



First Thickness

Second Thickness

Third Thickness

62. Accordingly, the Rockport Tristen Step Activated shoe embodies every limitation of at least Claim 1 of the '064 Patent.

63. As a result of Defendants' infringement of the '064 Patent, Skechers has been damaged. Skechers is entitled to recovery for damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial.

64. Moreover, Defendants' infringing acts and practices have caused and are causing immediate and irreparable harm to Skechers.

### **REQUEST FOR RELIEF**

WHEREFORE, Plaintiff Skechers respectfully requests relief against Defendants as follows:

1. A judgment declaring that Defendants have infringed one or more claims of Skechers' asserted patent;
2. An order and judgment preliminarily and permanently enjoining Defendants and their officers, directors, agents, employees, affiliates, attorneys, and all others acting in privity or in concert with them, and their subsidiaries, divisions, successors and assigns, from further acts of infringement of Skechers' asserted patent;

3. A judgment awarding Skechers all damages adequate to compensate for Defendants' infringement of Skechers' asserted patent, including, but not limited to, lost profits, and in no event less than a reasonable royalty for Defendants' acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;

4. A judgment awarding Skechers all damages, including treble damages, based on any infringement, at least since the filing of this complaint, found to be willful, pursuant to 35 U.S.C. § 284, together with prejudgment interest;

5. An order awarding Skechers supplemental damages, including interest, with an accounting, as needed;

6. Costs of suit and reasonable attorneys' fees; and

7. Any other remedy to which Skechers may be entitled, including under any other law that this Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Federal Rule of Civil Procedure 38(b), Skechers hereby demands a trial by jury on all issues triable to a jury.

Dated: September 4, 2024

Respectfully submitted,

By: */s/ Neal J. McLaughlin*

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*Counsel for Plaintiffs*  
SKECHERS U.S.A., INC. and SKECHERS  
U.S.A., INC. II

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# Exhibit 1



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

(10) **Patent No.:** US 12,011,064 B2  
(45) **Date of Patent:** Jun. 18, 2024

(54) **FOOTWEAR COUNTER FOR EASIER ENTRY AND REMOVAL**

(58) **Field of Classification Search**  
CPC ..... A43B 23/28; A43B 23/17; A43B 23/08; A43B 11/00  
See application file for complete search history.

(71) Applicant: **Skechers U.S.A., Inc. II**, Manhattan Beach, CA (US)

(56) **References Cited**

(72) Inventors: **John Maxwell Weeks**, Los Angeles, CA (US); **Scott Kelley**, Redondo Beach, CA (US); **Frank F Chuang**, Cypress, CA (US); **Pei-Chun Liao**, Torrance, CA (US); **Johnson Tja**, Foshan (CN); **Hui Xie**, Dongguan (CN); **Kurt Stockbridge**, Palos Verdes Estates, CA (US)

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(74) *Attorney, Agent, or Firm* — Marshall A. Lerner; Steven J. Kim; Daniel J. Malkin

(73) Assignee: **Skechers U.S.A., Inc. II**, Manhattan Beach, CA (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.

(21) Appl. No.: **18/199,262**

(22) Filed: **May 18, 2023**

(65) **Prior Publication Data**

US 2023/0284747 A1 Sep. 14, 2023

**Related U.S. Application Data**

(63) Continuation of application No. PCT/US2022/046726, filed on Oct. 14, 2022.  
(Continued)

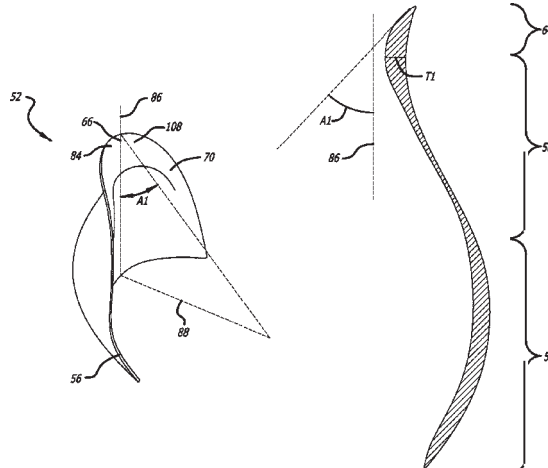
(51) **Int. Cl.**  
**A43B 11/00** (2006.01)  
**A43B 21/24** (2006.01)  
**A43B 23/08** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **A43B 23/08** (2013.01); **A43B 11/00** (2013.01); **A43B 21/24** (2013.01); **A43B 23/088** (2013.01)

(57) **ABSTRACT**

An article of footwear includes a heel cup that is attached to the upper and extends from the sole structure to at least a portion of the rear heel collar of the upper. The heel cup may be uniformly molded with an upper portion, midportion, and lower portion and the upper portion has a smaller medio-lateral length than the midportion, and the midportion and lower portion form a concave structure that receives the heel. The upper portion has a first configuration and is capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear. In the second configuration, at least part of the upper portion is lowered and is capable of returning to the first configuration.

(Continued)



US 12,011,064 B2

ration after the load of the user's foot is removed. The midportion includes a peripheral portion that may be thicker than a central portion.

18 Claims, 16 Drawing Sheets

Related U.S. Application Data

(60) Provisional application No. 63/256,521, filed on Oct. 15, 2021.

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Examination report No. 1 for Canada patent application 3202848, mailed Jul. 31, 2023.  
Examination and Search Report of CN Application No. 2021113470414 and Translation.  
Examination and Search Report of CN Application No. 2022102356725 and Translation.  
Examination and Search Report of CN Application No. 2022102433153 and Translation.  
Examination and Search Report of Finland Application No. 20235646.  
Examination and Search Report of Finland Application No. 20235905.  
Examination Report of Sweden Application No. 23507387.  
Examination Report of Sweden Application No. 23508062.  
Examination Report of Sweden Application No. 23508070.  
Examination Report of Taiwan Application No. 112204839 and Translation.  
Examination Report of UK Application No. GB23092695.  
PCTUS2022046726-IPRP.  
Examination Report No. 1 for Australia patent Application 2023203320.  
Examination Report No. 2 for Canada patent Application 3202848.

\* cited by examiner

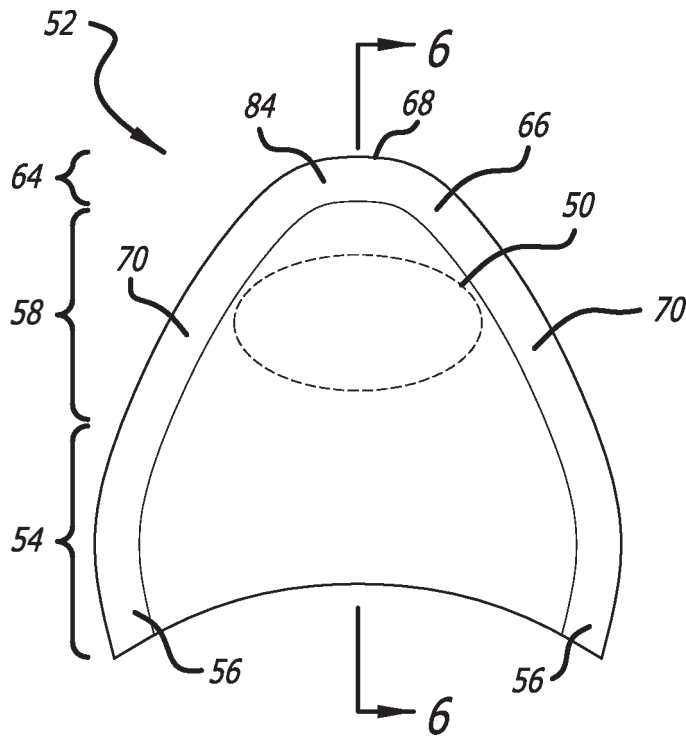


FIG. 1

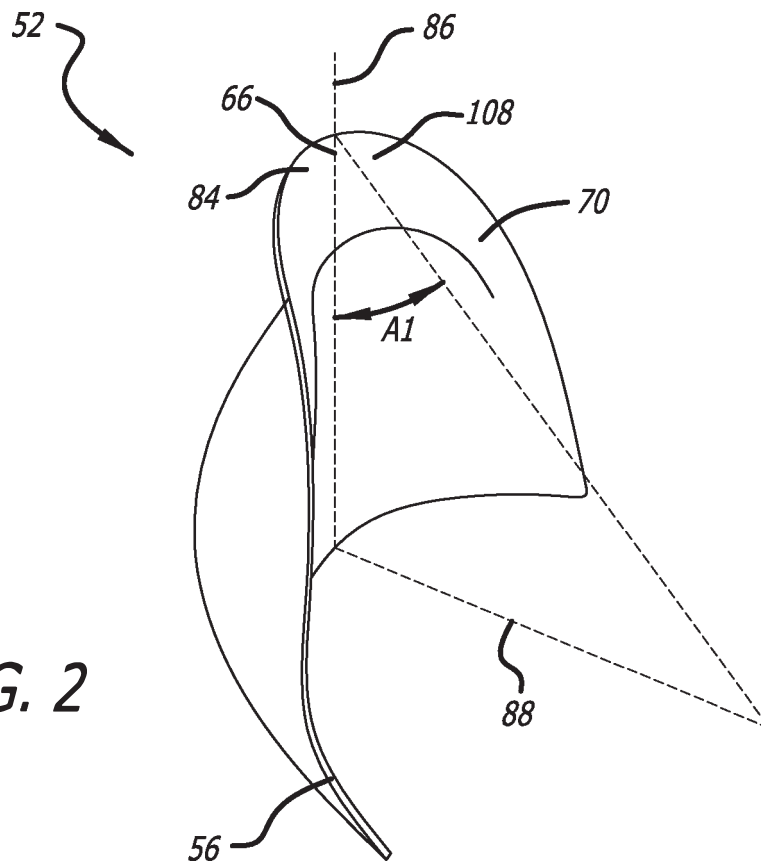
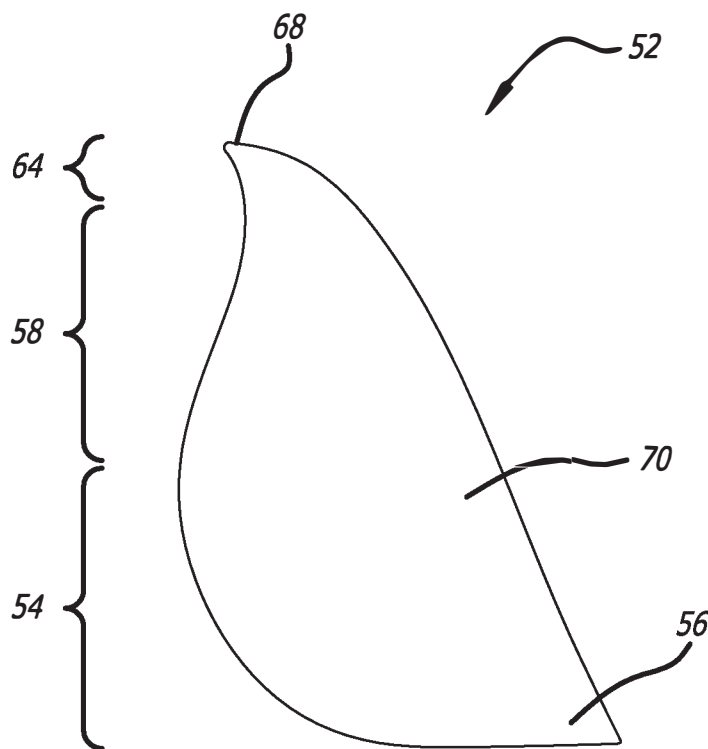
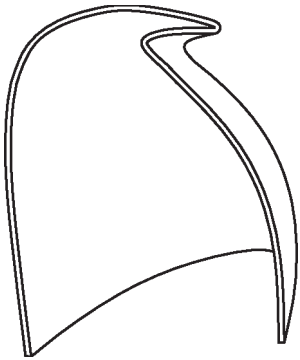


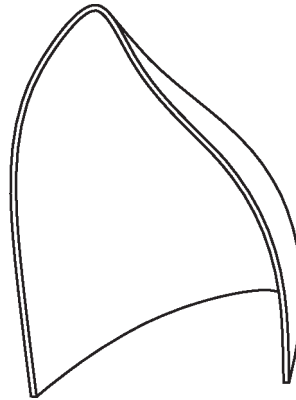
FIG. 2



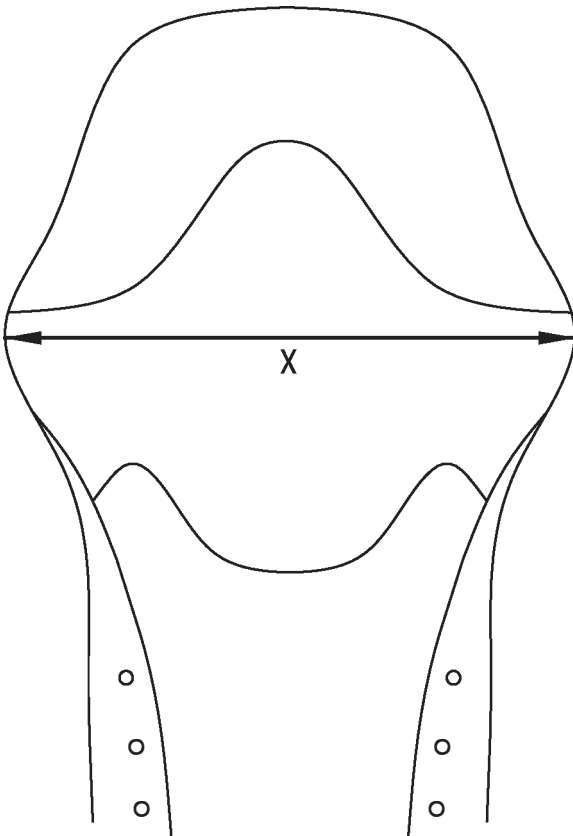
*FIG. 3*



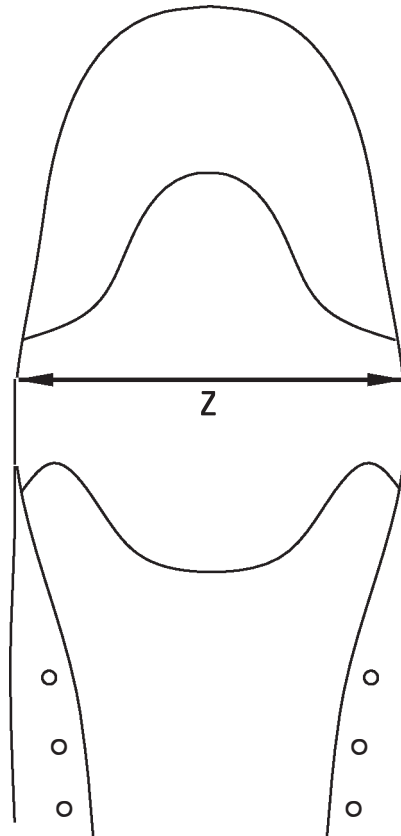
*FIG. 4A*



*FIG. 4B*



*FIG. 4C*



*FIG. 4D*

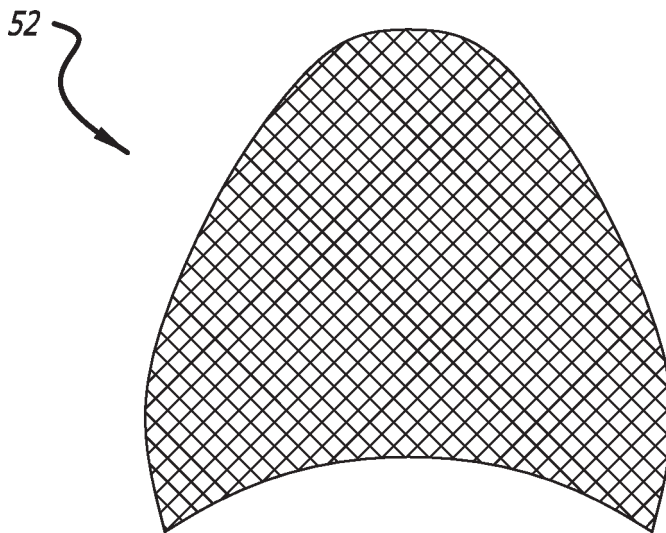


FIG. 5

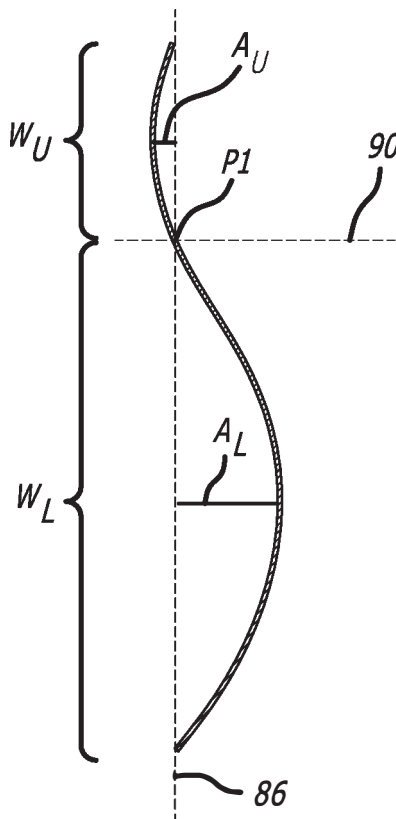


FIG. 6A



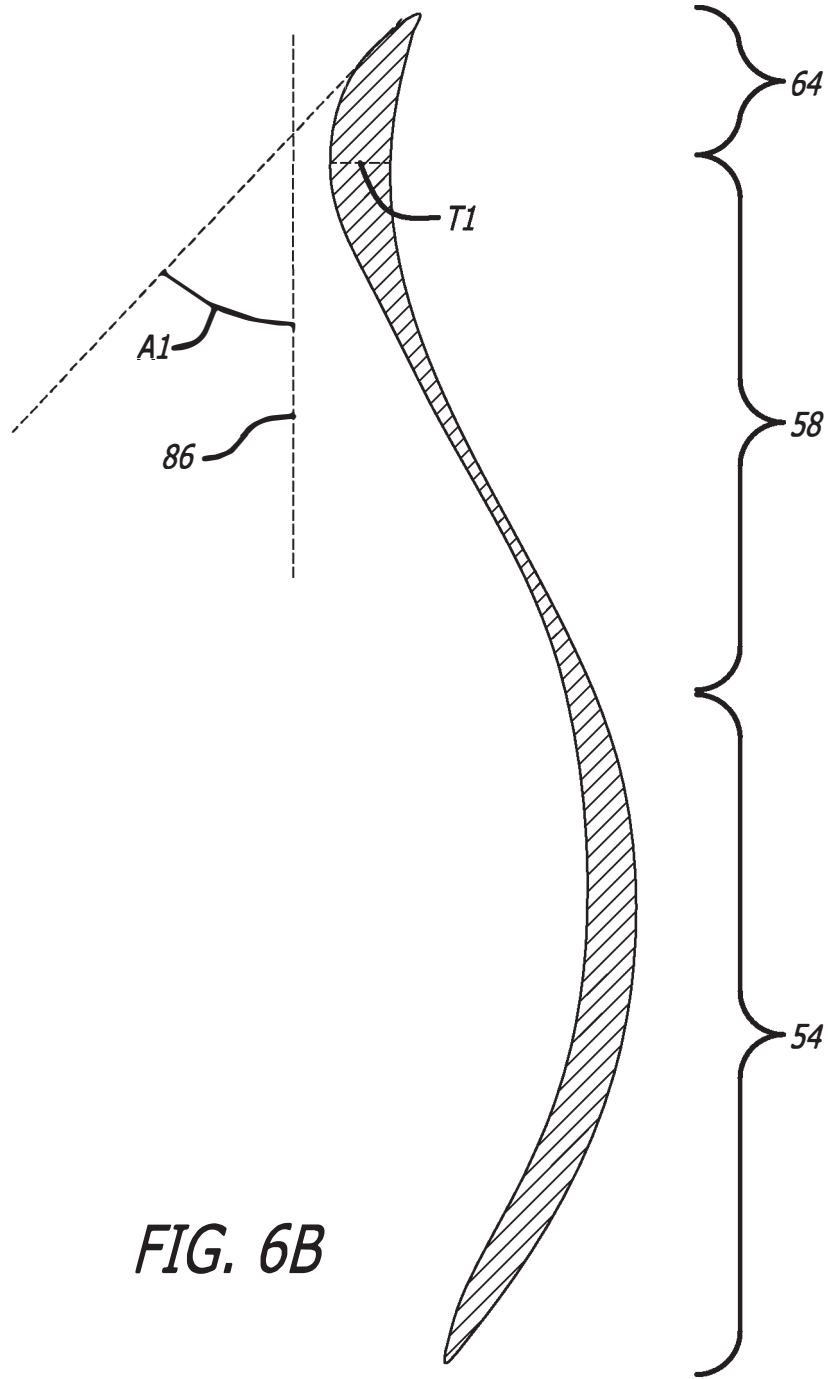
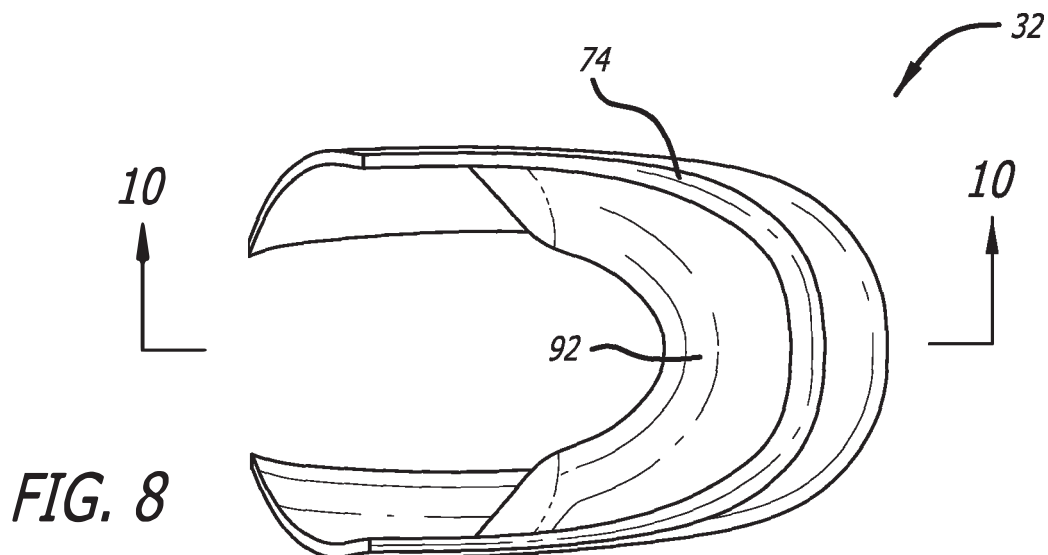
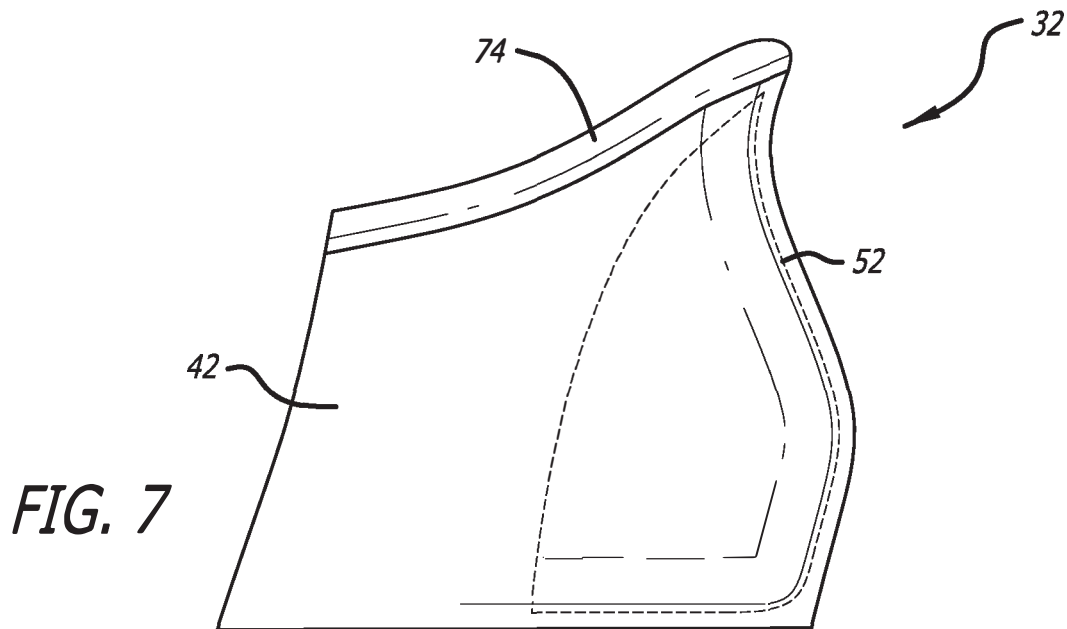


FIG. 6B



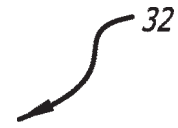
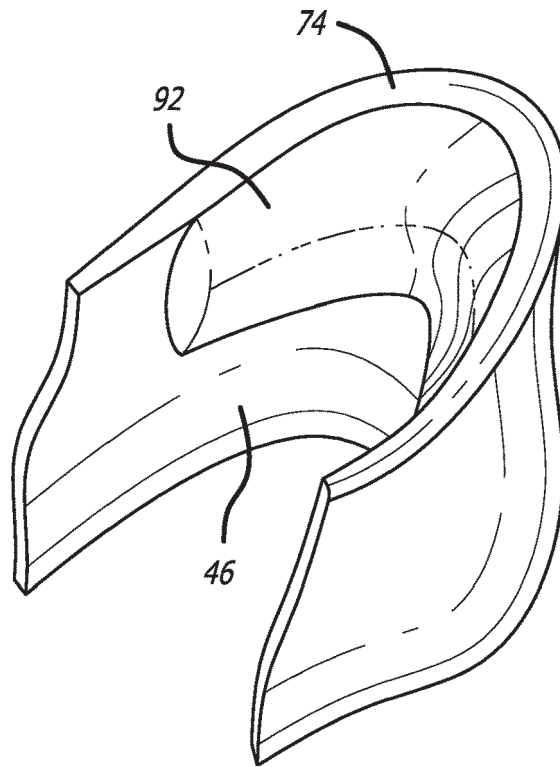
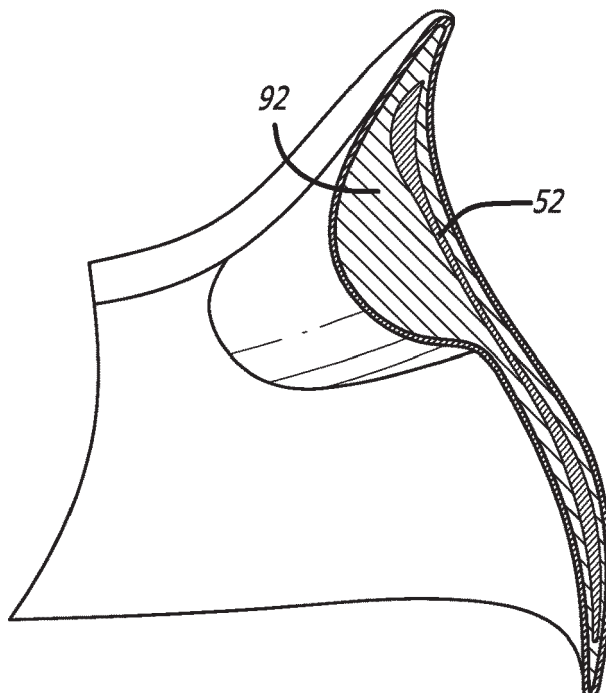
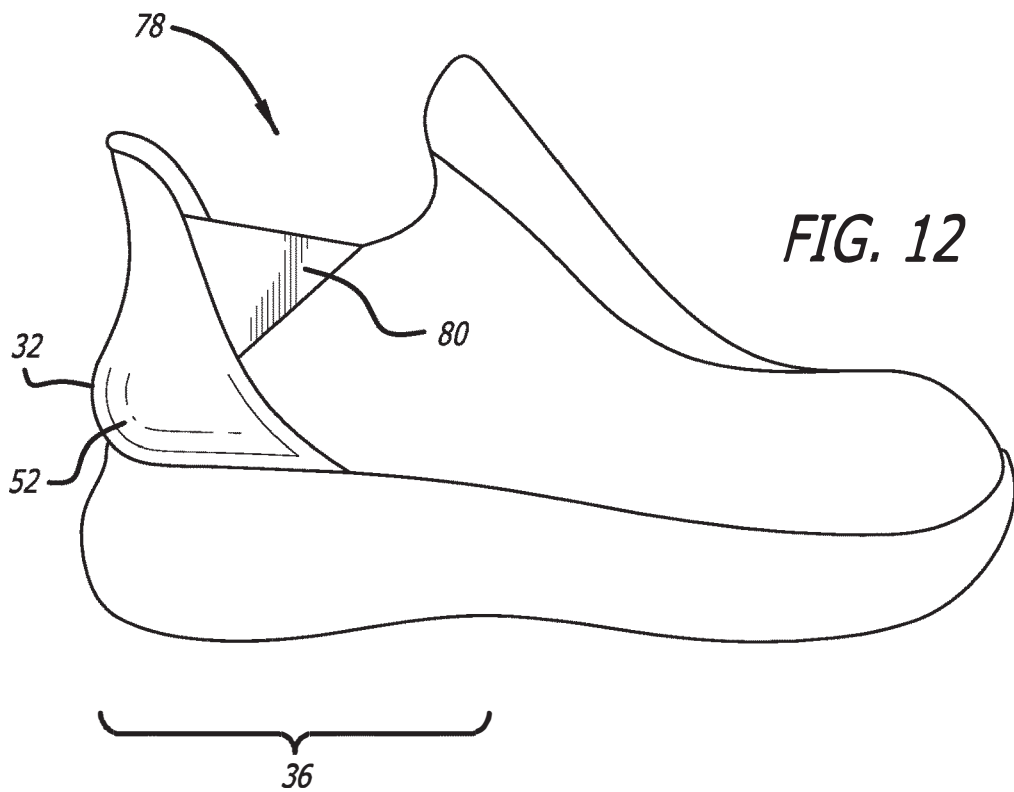
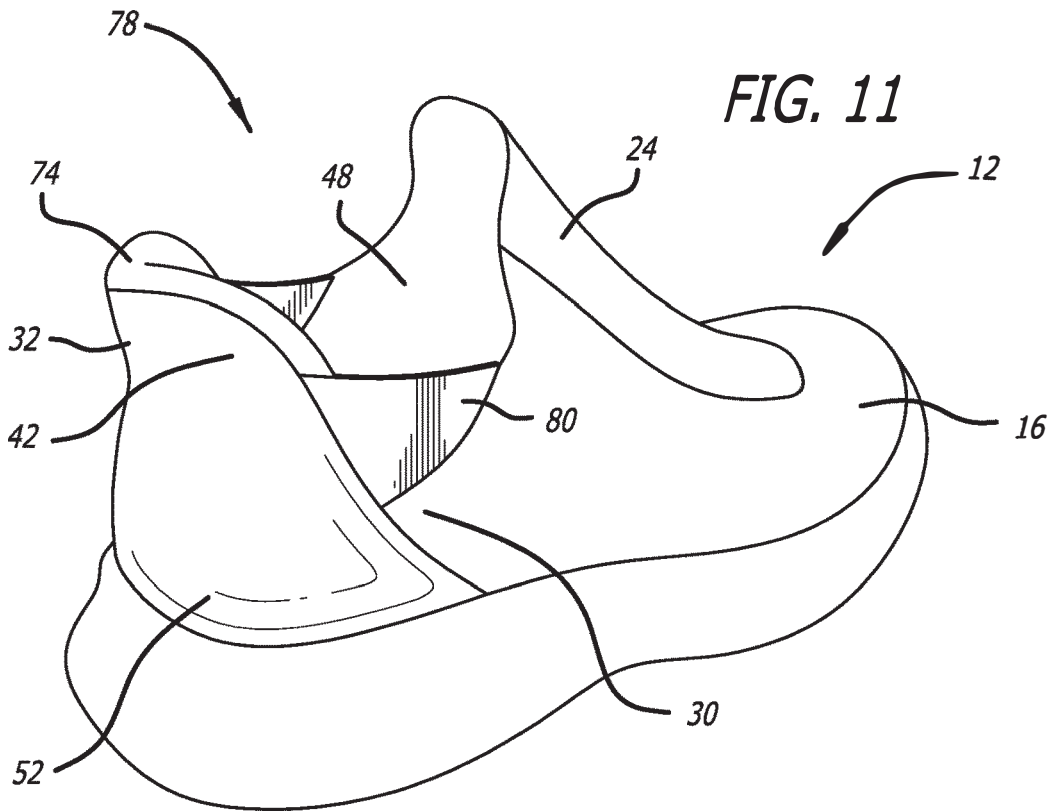
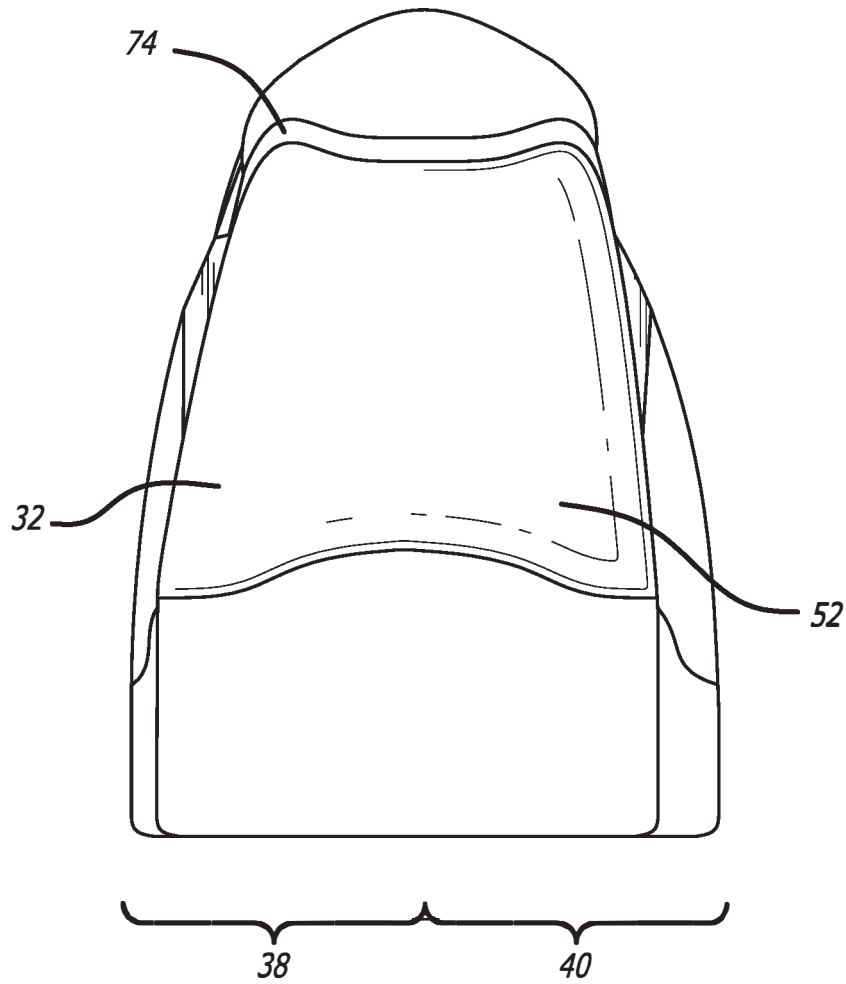


FIG. 9

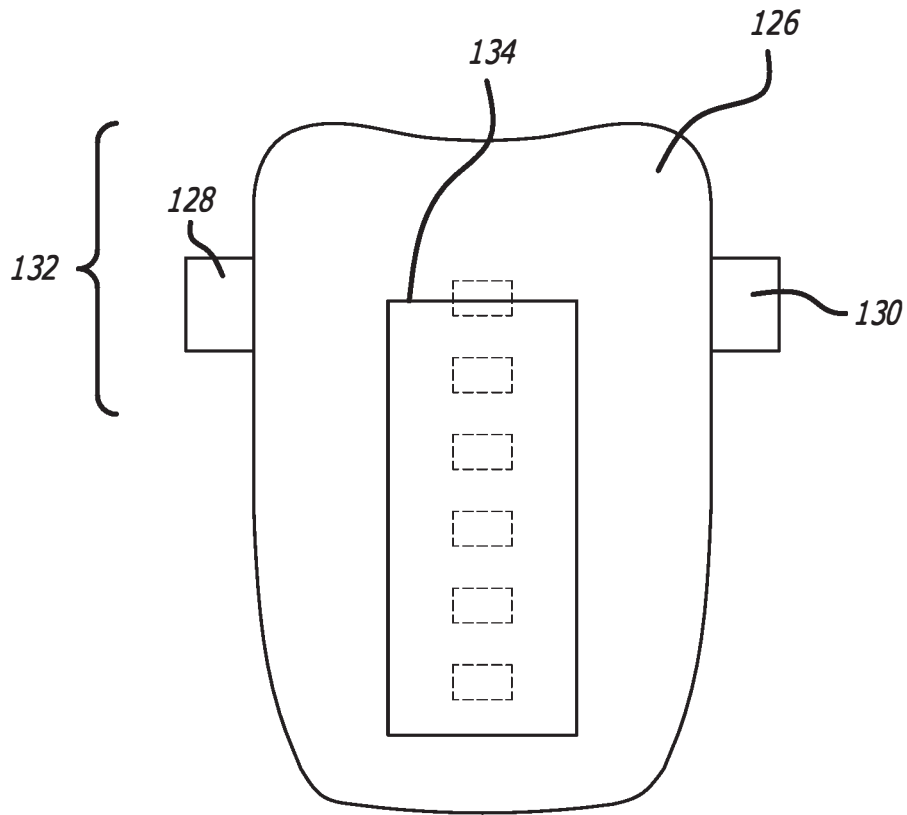
FIG. 10



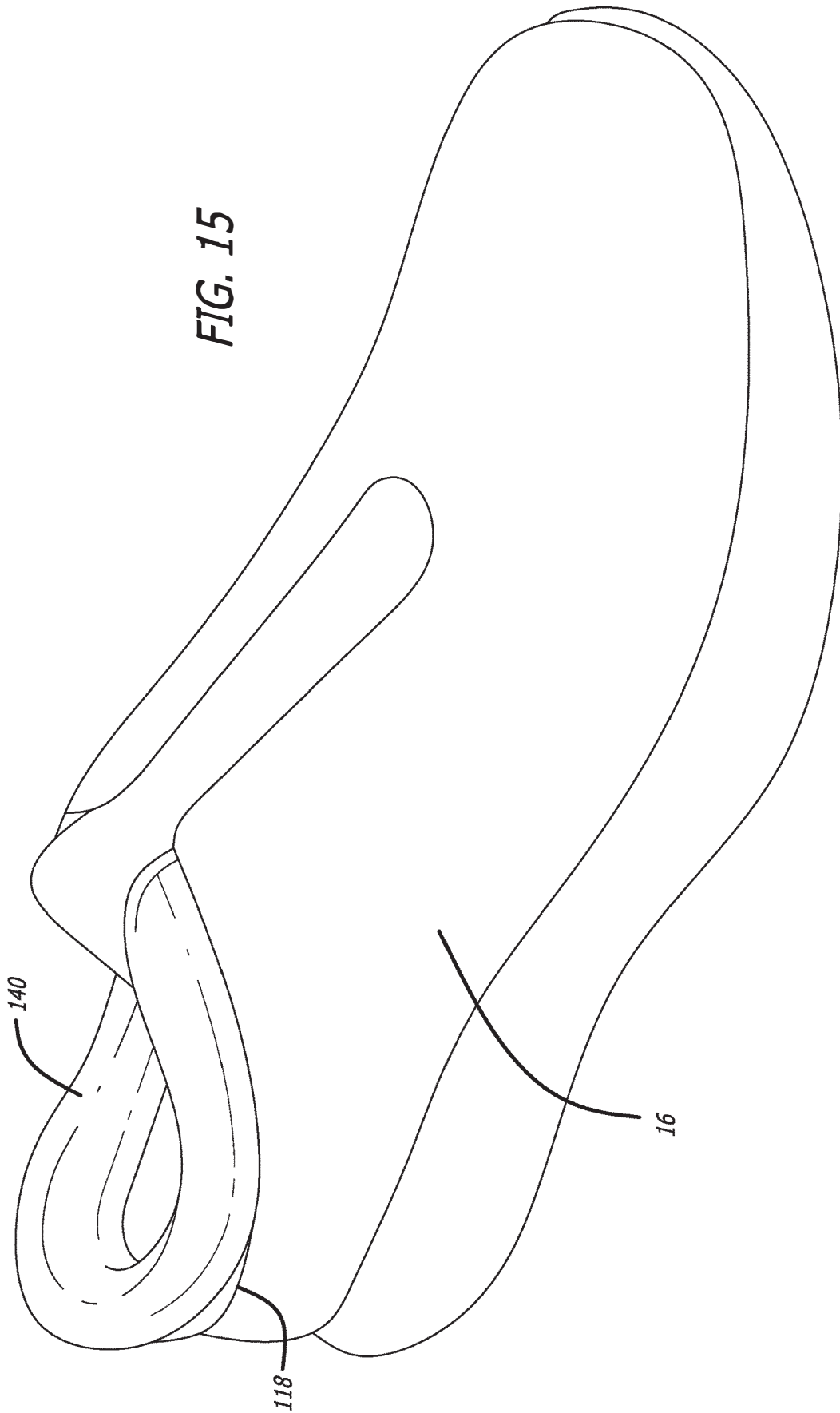


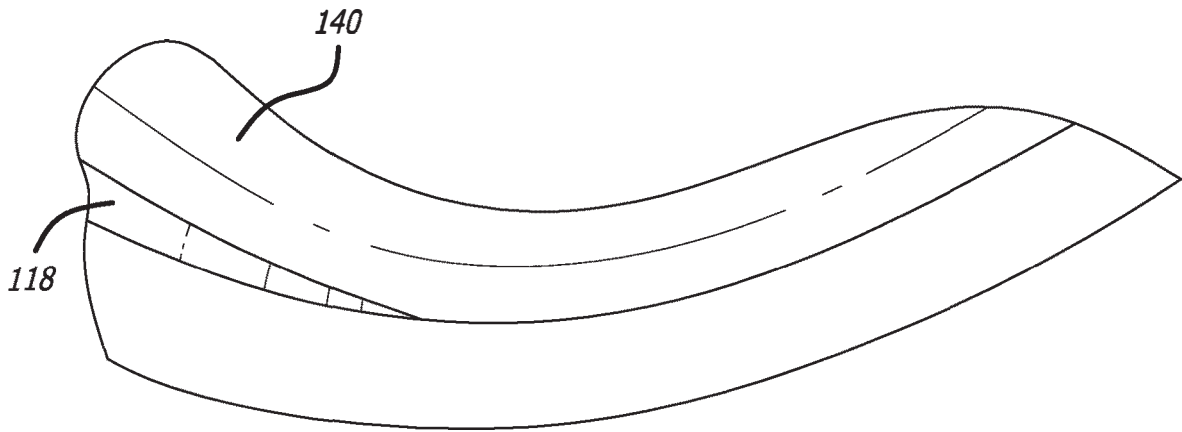


**FIG. 13**

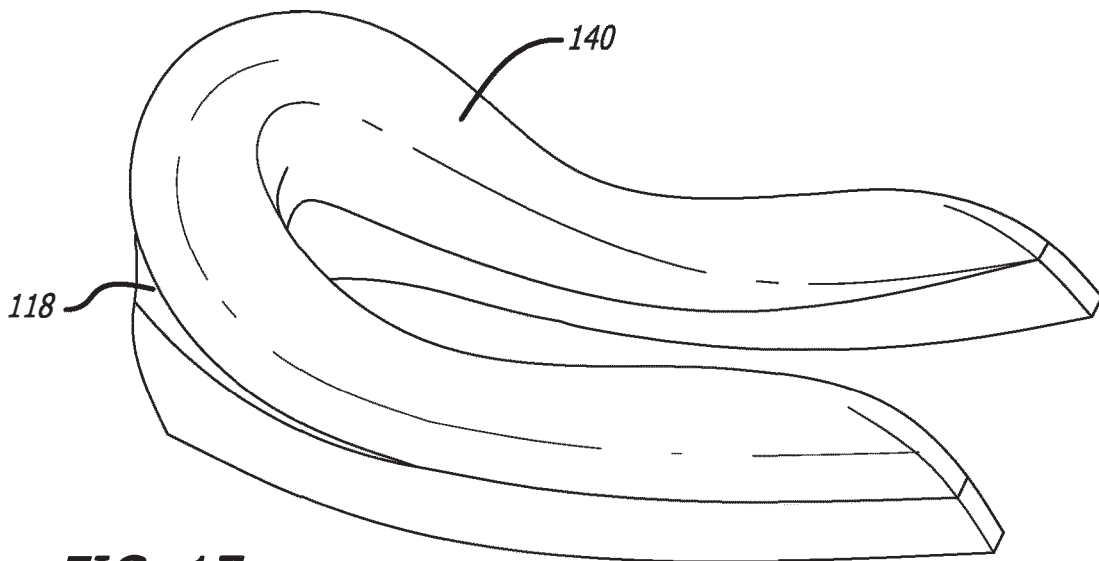


**FIG. 14**





**FIG. 16**



**FIG. 17**



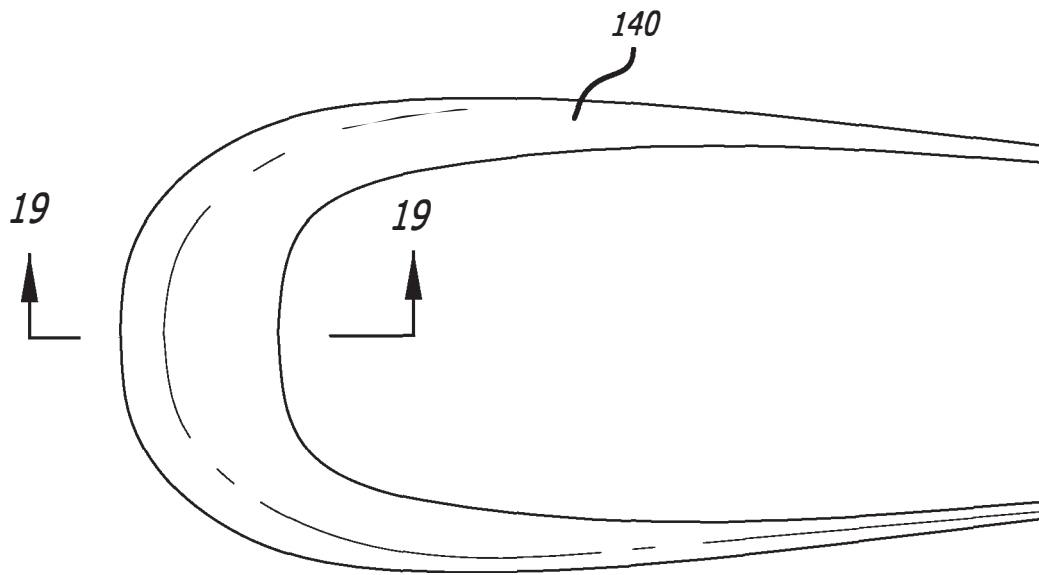


FIG. 18

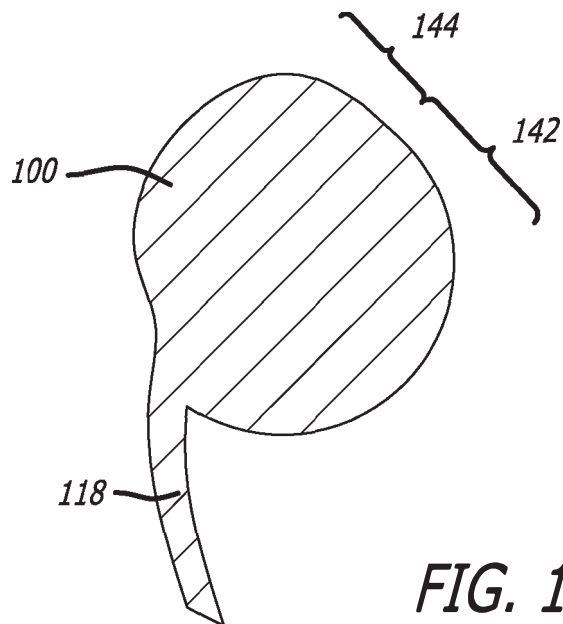


FIG. 19

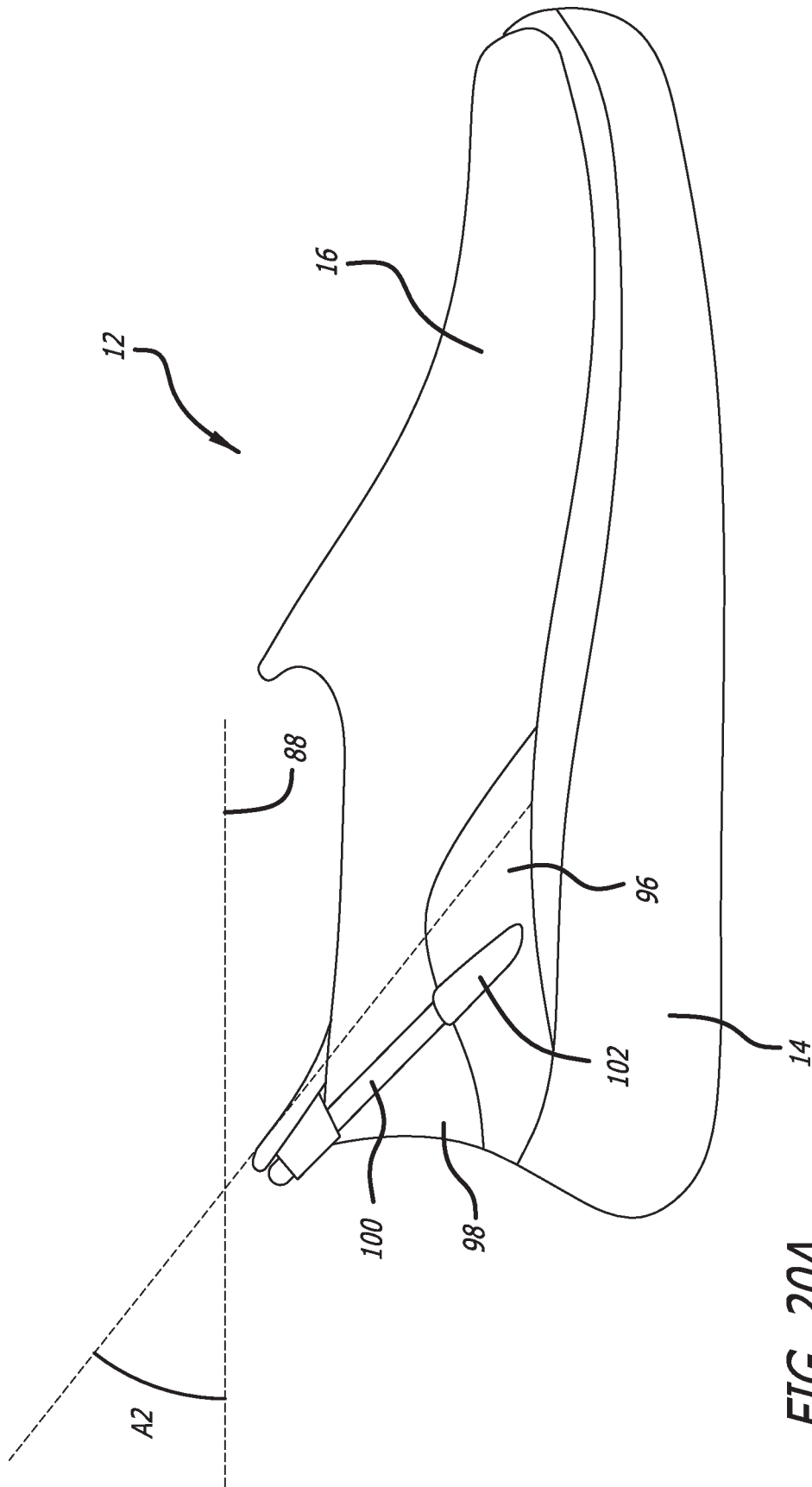
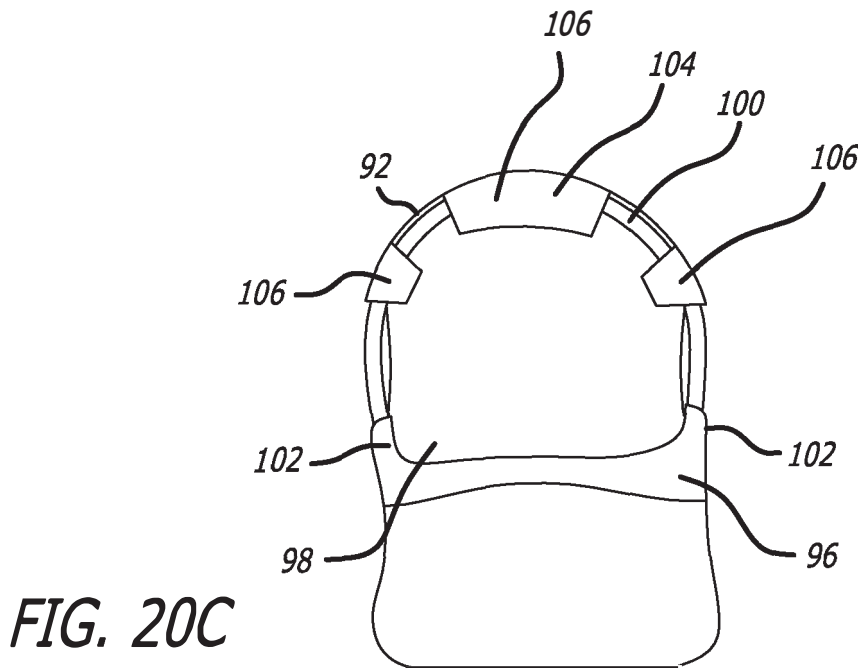
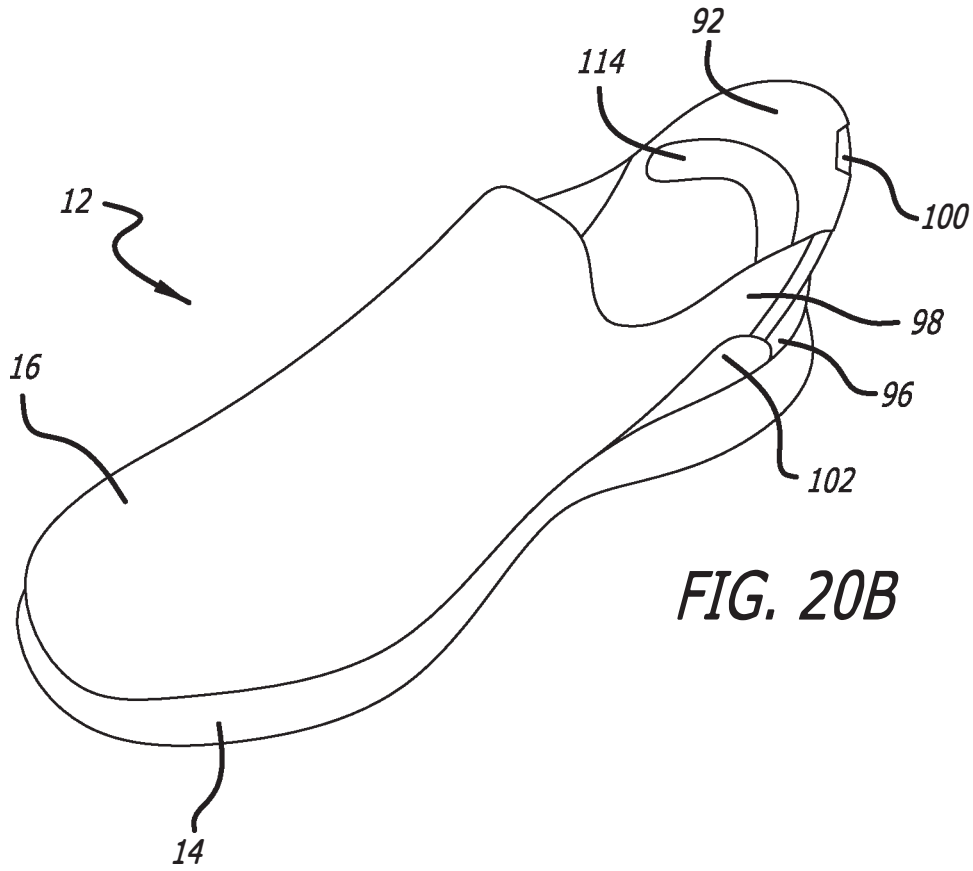


FIG. 20A



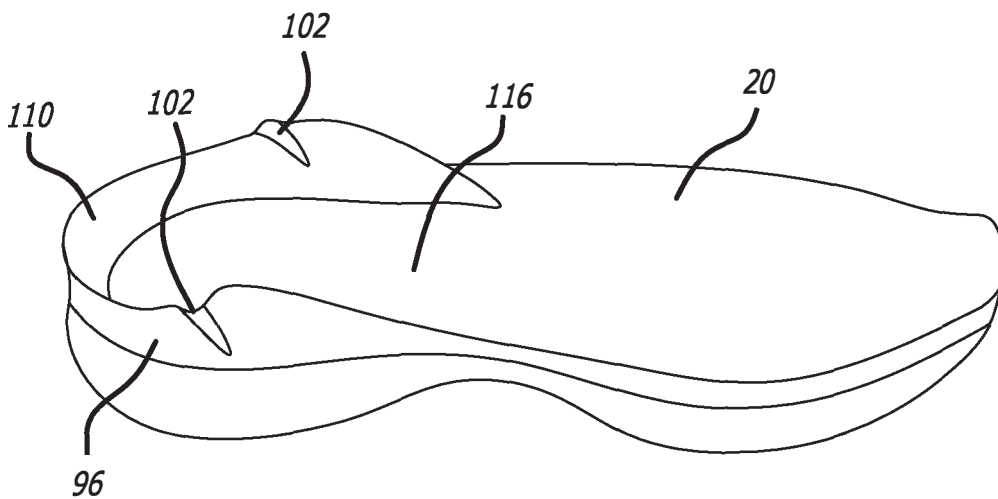
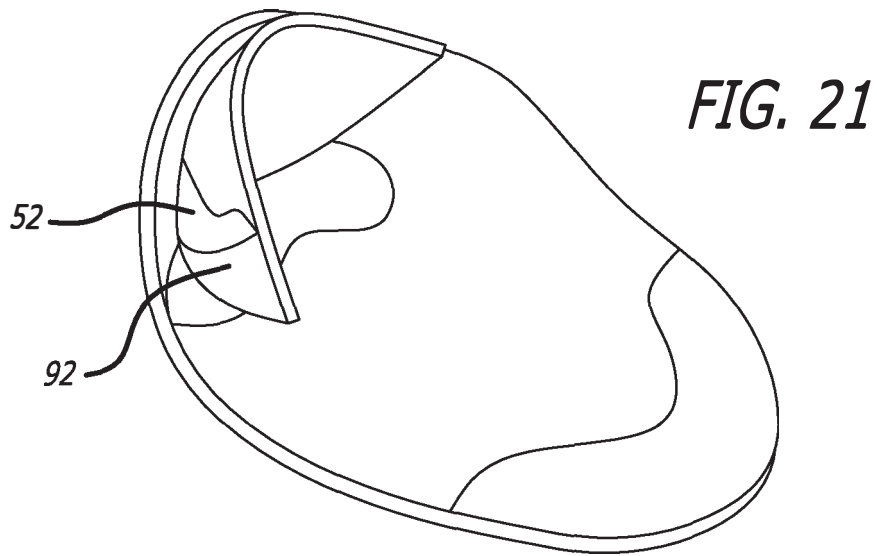


FIG. 22

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**FOOTWEAR COUNTER FOR EASIER  
ENTRY AND REMOVAL****CROSS REFERENCE TO RELATED  
APPLICATIONS**

This application is a U.S. continuation application which claims the benefit of priority to International Application No. PCT/US2022/46726, filed Oct. 14, 2022, which claims priority to U.S. Provisional Patent No. 63/256,521, filed on Oct. 15, 2021. These applications are both hereby incorporated by reference in their entireties.

**TECHNICAL FIELD**

The present disclosure generally relates to a heel counter or a component of a heel counter of a shoe, and in particular a heel counter that is designed to allow for easier entry of the wearer's foot into the shoe.

**BACKGROUND**

Conventionally, when donning footwear such as sports shoes, the user must often use one or both hands or operate a shoe horn separate from the shoe to properly insert the foot into the shoe and secure the quarter from collapsing under the heel.

**BRIEF SUMMARY OF DISCLOSURE**

Aspects of this invention relate to an article of footwear that has a structure capable of distortion to support easier foot insertion.

In one aspect of the invention, a heel cup may be uniformly molded with an upper portion, midportion, and lower portion, and the upper portion has a smaller mediolateral length than the midportion. The midportion and lower portion may form a concave structure configured to receive the heel. The upper portion of the heel cup has a first configuration in its native state and is capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear. In the second configuration, at least part of the upper portion is lowered relative to the first configuration and the upper portion is capable of returning to the first configuration after the load of the user's foot is removed. The midportion may include a peripheral portion having a first thickness and a central portion having a second thickness, and the second thickness is less than the first thickness.

In another aspect of the invention, the upper portion of a heel cup has a first configuration in its native state and is capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear and the heel cup is capable of returning to the first configuration after the load of the user's foot is removed. In the first configuration, the upper portion has a downward incline with a first angle relative to a vertical line that is normal to a horizontal surface of the floor, and the upper portion in the second configuration has an incline with a second angle greater than the first angle. Additionally, in the second configuration, a lower region of a central portion of the heel cup extends outward in a direction away from the shoe opening that causes the shoe opening to widen along the mediolateral direction.

In another aspect of the invention, an upper of an article of footwear includes a U-shaped foamed ankle collar that is substantially tubular in shape and forms the topmost region

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of the foot receiving shoe opening. The foamed ankle collar may extend at least partially around and over the foot receiving shoe opening and may be compressed by the user's heel during foot insertion. The ankle collar may exert pressure on the user's ankle once the foot is inserted into the footwear. The ankle collar may also have a flattened region along its length forming a downward angle from the topmost region toward the front of the article of footwear.

In another aspect of the invention, a heel counter support is located on the upper and above the sole structure. The heel counter support may have at least two hollow receptacles with backward angles. Additionally, each one of the two hollow receptacles receive one end of a compressible component. The compressible component has a first configuration in its native state, and the compressible component is capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear and is capable of automatically returning to the first configuration after the user's foot is fully inserted into the footwear.

**BRIEF DESCRIPTION OF THE DRAWINGS**

By way of example only, selected embodiments and aspects of the present invention are described below. Each description refers to a figure ("FIG.") which shows the described matter. Some figures shown in drawings or photographs that accompany this specification may be for footwear that is for either the left or right foot. Each figure includes one or more identifiers for one or more part(s) or element(s) of the invention.

Various embodiments are described with reference to the drawings, in which:

FIG. 1 is a front view of a compressible heel cup.

FIG. 2 is a perspective view of the compressible heel cup of FIG. 1.

FIG. 3 is a side view of the compressible heel cup of FIG. 1.

FIGS. 4A and 4B are a side-by-side front perspective view of the compressible heel cup of FIG. 1 in its compressed configuration (4A) and its uncompressed configuration (4B).

FIGS. 4C and 4D are a side-by-side top view of the compressible heel cup of FIG. 1 placed within a shoe in its compressed configuration (4C) and its uncompressed configuration (4D).

FIG. 5 is a front view of a heel cup configured to have a series of crisscross beams.

FIG. 6A is a schematic illustration of a cross-section of arc lengths of the rearmost portion of the heel cup of FIG. 1.

FIG. 6B is cross-sectional view of the heel cup of FIG. 1 taken at lines 6-6 in FIG. 1.

FIG. 7 is a side view of a heel counter with a heel cup located in the interior of the heel counter.

FIG. 8 is a top view of the heel counter of FIG. 7.

FIG. 9 is a perspective view of the heel counter of FIG. 7.

FIG. 10 is a cross-sectional view of the heel counter of FIG. 8 taken at lines 10-10 in FIG. 8.

FIG. 11 is a perspective view of a shoe with a heel counter incorporating a rigid heel cup.

FIG. 12 is a side view of the shoe of FIG. 11.

FIG. 13 is a rear view of the shoe of FIG. 11.

FIG. 14 is a bottom view of a tongue and an instep support.

FIG. 15 is a perspective view of a shoe with a cushioned lining.

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FIG. 16 is a side view of the cushioned lining of FIG. 15. FIG. 17 is a perspective view of the cushioned lining of FIG. 15.

FIG. 18 is a top view of the cushioned lining of FIG. 15.

FIG. 19 is a cross-sectional view of the cushioned lining of FIG. 18 taken at lines 19-19 in FIG. 18.

FIG. 20A is a lateral view of a shoe with a heel counter support.

FIG. 20B is a perspective view of a shoe with a heel counter support.

FIG. 20C is a rear view of the shoe of FIG. 20A.

FIG. 21 is a perspective view of the bottom of the upper of the shoe of FIG. 20.

FIG. 22 is a perspective view of the sole and heel counter support of the shoe of FIG. 23.

## DETAILED DESCRIPTION

A shoe may comprise a sole and an upper. The sole may comprise an outsole, a midsole, and/or an integrally formed outsole and midsole. The upper may comprise a toe box, a vamp, a tongue, a medial quarter, a lateral quarter, and a heel counter. The shoe has a forefoot portion, a rear portion, a medial side and a lateral side. The upper may comprise an exterior layer, interior layers or interior structure, and/or an inner lining. The upper may form a shoe opening that is capable of receiving a user's foot when the user is donning the shoe.

The heel counter or rear portion of the upper may comprise a structure(s) that enables easier insertion of the foot into the shoe opening. The structure(s) may also support easier removal of the foot. The heel counter or rear portion of the upper may further have a transient widening when the user is donning or removing the shoe. The widening of the shoe opening may be initiated by the user placing a load on the heel counter or rear portion of the upper that may be exerted by the user's foot with minimal to no assistance by the user's hands. In other embodiments of the invention, the heel counter may be compressible when placed under sufficient load and return to its uncompressed state. The lowering of the heel counter may also allow easier insertion of the user's foot. Once a foot is inserted into the shoe, the heel counter may have a compressible layer, such as a foam component, that secures or enhances securement of the foot during user's normal wear of the shoe.

Compressible Heel Cup. Referring to the embodiments of FIGS. 1-10 a heel counter 32 may comprise a compressible heel cup 52 which may be an interior component of the upper 16, a portion of the inner lining 46 or an attachment adjacent to the inner lining 46 of the upper 16 such that the heel cup 52 makes contact with the foot, or a portion of the exterior layer 42 of the upper 16 or an attachment of an outer surface of the exterior layer 42 of the upper 16.

Referring to the exemplary embodiment of FIGS. 1-4, the heel cup 52 has a shape substantially corresponding to a heel covering and having a profile resembling a pear-like shape. The heel cup has a mediolateral width near the heel cup collar 84 that is less than the mediolateral width of the lower portion 54 as shown in FIGS. 1-2

As shown in FIG. 2, the inner wall 66 of the upper portion 64 of the heel cup at the rearmost portion of the heel cup may have a downward incline of between 0 to 90 degrees relative to a vertical line 86 that is normal to the horizontal surface 88 of the floor. In this exemplary embodiment, the inner wall 66 of the upper portion 64 may have a downward incline of 30 degrees. The inner wall 66 of the upper portion 64 of the heel cup 52 may also have a convex curvature facing toward

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the shoe opening 48. The top portion of the convex curvature has the downward incline A1 of 30 degrees. The lower portion of the convex curvature extends just above the portion of the heel cup 52 that receives the heel. The lower portion of the convex curvature may have a downward incline less than the downward incline of A1 and gradually decreases as it approaches an incline equal to the vertical line 86. The heel cup 52 has a concave curvature that surrounds the rear portion of the heel. The medial and lateral sides of the heel cup 52 may also extend and form support of part of the quarter and even as far as the vamp.

The thickness of the heel cup 52 may be reduced at various locations. The top edge line 68 may have a tapering of the inner surface of the heel cup 52 and outer surface of the heel cup 52. The heel cup 52 may have increased thickness T1 along the other perimeter edges, such as 2 to 3 mm. In another exemplary embodiment, the thickness T1 may be reduced in certain areas to provide greater flexibility to the heel cup 52 when donning or removing the shoe 12.

In one embodiment, the thickness T1 of the heel cup 52 may decrease gradually from a peripheral portion 70 forming an area at the periphery of the heel cup 52 toward the central portion or region 50 of the mid-portion 58. The minimum thickness T1 in the central region 50 of the mid-portion 58 may be approximately, but not limited to 1/4 to 1/6 the thickness relative to the thickest portions at the periphery of heel cup 52, such as 0.5 to 1 mm. The thickest region of the top portion may be greater than the thickest region of the bottom portion. The reduced thickness T1 of the central region of the mid-portion 58 may allow for the heel cup 52 to compress under sufficient load. In an alternate embodiment, the thickness T1 may be reduced across the entire mediolateral portion or in multiple regions such as regions in the mid-portion 58 and/or regions of the upper portion 64. The thinner regions may provide increased flexibility and bending of the heel cup 52 which provides the necessary compressibility under the load of a user's foot such as during the donning of a shoe 12. Such compression may allow the upper portion 64 and/or the mid-portion 58 of the heel cup 52 to move rearward and widen the shoe opening 48 to allow easier entry of the foot. The heel cup 52 is capable of distortion from a first configuration in its native state, to a second configuration under a load of a user's foot when the user is donning the footwear. For example, the heel cup 52 may be partially compressed such that the upper portion 64 and/or mid-portion 58 of the heel cup 52 is lowered sufficiently to allow the insertion of the user's foot. See for example FIGS. 4A and 4C. Once the user's foot is inserted into the shoe 12, the heel cup 52 may return to its uncompressed configuration.

Further to this embodiment, when a user dons the shoe 12, the top portion of the convex curvature of the heel cup 52 or the uppermost segment of the heel counter 32 of the shoe 12 may be lowered and extend backward away from the foot as the heel counter 32 is compressed as shown in FIG. 4A. This action allows the user's foot to be inserted into the shoe opening 48 with a reduced degree of plantar flexion. During compression of the heel cup 52, portions of the heel cup 52 may move forward toward the direction of the forefoot portion. The distortion of the heel cup 52 may include the attached heel counter 32 widening with the medial and lateral sides of the heel cup moving outward thereby widening the opening of the shoe. The mediolateral widening of the shoe opening 48 allows easier entry such as easier insertion of the forefoot portion of the user's foot. In one exemplary embodiment, the shoe opening of 7.5 cm may widen up to 4 cm or about 50%. See FIGS. 4C and 4D. The

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widening may be less or more depending on the size of the shoe and the flexibility of the heel cup. In some shoes, the desired widening may be less or greater depending on the needs of securement and use.

In an exemplary embodiment of the heel cup **52** as shown in FIGS. **1-4**, the thickness **T1** of a heel cup **52** made of a polymer material, such as Dupont Hytre, may range from 0.4 millimeters to 4 millimeters. The range of thickness **T1** of the heel cup may be thinner or thicker at various regions depending on the desired elastic and durable properties of the material. For example, the midpoint region may be thinner than the surrounding regions, and in particular a central portion may be thinner as shown in FIG. **6B**. The central portion may be spaced away from the medial and lateral edges wherein the peripheral edges may have a greater thickness. Other suitable materials may include other thermoplastic elastomers or other polymers capable of providing the compressible characteristics of the heel cup.

In another exemplary embodiment, the heel cup may be configured to have a series of crisscross beams that form an egg crate like configuration. FIG. **5** shows an exemplary embodiment with beams that are in a diagonal configuration. In an alternate embodiment, the beams may also be in a vertical and lateral configuration. The apertures between the beams may be approximately uniformly sized. The beams may be uniform in dimensions or vary in thickness and width. Beams that are thinner or less wide may be used to enhance flexibility and compressibility in designated locations while thicker or wider beams provide varying degrees of rigid support. For example, the beams may be thinner in the mid-portion, and in particular, the central portion of the mid-portion that is spaced away from the edges. The surrounding beams may be thicker than the central portion. The central portion may allow for greater flexibility in order to distort under a load.

In an exemplary embodiment, the rearmost portion of the heel cup **52** may have an overall vertical cross-sectional shape that resembles approximately an S wave as shown on a cross-sectional diagram of FIG. **6A**. The upper and lower portions of the S wave may be differentiated at the point **P1** through a horizontal plane, i.e. the midline **90**, which is drawn between the upper arc and lower arc ends of the S wave and intersects the heel counter **52** and the inflection point of the S wave. The amplitude ( $A_U$ ) and width ( $W_U$ ) of arc of the upper portion of the S wave may be different than the amplitude ( $A_L$ ) and width ( $W_L$ ) of the lower arc of the lower portion of the S wave. In the exemplary embodiment, the  $W_U$  is approximately 0.44 times that of the  $W_L$ . The  $A_U$  is approximately  $\frac{1}{3}$  that of the  $A_L$ . In one possible embodiment, the  $W_U$  is approximately 2 centimeters and the  $W_L$  is approximately 4.5 centimeters. The  $A_U$  is roughly 3 millimeters and the  $A_L$  is roughly 9 millimeters. The S configuration decreases both in  $A_U/A_L$  and  $W_U/W_L$  in the cross-sections in the areas extending from the rearmost portion's cross-section of the heel cup **52** and may only consist of the lower portion arc along the medial and lateral sides of the heel cup **52**. The measurements at the rearmost portion of the heel cup **52** of the exemplary embodiment are intended to be exemplary.

The central region of the mid-portion of the heel cup may have a single aperture or a plurality of apertures. Just as the central region of the mid-portion may be constructed with less material than the maximum thickness of the collar and/or the maximum thickness of the base, the central region of the mid-portion of the heel cup may be constructed with a material of greater flexibility than the material forming its periphery. The resulting effects of the central region com-

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prising a single aperture, a plurality of apertures, a lesser thickness, and/or a material of greater flexibility, may serve to facilitate entry and removal of the user's foot from the shoe.

Further to the exemplary embodiment, the heel cup **52** may be attached at least to an interior foam layer **92**, as shown in FIG. **10**. The heel cup **52** may be located in the interior of the heel counter **32** of the upper **16** as shown in FIGS. **7-10**. The foam layer **92** may line both the inner wall **66** of the heel cup **52** and outer wall of the heel cup **52**. Around the upper portion and mid-portion, the foam layer **92** may protrude and extend further into the shoe opening **48**. The foam layer **92** may be thicker at or adjacent to the upper portion **64** and mid-portion **58** of the heel cup **52** thereby forming part of the cuff of the shoe opening **48**. The thicker foam layer **92** may provide securement of the user's foot once inserted within the shoe **12** as the foam would be located above the calcaneus bone region of the user's foot and extend around at least portions of the ankle region of the foot. Since the foam is compressible, the foam may be compressed by the heel during foot insertion or removal and hold the ankle of the user's foot once the foot is inserted.

**Rigid Heel Cup.** In one exemplary embodiment, a shoe **12** may have a heel counter **32** located at the rear portion **36** of a shoe upper **16** as shown in FIGS. **11-13**. The heel counter **32** may comprise a heel cup **52** which may be an interior component of the upper **16**, a portion of the inner lining **46** or an attachment adjacent to the inner lining **46** of the upper **16** such that the heel cup **52** contacts the foot, or a portion of the exterior layer **42** of the upper **16** or an attachment of an outer surface of the exterior layer **42** of the upper **16**.

The heel cup may have a lower portion that forms a heel cup configured to receive the heel of the foot. The lower portion of the heel cup may further have side extensions around both the medial side and lateral side. The heel cup may have a mid-portion located above the lower portion of the heel cup and that curves inward above the heel bone or may be composed of an aperture. The heel cup may have an aperture located at the rear of the heel cup. Further to this embodiment, the heel cup may be a rigid heel cup constructed of a substantially incompressible material under the load of the foot.

At least one aperture may be incorporated into the mid-portion of the rigid heel cup that may be added to enhance the fit of the shoe around the foot of the heel. The upper material layers covering the aperture may comprise an elastic material such that the material stretches around the contours of the heel. The tension created by the elastic material upon stretching may enhance the securement of the foot during normal use of the shoe.

The upper portion of the heel cup may be configured with a smooth curvature extending from the top edge of the heel cup curved downward towards the shoe opening **48**. The inner wall of the upper portion has an overall downward incline that extends from the curved top edge of the upper portion toward the interior of the upper **16**. The inner wall of the upper portion may have dimensions akin to a shoehorn such that the smooth curvature and angle of the downward incline of the upper portion allows the heel of the foot to slide into the shoe **12** with greater ease. The heel cup may be constructed of a rigid material that does not substantially compress under the load of the user's foot. In an alternate embodiment, the heel cup may have some flexibility such that the upper portion of the heel cup may have some slight flexibility sufficient to bend downward and away from the shoe opening and/or widen the shoe opening **48** for easier foot insertion and/or removal.

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As shown in FIG. 11, the top edge of the heel counter 32 may also form a resilient support structure of the rear heel collar 74. When the heel cup 52 is incorporated into the upper 16, a fabric material(s) or a suitable material(s) known in the art may be used to cover the heel cup 52 thereby forming the exterior layer 42 and interior layers or structures of the upper. The fabric material may extend above the heel cup 52 thereby forming an extension of the heel collar 74.

Foam material or any inner lining material(s) known in the art may be used as an inner compressible layer of the upper 16 of FIG. 11. The foam material may be bonded to the inner surface of the heel cup 52 to provide cushioning against the rigid heel cup material. The thickness of the foam material may be uniform or vary at certain locations depending on the desired cushioning or support to the foot. In one exemplary embodiment, thicker foam material may be located at the inner wall 66 of the upper portion 64 and may further extend at least a portion along the mediolateral length of the inner wall 66. The foam material may be configured to curve around at least a portion of the ankle above the heel when the shoe 12 is worn similar to the foam material configuration shown in FIG. 10. In this embodiment, the user's foot may compress the foam material during foot insertion. Following foot insertion, the foam material may expand to its fully uncompressed state or partially expand thereby improving the security of the foot within the shoe 12. A thinner foam material may be used to line the other portions of the heel cup 52.

The rigid heel cup 52 may be used in combination with a shoe upper 16 having at least one elastic region 78 located on the sides of the upper between the heel cup 52 and the front portion of the foot receiving shoe opening 48. The elastic region 78 may have one or more elastic materials that allow the rear portion of the heel counter 32 to be temporarily moved back to widen the foot receiving shoe opening 48 for easier insertion of the foot into the shoe 12. As shown in FIG. 11, the elastic material may be a gore piece 80 configured to be fixed within a void of the upper such as in the form of a gusset on the medial quarter or lateral quarter or both. The elastic material may be in any spacing between the heel cup 52 and the upper portion located at the quarters 30 or vamp 24 or possibly a tongue. The elastic material may also be configured as a series of elastic strips or webbing extending between the heel cup 52 to the medial and lateral sides of the vamp 24 or possibly a tongue.

**Instep Support.** In some embodiments, an instep support may be used to aid in preventing, in some instances, the instep of the user's foot from dragging a portion of the instep, or tongue partially into the throat area as the user dons the shoe.

In some embodiments having a tongue 126 as shown in FIG. 14, the medial side of the upper portion 132 of the tongue 126 is attached to the first or proximal end of a medial elastic strap 128 and the lateral side of the upper portion 132 of the tongue 126 is attached to the first or proximal end of a lateral elastic strap 130. The front lower portion of the tongue is attached directly to the upper. Each of the medial and lateral elastic straps may be attached to the upper directly to the inner lining of the upper at its second or distal ends. In an alternate embodiment, the elastic straps may extend through an opening of the inner lining of the medial quarter and lateral quarter respectively. The second end of each of the medial and lateral elastic straps may terminate respectively at the sole, sockliner, or a region within the upper's interior lining. The elastic straps function to maintain the general positioning of the tongue when the user dons the shoe.

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In other embodiments, each of the medial and lateral sides of the edge of the tongue or an upper portion of the tongue are attached by a gusset which may be of elastic material, to the inner lining of the upper of the medial quarter and lateral quarter of the upper. The gusset similarly may function to maintain the general positioning of the tongue when the user dons the shoe. In another embodiment of the tongue, the at least a portion of the medial and lateral edges of the tongue may be directly affixed or stitched to the interior portion of the upper and the tongue. Furthermore, the tongue may be extended wider than a conventional tongue along the medio-lateral direction in the upper portion of the tongue and the edges or some portion of the extended portion may be affixed or stitched to the interior portion of the upper.

In other embodiments, an instep or tongue support which may be constructed of a sheet-like material of greater hardness than the fabric of the instep or tongue may be attached to the outer surface of the tongue or embedded between an exterior tongue layer and an inner tongue layer facing the shoe opening. The instep or tongue support may reduce or prevent the instep or tongue from collapsing during the insertion of the foot. In one embodiment shown in FIG. 14, tongue support 134 may be a more rigid material such as a thermoplastic polymer configured to be more rigid than the tongue. In some embodiments, the instep or tongue support may have a thickness of 0.2 mm to 1 mm. The instep support may be coextensive with the instep or tongue, or it may extend beyond the medial or lateral sides of the instep or tongue. In the embodiment shown in FIG. 14, the tongue support 134 may be narrower and shorter than the instep or tongue.

In one embodiment, a reinforcing quarter element may extend from the heel counter to the instep or eyestay. When a gusset is incorporated such as gusset 80 in FIG. 11-12, a reinforcing quarter element may extend from the heel counter 32 along the front lower edge of the gusset and around the top edge of the collar to the instep, a region near vamp 24, or an eyestay adjacent to a tongue. A reinforcing quarter element may be stiffer than the upper or quarter material. The reinforcing quarter element material may be constructed of leather, plastic, or rigid fabric. The reinforcing quarter element may be attached to the upper through bonding or stitching. The reinforcing quarter element may be configured as an elongated shape such as a strip that extends along the front lower edge of the gusset and the collar portion. The reinforcing quarter element may be located on the exterior surface or may be an interior layer of the upper such as a layer embedded within the upper or along a portion of the inner lining of the upper. A reinforcing quarter element may provide greater stability to the opening of the shoe such that it provides resistance against the quarters and instep region collapsing or moving inward into the opening of the shoe when the foot is inserted into the shoe and pushes the heel cup rearward.

When the reinforcing quarter element is used in combination with an eyestay layer used in laced shoes, the eyestay may add additional structural support in providing resistance against the quarters and instep from collapsing or moving inward into the opening of the shoe. Thus, as a foot pushes against the heel cup and the gusset is stretched rearward, the reinforcing quarter element is not significantly pulled rearward. Accordingly, the shoe opening may attain a wider opening when the foot is inserted into the shoe and pushes the heel cup rearward.

**Compressible lining.** In some embodiments, the inner surface of the heel counter and heel/ankle collar may have a portion having a compressible layer such as a foam layer.



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The compressible layer may extend into the shoe opening. The compressible layer is compressed under a load during the donning or removal of the shoe. After the foot is inserted into the shoe, the foam layer may expand fully or partially to its uncompressed state, and such expansion may enhance the securement of the foot within the shoe.

In one exemplary embodiment, the compressible layer **100** is embedded at least within a portion of the ankle collar **140** and the upper region of the heel counter **32**. See FIGS. **15-19**. The compressible layer **100** extends into the opening of the shoe. During the donning of the shoe, the foot exerts a load onto the compressible layer thereby widening the opening of the shoe through the transient compression of the compressible layer. After the foot is inserted into the shoe, the compressible layer expands partially or fully back to its original shape. Expansion of the compressible layer causes the foam to expand around the foot which may enhance comfort and securement of the foot. In some embodiments, the compressible layer extends above and/or around the calcaneus bone of the user's foot and around at least portions of the ankle region of the foot.

The compressible layer may be constructed of a material of a foam material such as EVA or polyurethane foam. The shape of the compressible layer may be pre-formed by molding the material, and affixing the compressible layer between at least two layers of textile material. The shape of the compressible layer may have at least partially a rounded outer surface that extends into the opening of the shoe and/or the ankle collar of the shoe. The volume of the compressible layer may be greater in the rear portion of the heel counter and taper along longitudinal direction of the inner portion of the foam layer at both sides of the shoe as shown in FIGS. **17-18**. The compressible layer may also taper or be rounded along the vertical axis and that the compressible layer is greater in volume at the upper portion of the ankle collar **140** and less at the lower portion of the ankle collar **140**. See FIGS. **18-19**. The compressible layer may be used to form the entire heel cup without the need of an additional heel cup or heel counter. Alternatively, the compressible layer can be used in combination with a compressible heel cup, such as shown in FIG. **1**. The heel cup can define an exterior surface of the upper, the heel cup can define an interior surface of the upper, or the heel cup can define an internal layer, for example, if embedded within the compressible layer.

In the exemplary embodiment, a lower flange **118** may extend downward from the ankle collar and is configured to attach to the upper. The lower flange may be configured in any dimensions necessary to secure the ankle collar to the upper. The lower flange may also vary in the length. In some embodiments, the lower flange may define the portion of the ankle collar attached to the upper without extending downward from the ankle collar at all. In other embodiments, the lower flange may extend downward partially or fully to the bottom of the upper. In some embodiments, the lower flange may be configured to form the heel counter. In other embodiments, a heel cup, such as shown in FIG. **1**, may be partially or fully embedded in lower flange.

The compressible layer **100** may be covered by any type of textile. The textile may be elastic and may have wicking properties. The textile may be form fitted to the exterior shape of the compressible layer. In a preferred embodiment, an adhesive such as a thermoplastic based adhesive is applied to the compressible layer after which the compressible layer is inserted into an elastic textile sleeve. The resulting product may also be affixed by any means such as glue or stitching according to the desired pattern of the ankle collar **140**. The textile may also include thermoplastic mate-

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rial and after the compressible layer **100** is inserted into the textile sleeve, heat may be applied to fuse the textile to the compressible layer **100**. In a preferred embodiment, steam may be applied so that the textile conforms to the preformed shape that forms a portion of the ankle collar and/or heel counter.

Further to the exemplary embodiment, the ankle collar **140** is devoid of stitches or seams on its upper portion and may have a seam on the bottom portion where it is attached to the upper **16**. The seamless ankle collar **140** may extend from the medial quarter, around the heel, to the lateral quarter. As the user's foot is inserted into the footwear, the user's heel depresses the compressible layer **100** against the heel cup. The heel cup may keep the structural integrity of a portion of the heel region of the upper **16** from collapsing when the user's heel depresses the compressible layer **100**, thus allowing for an easier entry into the shoe by the user's foot without the use the user's hands or an external shoe horn. Once the user's heel is fully inserted into the shoe, the compressible layer may rebound and may exert force against the back of the user's heel above the calcaneus bone and around portions of the ankle region which may aid in providing comfort and securing the user's foot within the shoe.

Further to the exemplary embodiment, the cross-section of the seamless upper portion of the ankle collar **140** is substantially round. The ankle collar **140** may be separated into a forward portion **142** and a rear portion **144**. Each of the forward portion and rear portion resemble an approximately circular cross-section or semicircular cross-section wherein the radius of the forward portion is greater than the radius of the rear portion. See FIGS. **18-19**. The compressible layer may be directly attached to the inner structure of the heel counter or via the textile sleeve covering the compressible layer material.

Compressible Heel Counter with Heel Counter Support. In another exemplary embodiment, heel counter support **96** may partially form an exterior layer of the shoe and extend around the heel portion of the upper **16** from the medial quarter of the shoe to the lateral quarter of the shoe as shown in FIGS. **20-22**. In other embodiments, the heel counter support may further extend along a portion of the quarter, along the entire quarter, or along the entire quarter and into the vamp portion of the shoe. The heel counter support **96** may vary in height at different regions of the shoe. In the exemplary embodiment, the medial end and lateral end of the heel counter support **96** gradually decreases in height to the base of the upper **16** just above the sole **14**. The heel counter support **96** may have a medial region of a maximum height on the medial side of the heel portion of the upper, and a maximum height on the lateral side on the heel portion of the upper. The heel counter support **96** extends at least a portion of the height of the upper **16**. In the exemplary embodiment, the height of the medial and lateral side heel portions **98** of the upper **16** is roughly 5 cm above the lasting surface **116** and the maximum height of the heel counter support **96** on the medial and lateral sides of the heel portion is roughly 3 centimeters above the lasting surface **116**. The heel counter support **96** may gradually reduce in height from the region of its maximum height to a region of roughly uniform height along the rear of the heel portion **98** of the upper **16**. In the exemplary embodiment, the height along the heel portion **98** of the upper **16** extends up to roughly 3 centimeters above the lasting surface **116**, and the roughly uniform height of the portion forming rear portion of the heel counter support **96** is roughly 2 centimeters above the lasting surface **116**.

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The heel counter support **96** may partially form an exterior surface of the upper **16**. The heel counter support **96** may have an interior surface in contact with an outer surface of the heel portion **98** of the upper **16**. The heel counter support **96** may have a varying thickness across its exterior surface to its interior surface. In the exemplary embodiment, angular strips **102** form portions of increased thickness of the heel counter support **96**. The angular strips **102** may provide increased rigidity to the heel counter support **96** as well as be configured to receive the compressible component **100**.

In the exemplary embodiments, the angular strips **102** have hollowed protrusions on the medial and lateral sides of the shoe **12** into which the ends of the compressible component **100** are secured. The compressible component **100** may be a pipe wherein each end of the pipe is secured within the hollowed protrusions **102**. A hollowed protrusion of the angular strips **102** may extend partially or completely around the surfaces of the compressible component **100**. In the exemplary embodiment, the compressible component **100** may be formed from polyoxymethylene or any other material with similar durability and sufficient rigidity to support the load of a foot and flexibility to curve from medial to lateral sides of the heel portion of the shoe **12**. The central segment **104** of the compressible component **100** may extend behind the ankle opening and above the heel counter of the shoe **12**. In the exemplary embodiment, the angular strips **102** may be designed to receive the compressible component **100** at an angle so that the compressible component **100** extends from inside the hollowed protrusions **102** at a rearward incline **A2** toward the back of the shoe **12**. The rearward incline **A2** of the compressible component **100** is approximately 45 degrees with respect to a level plane of the floor **88**. See FIG. 20A. A foam layer **92** extending above the rear heel portion **98** of the upper **16** at the rear portion of the heel opening may have a rearward incline **A2** that is coextensive with the compressible component **100**. The rearward incline **A2** of the foam layer **92** may assist in guiding the user's foot into the shoe **12** when donning the shoe.

The central segment **104** of the compressible component **100** may extend behind the rearmost portion of the upper **16** and may be threaded through one or more guide tunnels **106** in the upper **16**. In the exemplary embodiment, strips of leather material are sewed to the foam layer **92** and extend above the upper at the rear portion of the heel opening. The ends of the strip of leather are stitched together to form guide tunnels **106** through which the compressible component is threaded.

When donning the shoe **12**, the user's foot may depress the compressible component **100** and/or the rearwardly inclined foam layer **92** downward and rearward from the shoe opening. Once the user's foot has fully entered the shoe **12**, the compressible component **100** and the rearwardly inclined foam layer **92** return to their initial elevated positions.

The additional interior heel support **114** made of foam material may have sufficient thickness that may enhance securing the foot at the Achilles tendon, and once the user dons the shoe **12**, the calcaneus bone may be located below the additional interior heel support **114**. The interior heel support **114** may have a sufficient height to be located above the calcaneus bone once the foot has been inserted into the shoe.

Further to the exemplary embodiment, the shoe may have a heel cup **52** made of a flexible material configured to receive the rear portion of the heel. In one embodiment, the

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heel cup is a thermoplastic material that provides sufficient support as a heel counter. The interior heel support **114** may be foam material lining to provide the necessary comfort to the user's heel.

Although the present invention has been described above by referring to particular embodiments, it should be understood that modifications and variations could be made to the sole structure without departing from the intended scope of invention.

We claim:

1. An article of footwear comprising:

- an upper and sole structure;
- the upper defining a foot receiving shoe opening;
- a heel cup attached to the upper and extending from the sole structure to at least a portion of a rear ankle collar of the upper;
- the heel cup uniformly molded with an upper portion, midportion, and lower portion where in the upper portion has a smaller mediolateral length than the midportion, and the midportion and lower portion form a concave structure configured to receive the heel;
- the heel cup having a rearward facing upper concavity with a first amplitude;
- the heel cup having a forward facing lower concavity with a second amplitude;
- the second amplitude being greater than the first amplitude;
- the upper portion having a first configuration;
- the upper portion capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear;
- wherein in the second configuration at least part of the upper portion is lowered relative to the first configuration;
- the upper portion capable of returning to the first configuration after the load of user's foot is removed;
- the heel cup having an upper central portion, a mid-central portion, and lower central portion;
- the mid-central portion having a first thickness;
- the upper central portion having a second thickness;
- the lower central portion having a third thickness;
- and
- the first thickness is less than the second thickness and the third thickness.

2. The article of footwear of claim 1 wherein the first thickness increases gradually to the second thickness in a direction extending from the mid-central portion to the upper central portion, and the first thickness increases gradually to the third thickness in a direction extending from the mid-central portion to the lower central portion.

3. The article of footwear of claim 1 wherein in the second configuration, the upper central portion is closer to the front of the article of footwear than in the first configuration and an uppermost segment of the upper portion is moved further away from the front of the article of footwear.

4. The article of footwear of claim 1 wherein at least one of the upper central portion, the mid-central portion, and the lower central portion folds under the load in the second configuration and unfolds in the first configuration.

5. The article of footwear of claim 1 wherein the upper portion in the first configuration has a downward incline with a first angle relative to a vertical line that is normal to a horizontal surface of a floor and the upper portion in the second configuration has an incline with a second angle, and the second angle is greater than the first angle.

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6. The article of footwear of claim 1 wherein in the second configuration, the peripheral portion of the midportion is extended outward along the mediolateral width of the article of footwear to a greater extent than in the first configuration.

7. The article of footwear of claim 1 wherein an elastic member is located between the heel cup and a front portion of the foot receiving shoe opening.

8. The article of footwear of claim 1, wherein a foam component is located on at least an inner surface of the upper portion and midportion of the heel cup; the foam component is compressed by the user's heel during foot insertion; and the foam component exerts pressure on the user's ankle once the foot is inserted.

9. The article of footwear of claim 8 wherein the foam component extends from both sides of the upper portion of the heel cup along at least a portion of the inner surface of the upper to form side sections of the foam component.

10. The article of footwear of claim 9 wherein the rear portion of the foam component curves inward and tapers vertically downward along a concave structure of the heel cup.

11. The article of footwear of claim 1 wherein the upper portion, midportion, and lower portion has an overall vertical cross-sectional "S" wave shape.

12. The article of footwear of claim 11 wherein at least one of the upper central portion, mid-central portion, and lower central portion is at least partially located at an inflection point of the "S" wave shape.

13. The article of footwear of claim 1, wherein a foam component is located on at least an inner surface of the upper portion and midportion of the heel cup; the foam component is compressed by the user's heel during foot insertion; and the foam component exerts pressure on the user's ankle once the foot is inserted.

14. An article of footwear comprising:  
an upper and sole structure;  
the upper defining a foot receiving shoe opening;  
a heel cup attached to the upper and extending from the sole structure to at least a portion of the rear heel collar of upper;  
the heel cup uniformly molded with an upper portion, midportion, and lower portion where in the upper portion has a smaller mediolateral length than the midportion;  
a heel region of the upper having a rearward facing upper concavity and a forward facing lower concavity;  
the upper concavity having a first depth;  
the lower concavity having a second depth;  
the second depth being greater than the first depth;  
the lower concavity being configured to cup a calcaneus bone region of a heel;  
the upper portion having a first configuration;  
the upper portion capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear;  
the upper portion capable of returning to the first configuration after  
the load of the user's foot is removed; and wherein  
the upper portion in the first configuration has a downward incline with a first angle relative to a vertical line that is normal to a horizontal surface of the floor;  
the upper portion in the second configuration has an incline with a second angle;  
and the second angle is greater than the first angle; and

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a lower region of the central portion extends outwardly in the second configuration in a direction away from the shoe opening that causes the shoe opening to widen along the mediolateral direction.

15. The article of footwear of claim 14 further comprising a foam layer located adjacent to the forward-facing surface of the heel cup, wherein the foam layer has a first thickness adjacent to the upper concavity and a second thickness adjacent to the lower concavity, the first thickness is greater than the second thickness, and the first thickness tapering to the second thickness toward the direction of the lower concavity.

16. The article of footwear of claim 15 wherein the upper portion, midportion, and lower portion has an overall vertical cross-sectional "S" wave shape, wherein the central portion is at least partially located at an inflection point of the "S" wave shape and partially folds under the load.

17. An article of footwear comprising:  
an upper and sole structure;  
the upper defining a foot receiving shoe opening;  
a heel cup attached to the upper and extending from the sole structure to at least a portion of a rear ankle collar of the upper;  
the heel cup uniformly molded with an upper portion, midportion, and lower portion where in the upper portion has a smaller mediolateral length than the midportion;  
the heel cup having a rearward facing upper concavity with a first amplitude;  
the heel cup having a forward facing lower concavity with a second amplitude;  
the second amplitude being greater than the first amplitude;  
the midportion and lower portion forming the lower concavity and  
being a concave structure configured to receive the heel;  
the upper portion having a first configuration;  
the upper portion capable of distorting into a second configuration under a load of a user's foot when the user is donning the footwear;  
wherein in the second configuration at least part of the upper portion is lowered relative to the first configuration;  
the upper portion capable of returning to the first configuration after the load of the user's foot is removed;  
the heel cup having an upper central portion, a mid-central portion, and lower central portion;  
the mid-central portion having a first thickness;  
the upper central portion having a second thickness;  
the lower central portion having a third thickness;  
the first thickness is less than the second thickness and the third thickness; and  
the upper portion, midportion, and lower portion has an overall vertical cross-sectional "S" wave shape, wherein the central portion is at least partially located at an inflection point of the "S" wave shape.

18. The article of footwear of claim 17 wherein an elastic member is located between the heel cup and a front portion of the foot receiving shoe opening.

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