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(54) **CONSTRUCTION UNIT AND SHOE INCORPORATING THE CONSTRUCTION UNIT**

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Related U.S. Application Data

(63) Continuation-in-part of application No. 29/778,246, filed on Apr. 12, 2021, Continuation-in-part of application No. 16/983,773, filed on Aug. 3, 2020, which is a continuation-in-part of application No. PCT/US20/28739, filed on Apr. 17, 2020, said application No. 16/983,773 is a continuation-in-part of application No. 16/735,680, filed on Jan. 6, 2020, now Pat. No. 10,729,207.

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Publication Classification

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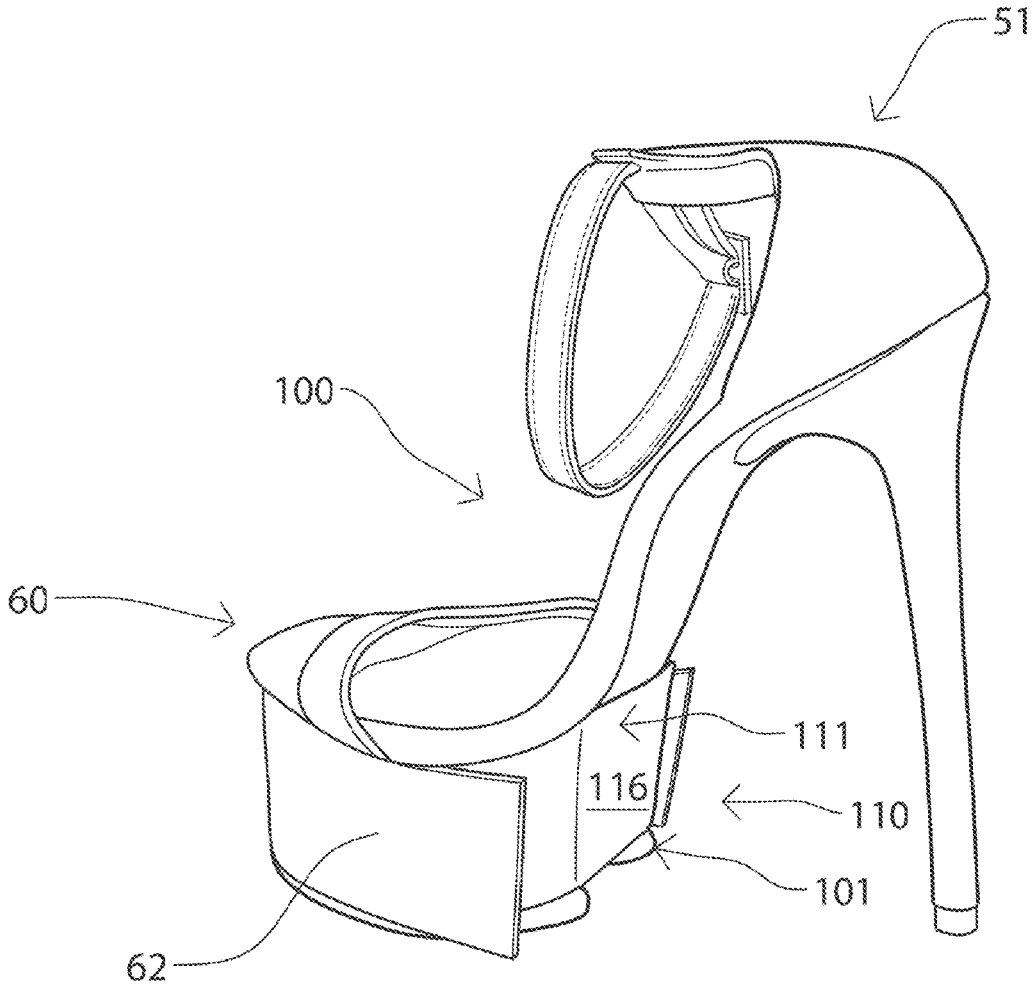
A43B 13/14 (2006.01)

(52) **U.S. Cl.**
CPC ***A43B 13/14*** (2013.01)

(57) **ABSTRACT**

A footwear construction unit for receiving a decorative component is provided along with an embellished shoe that incorporates the construction unit. The construction unit comprises an upper body and a weight-bearing wall extending downwardly from the upper body, which together at least partially define an interior upraised area that, in some aspects of the invention, accommodates at least a portion of the decorative component to elevate the decorative component above the walking surface and to protect it from dirt and abrasion. In other aspects of the invention, the decorative component may extend across the arch, down the inner heel, through a décor-receiving channel inset in the weight-bearing wall, and/or onto other surfaces herein disclosed.



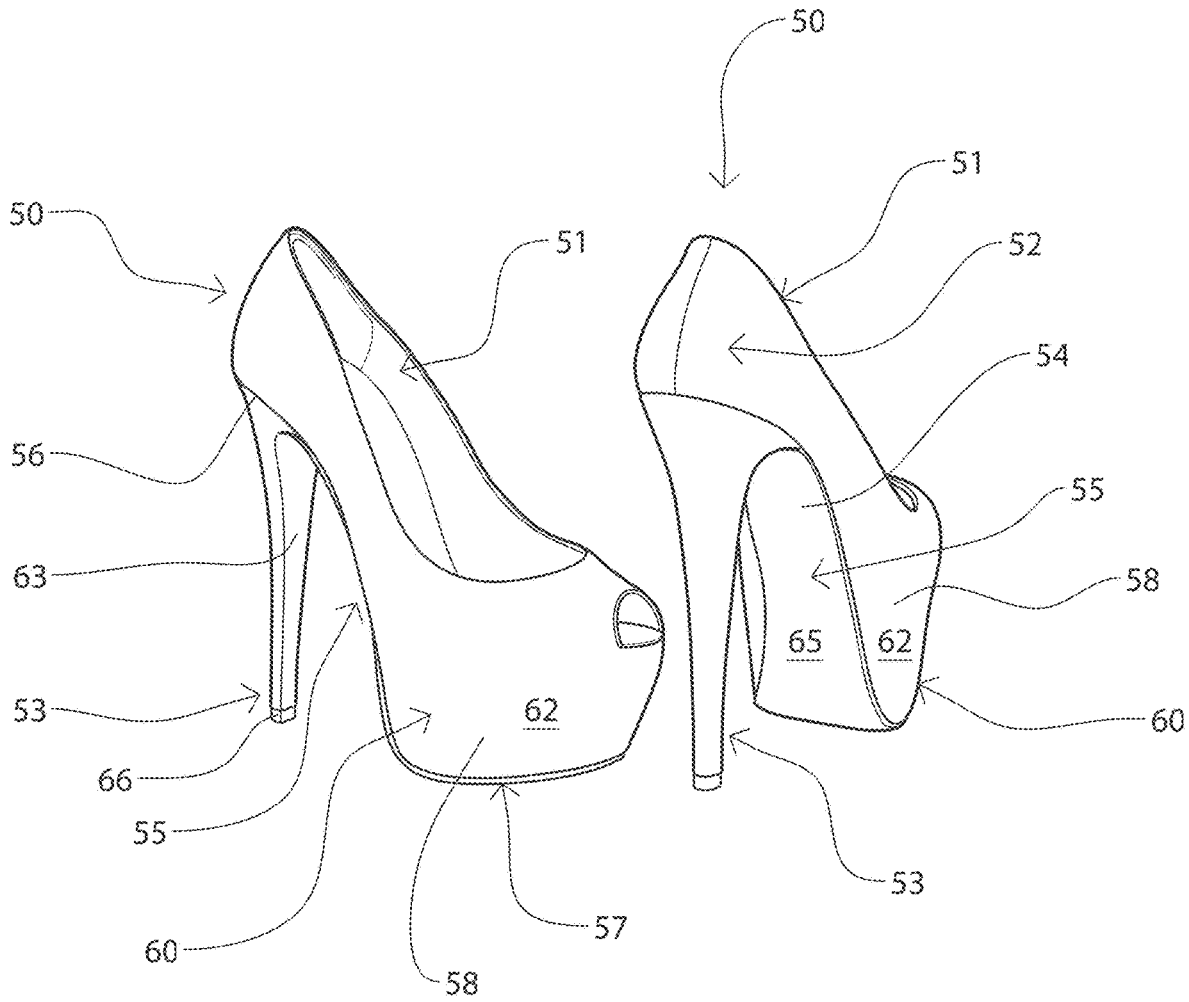


FIG. 1
Prior Art

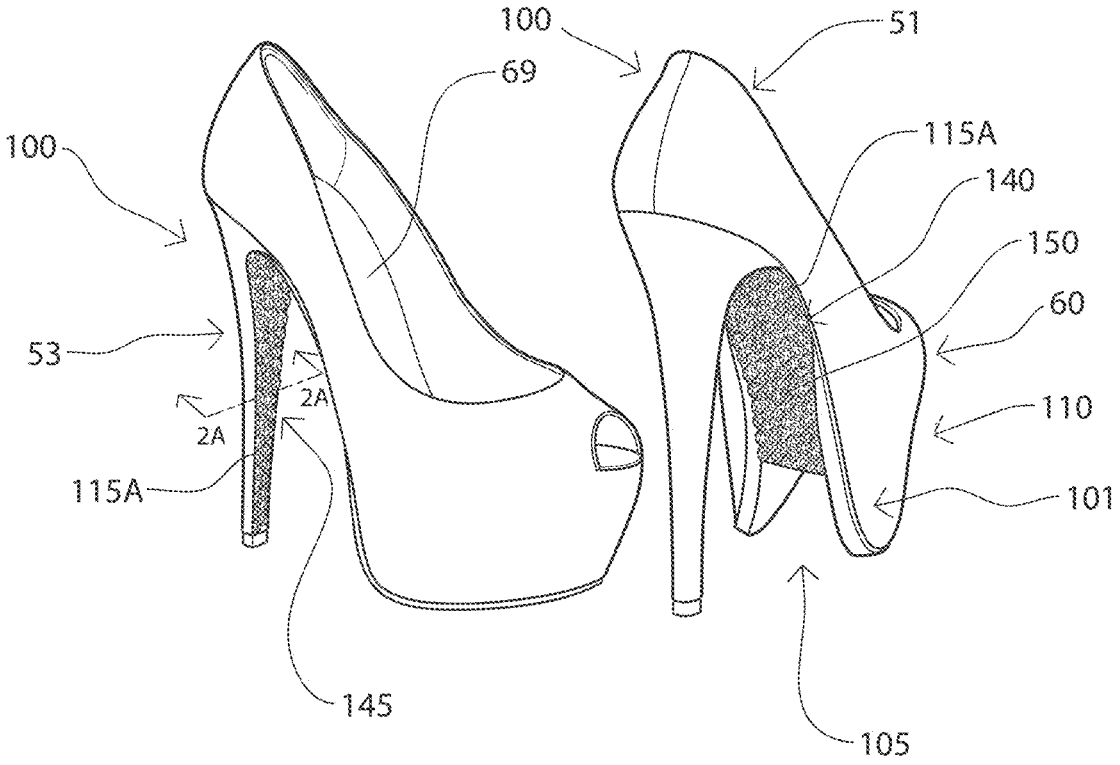

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FIG. 2

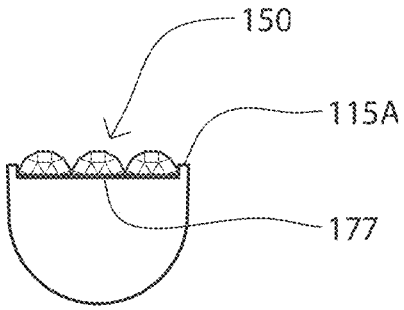
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FIG. 2A

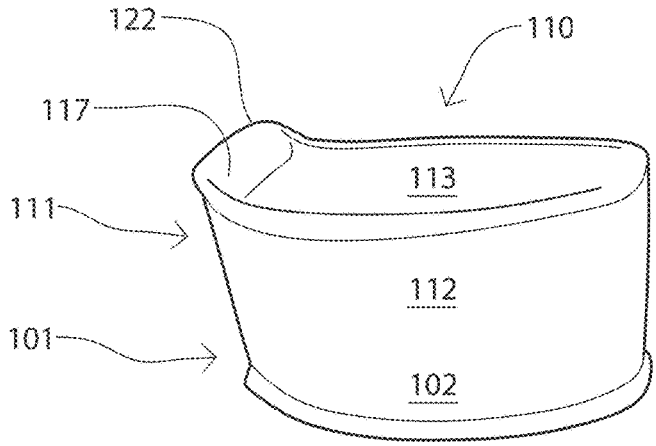

FIG. 3

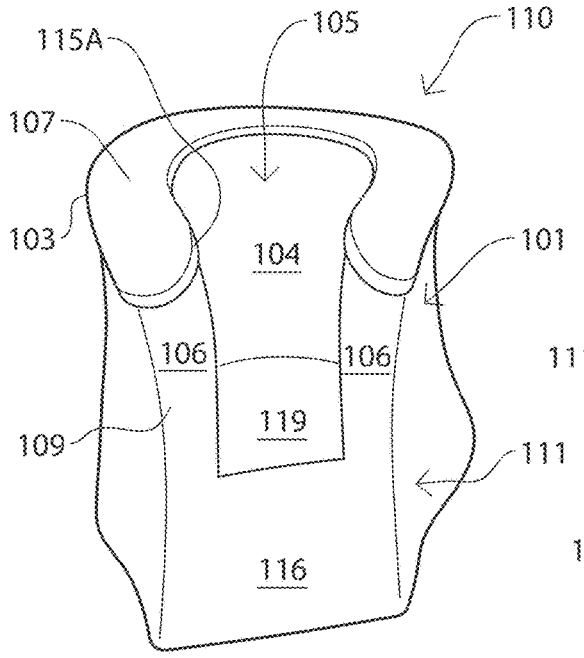

FIG. 4

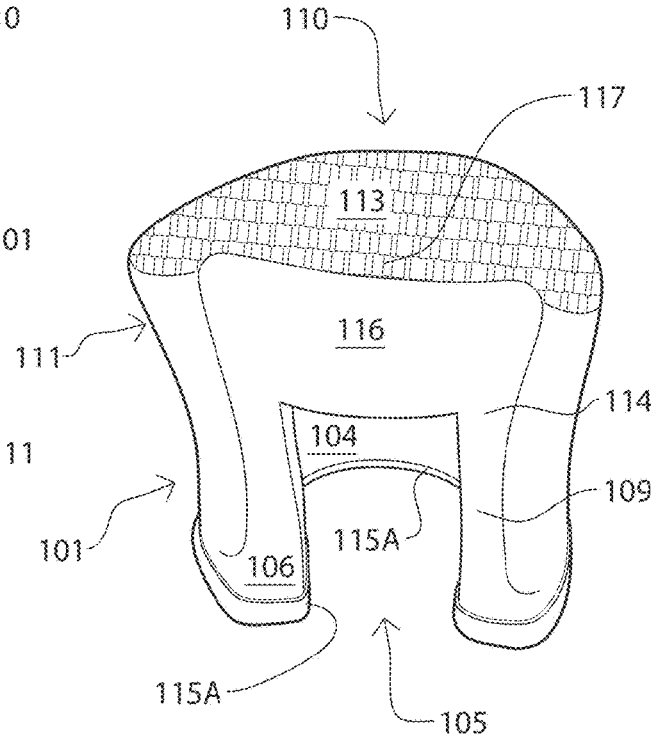

FIG. 5

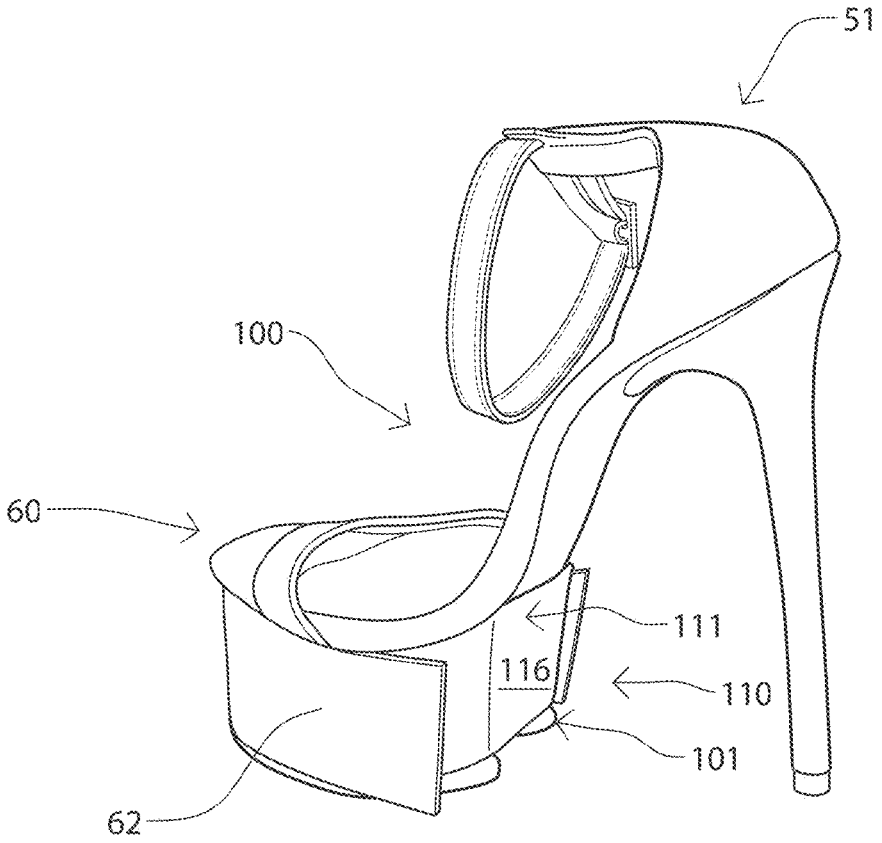

FIG. 6

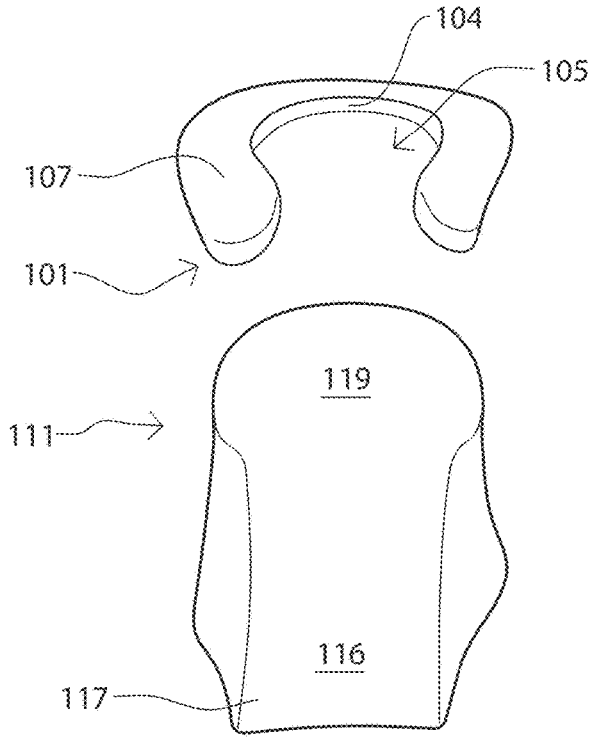

FIG. 7

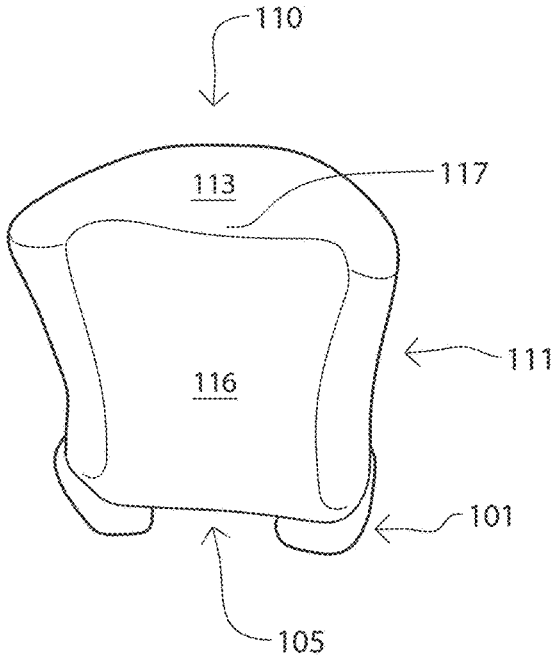

FIG. 8

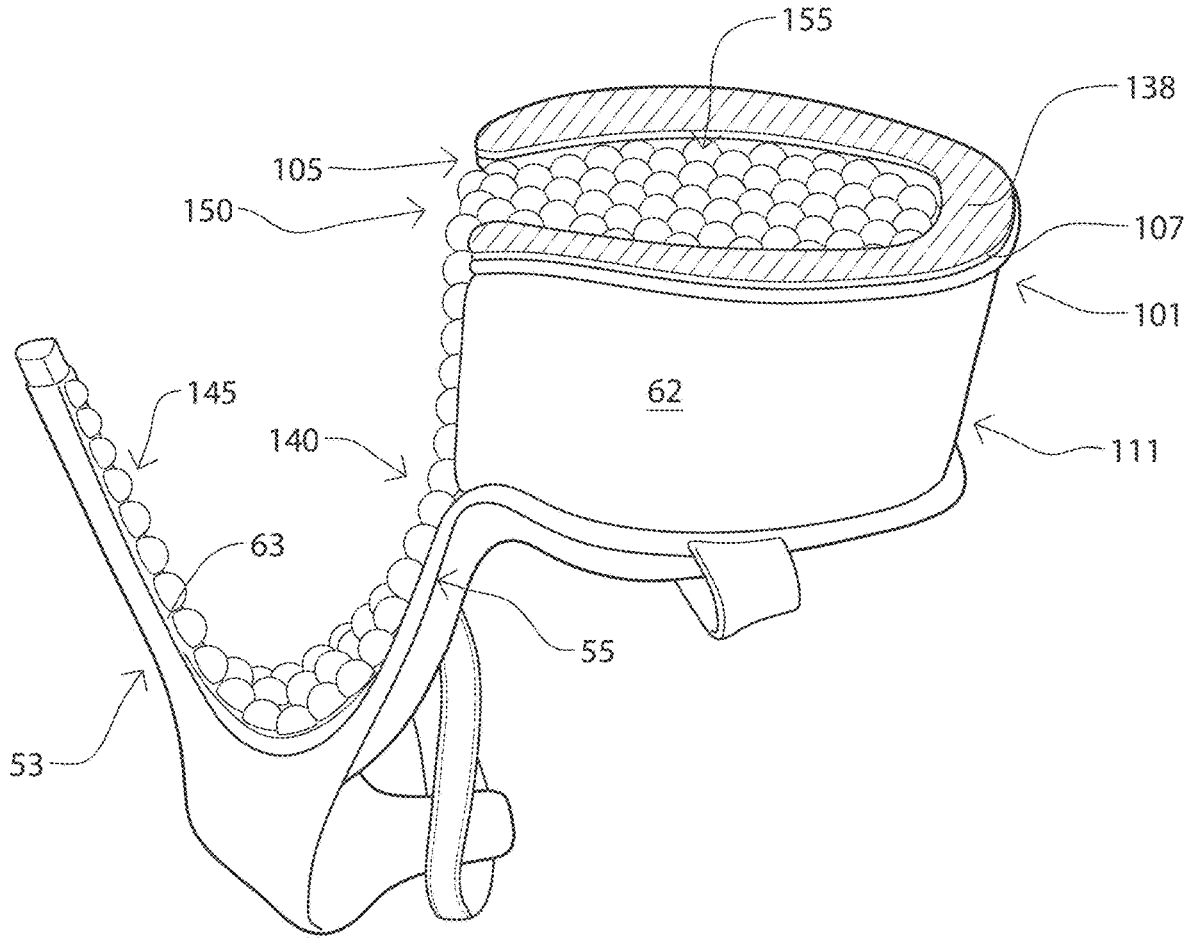

FIG. 9

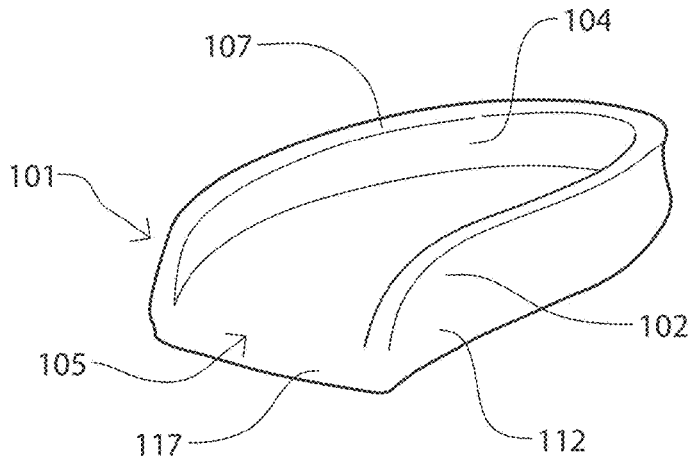
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FIG. 10

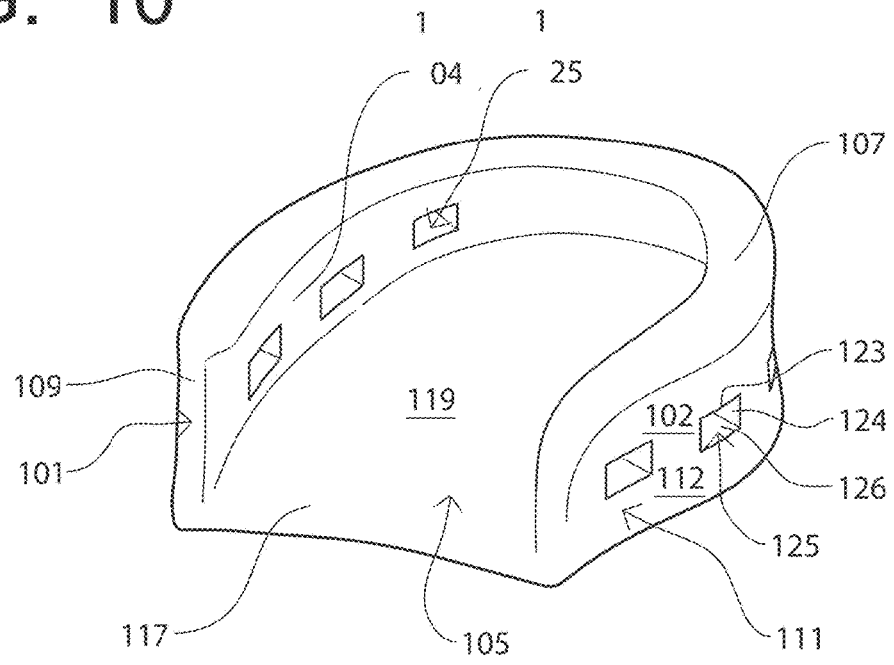
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FIG. 11

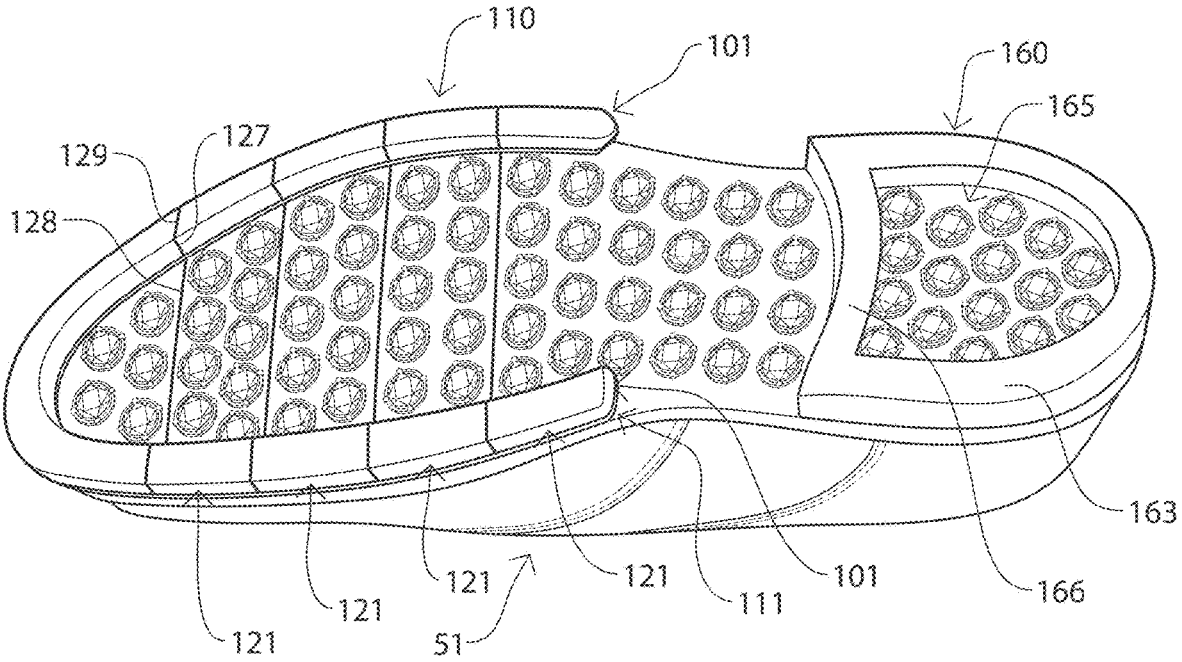

FIG. 12

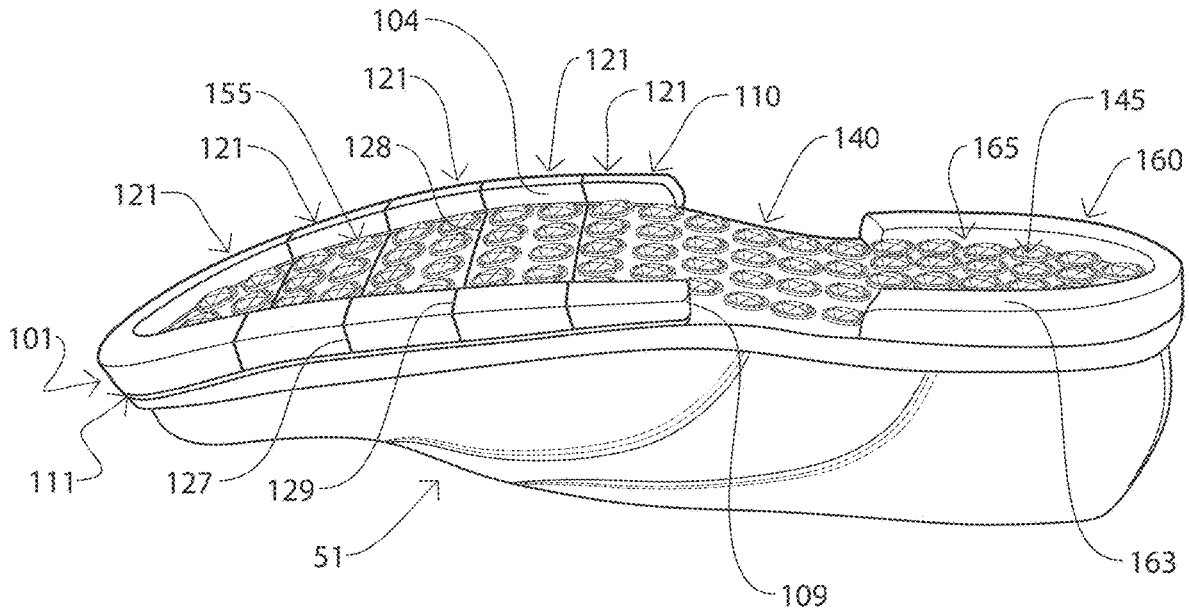
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FIG. 13

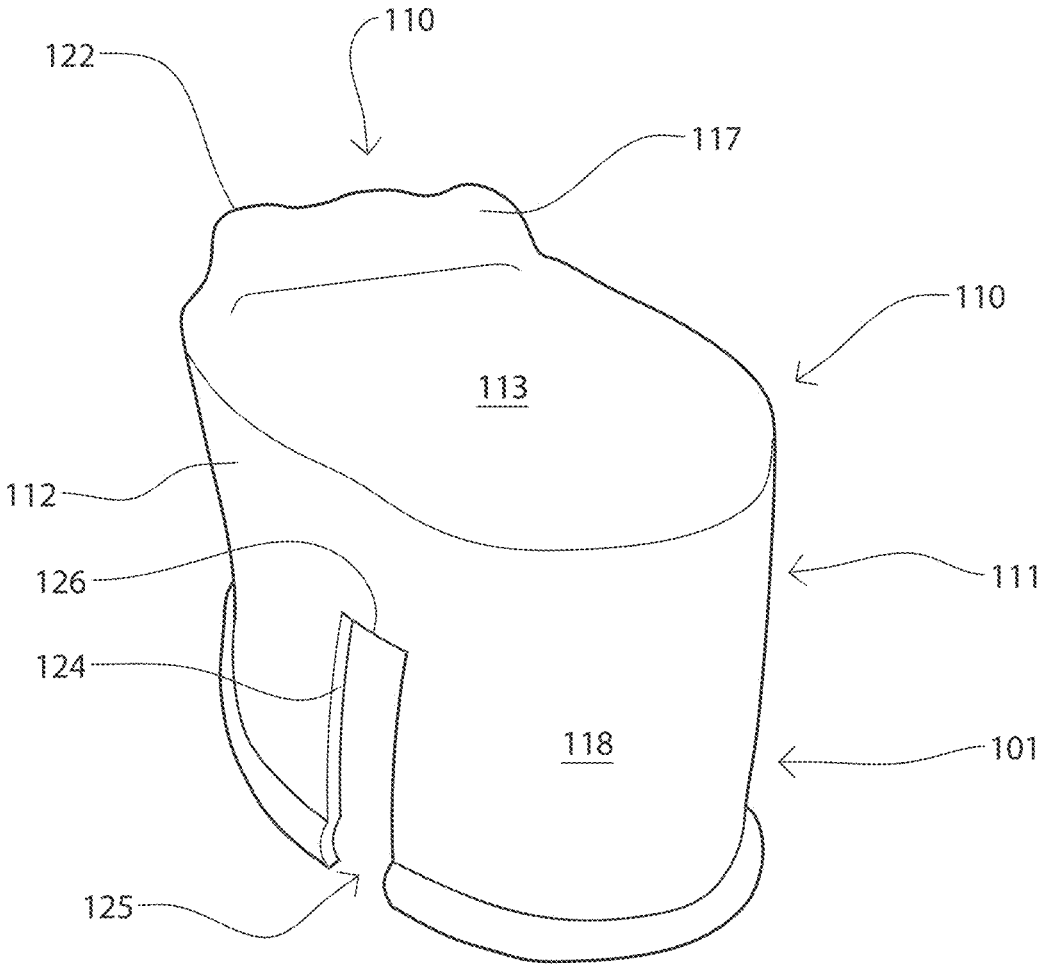


FIG. 14

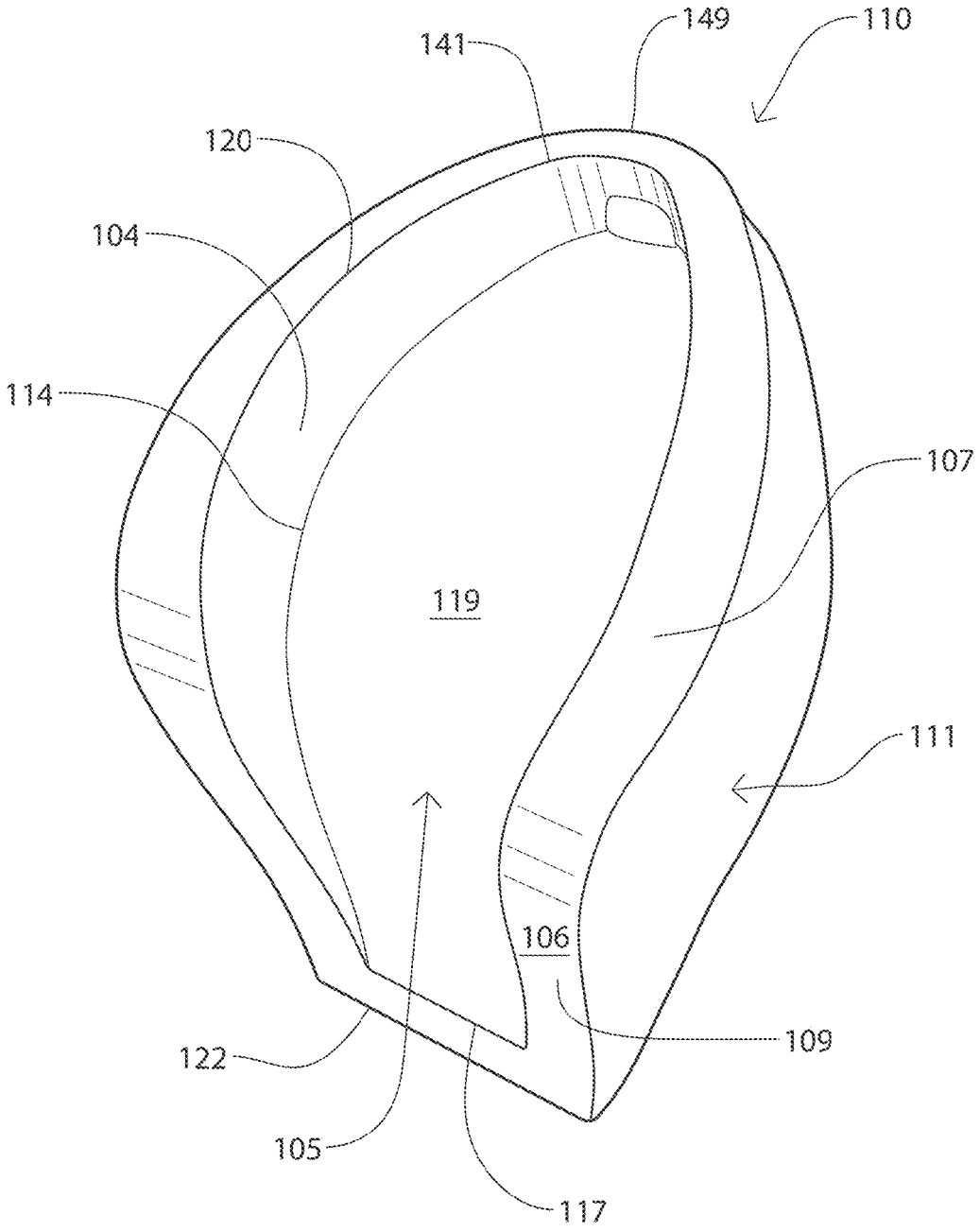


FIG. 15

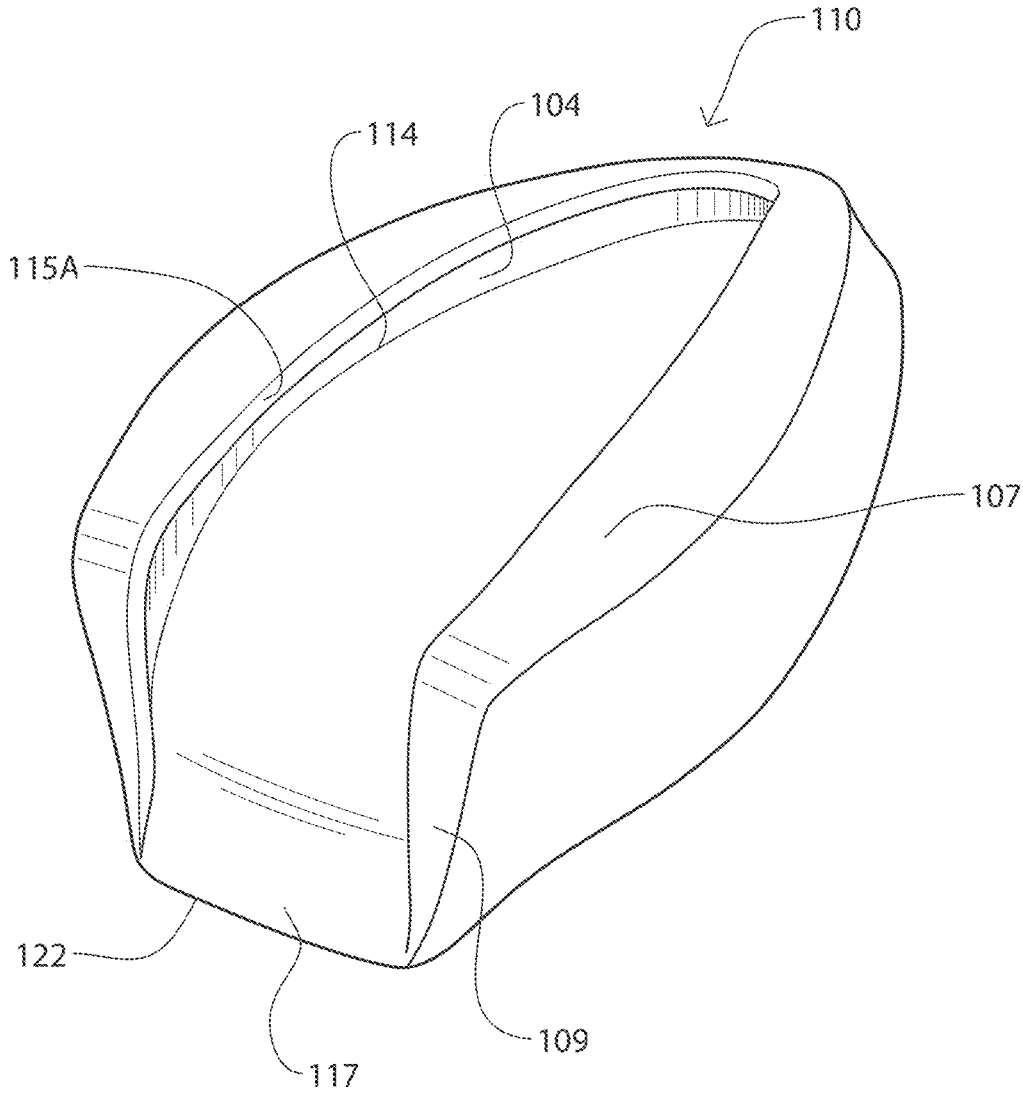


FIG. 16

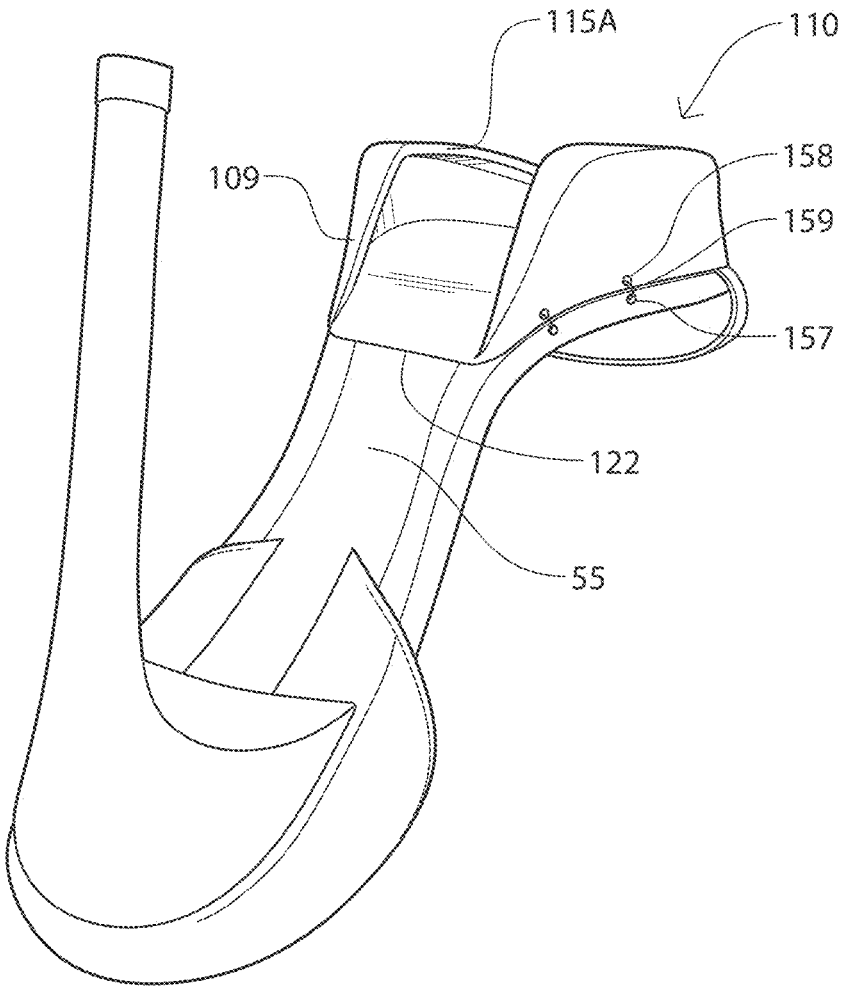
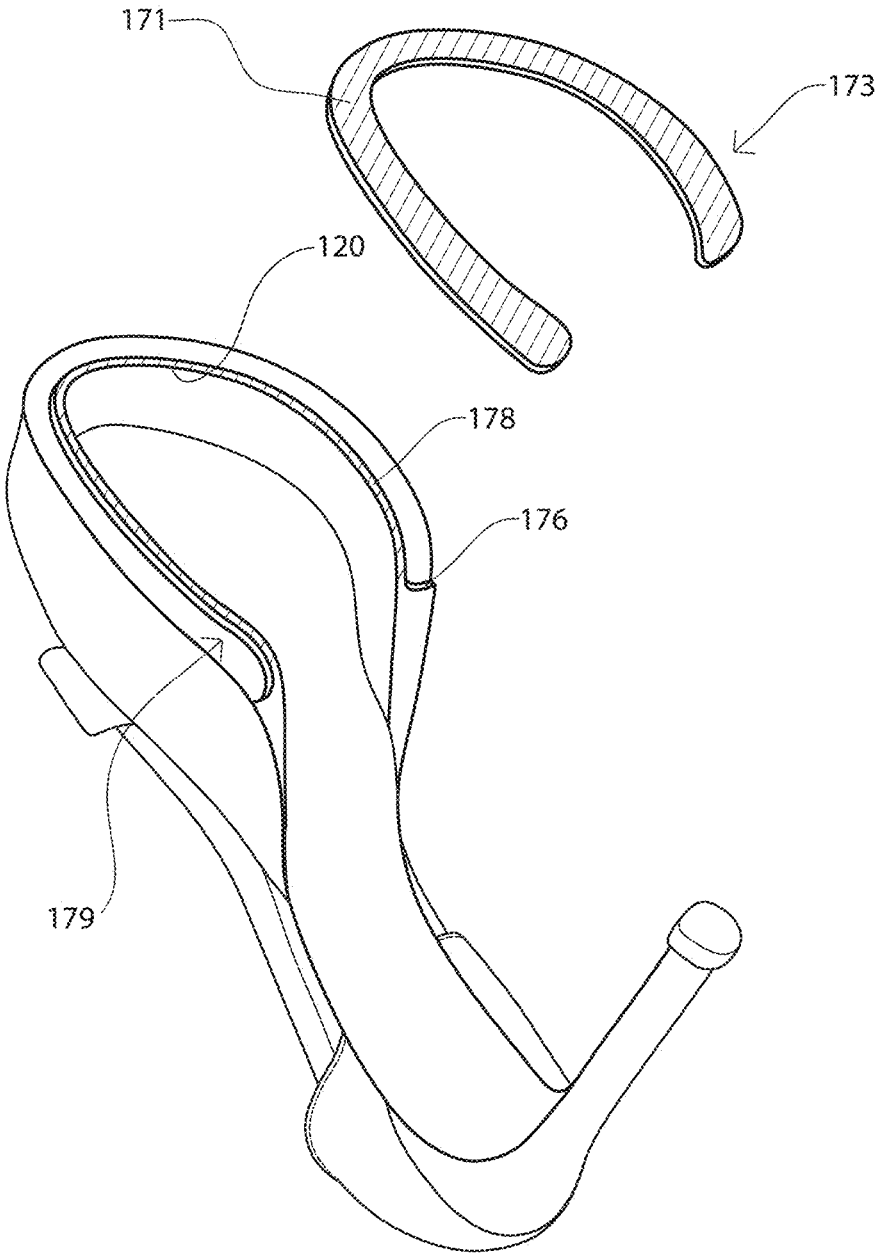


FIG. 17



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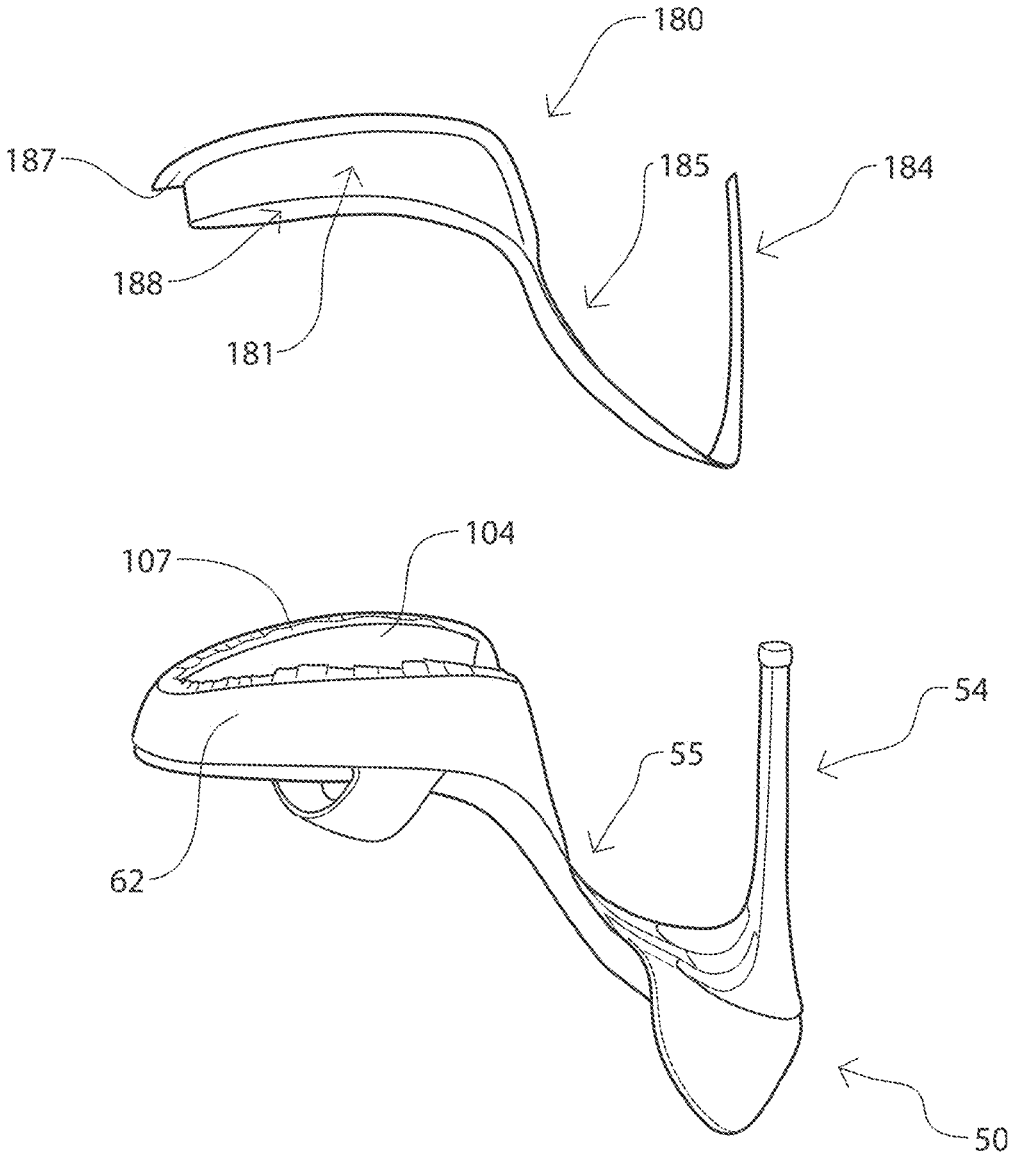

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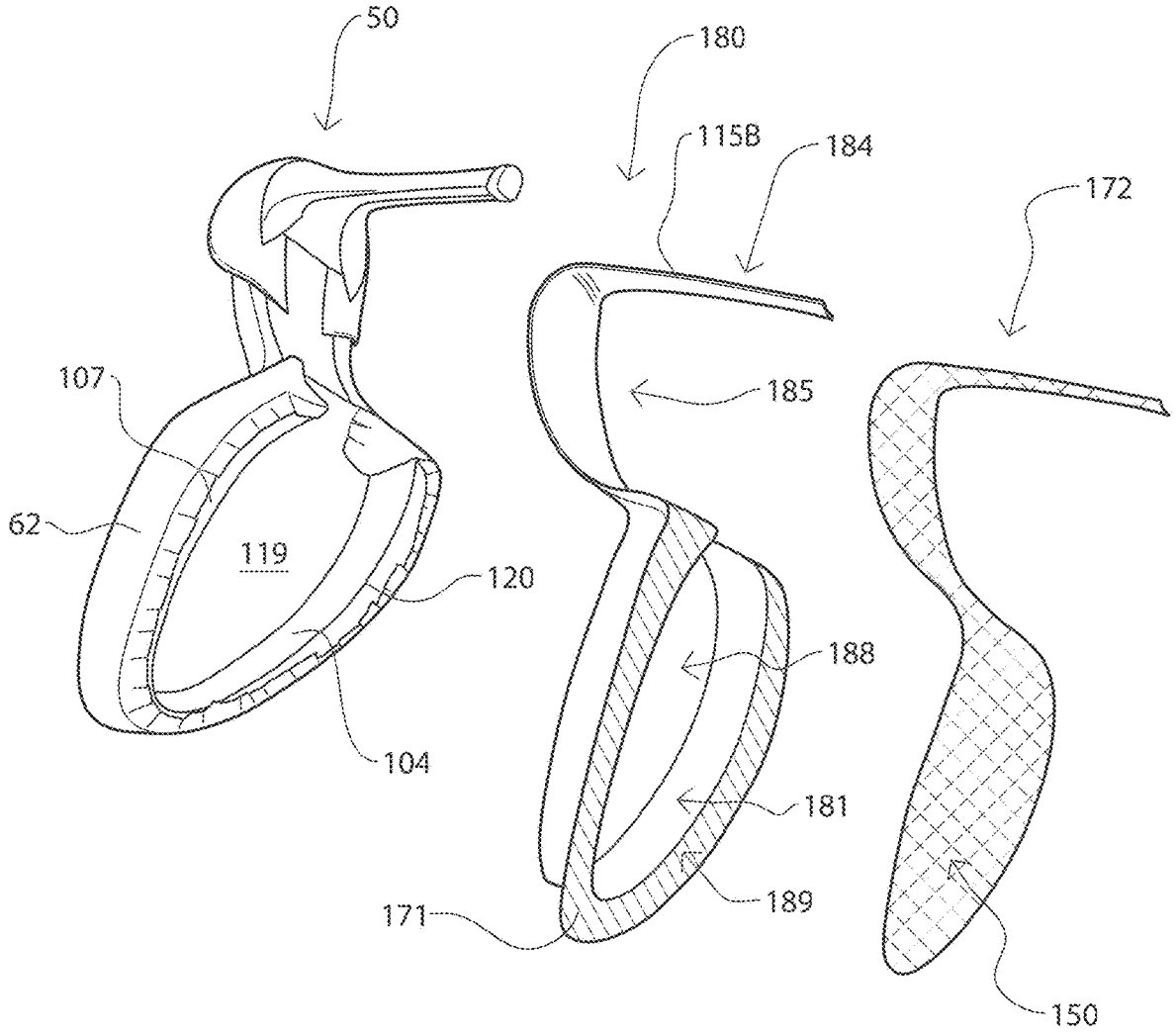

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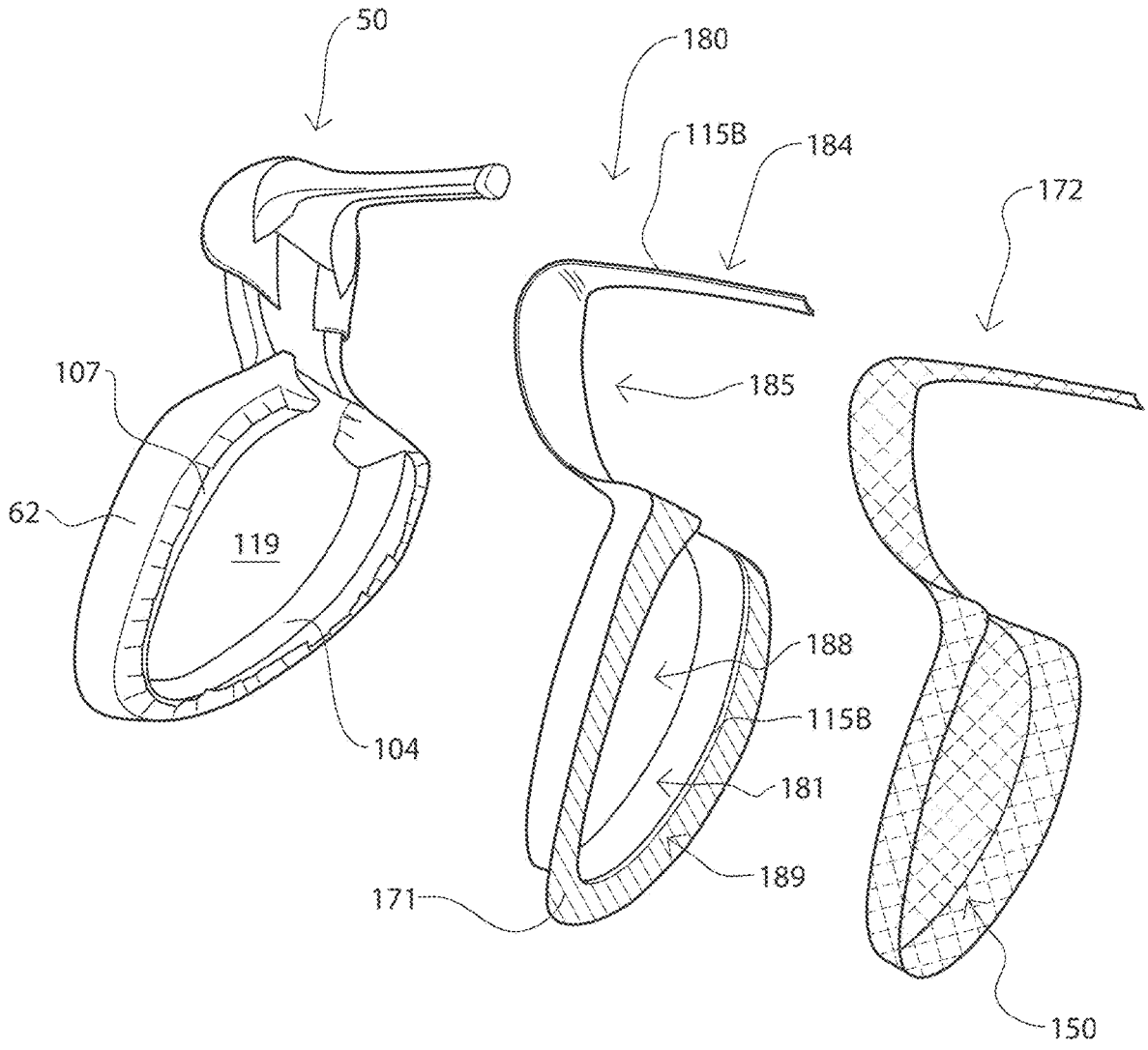
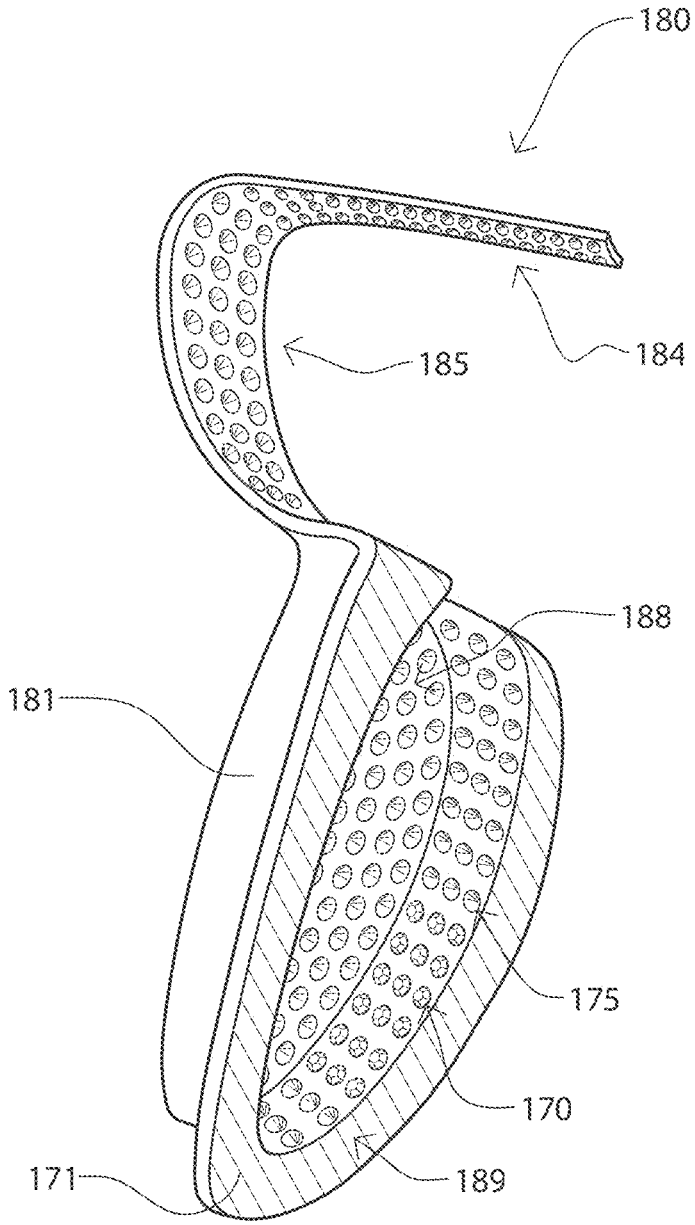


FIG. 21



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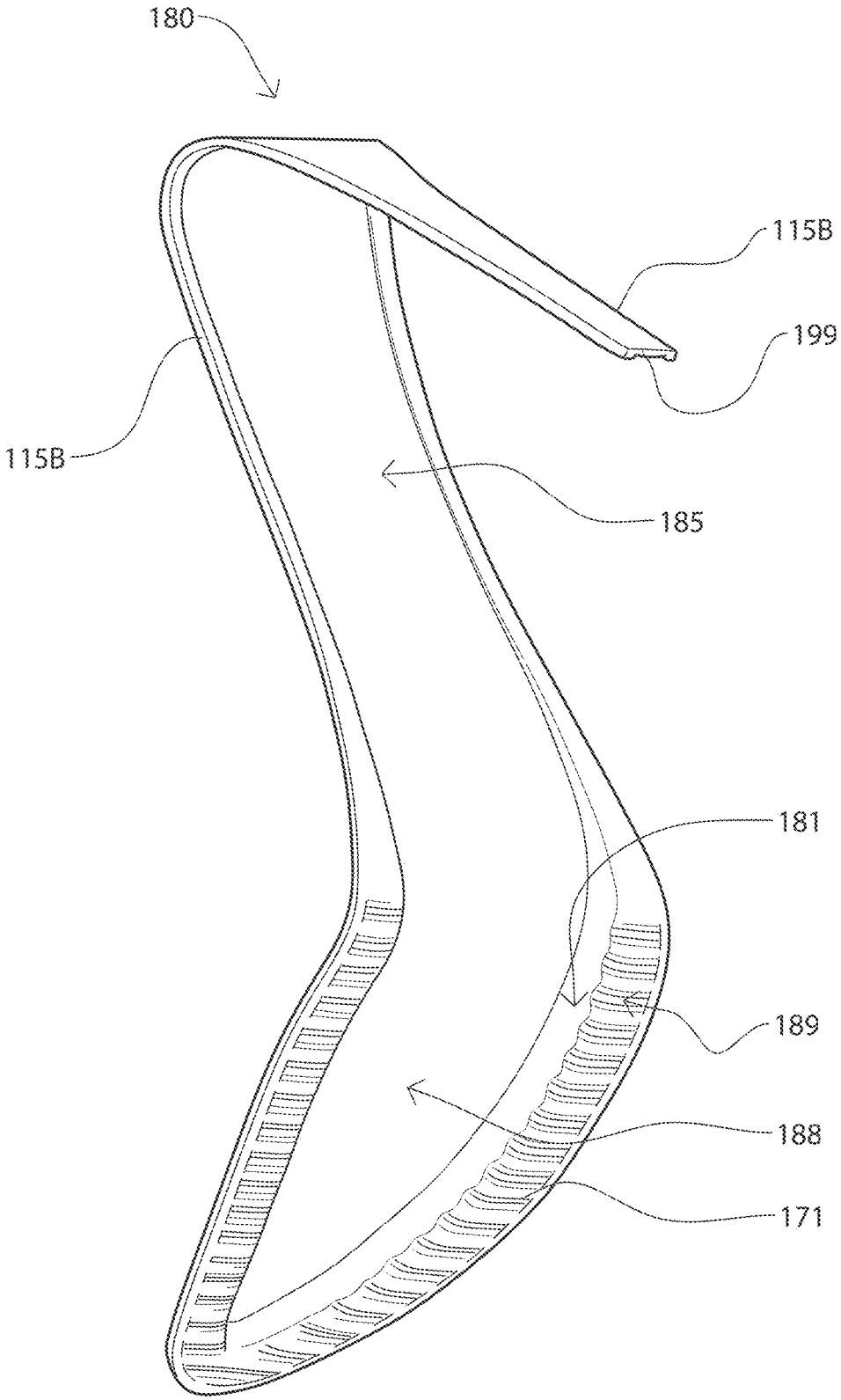

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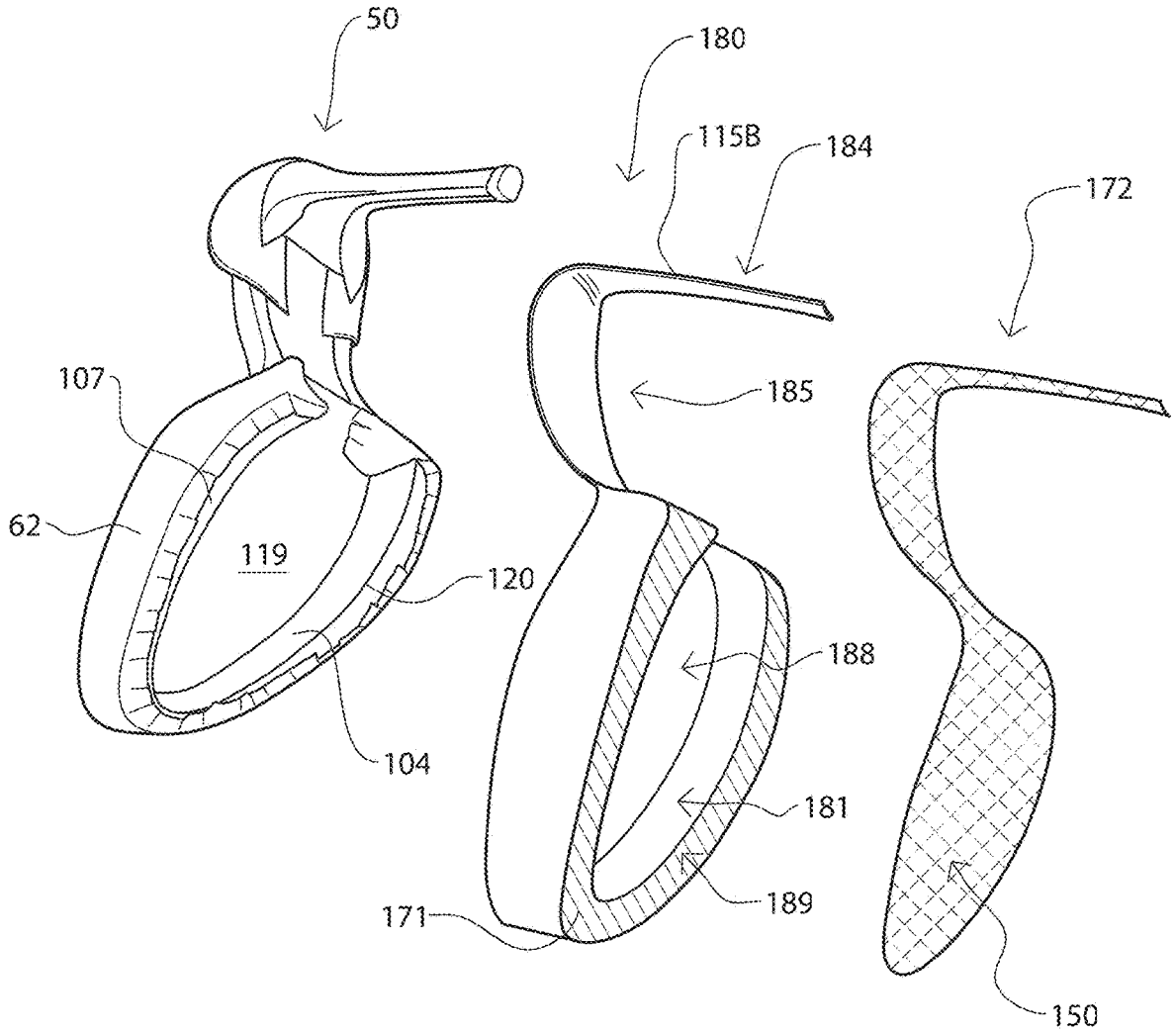

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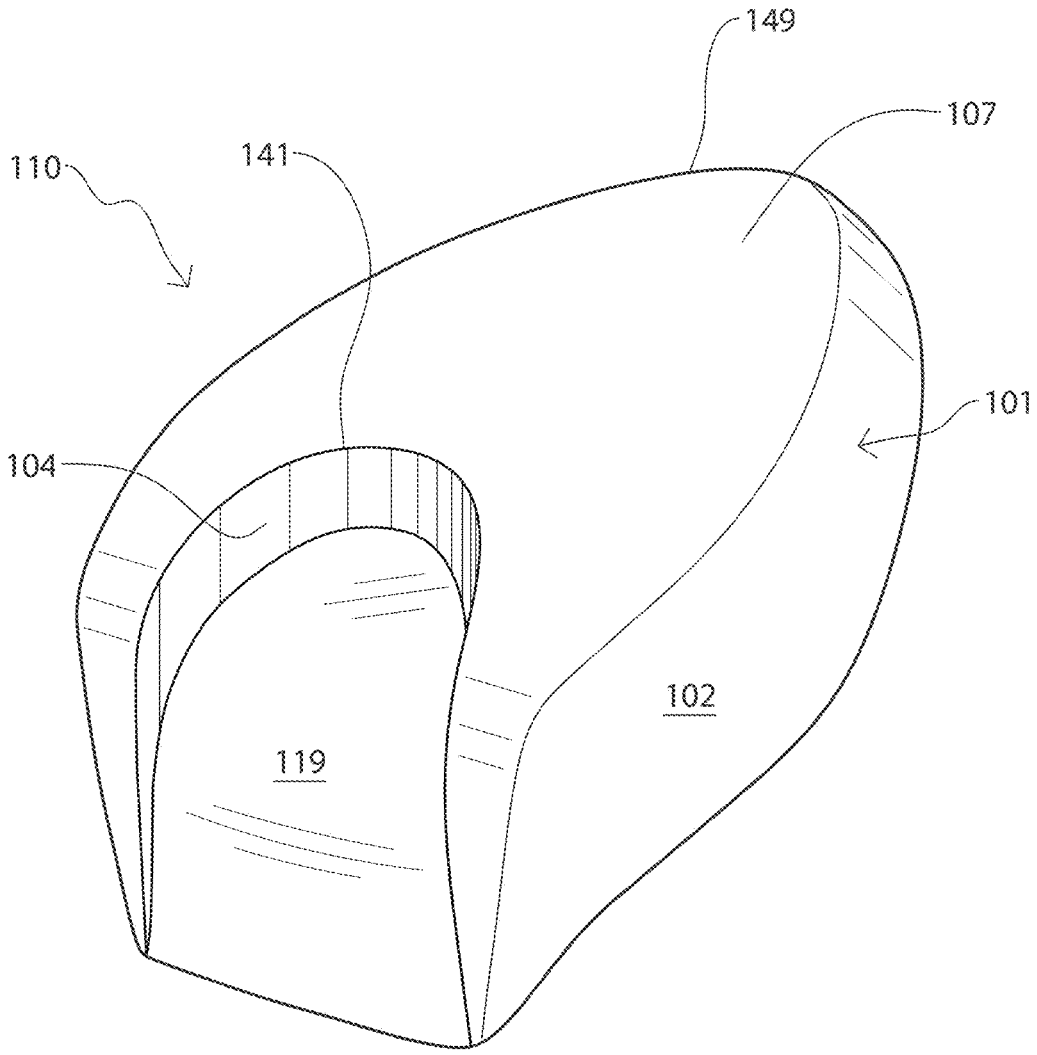

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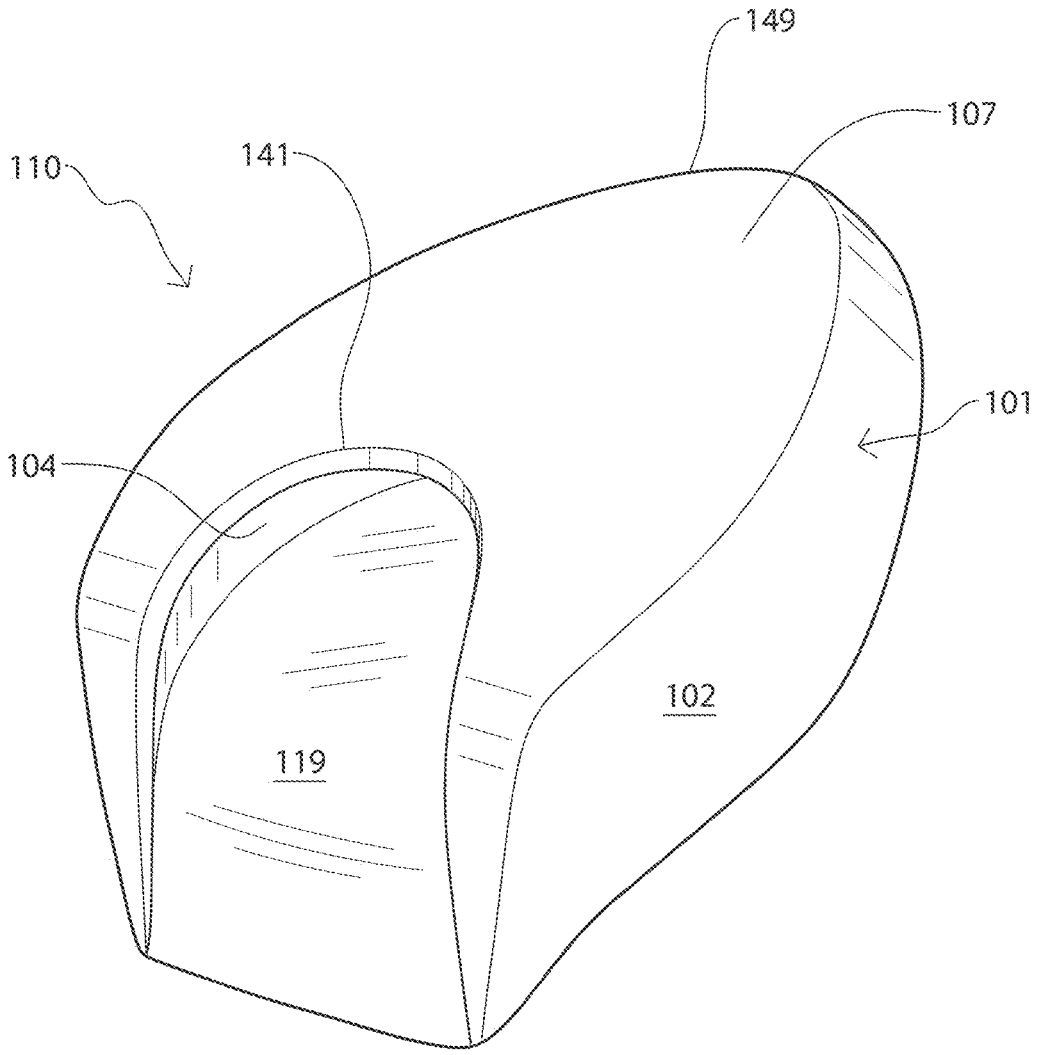

FIG. 26

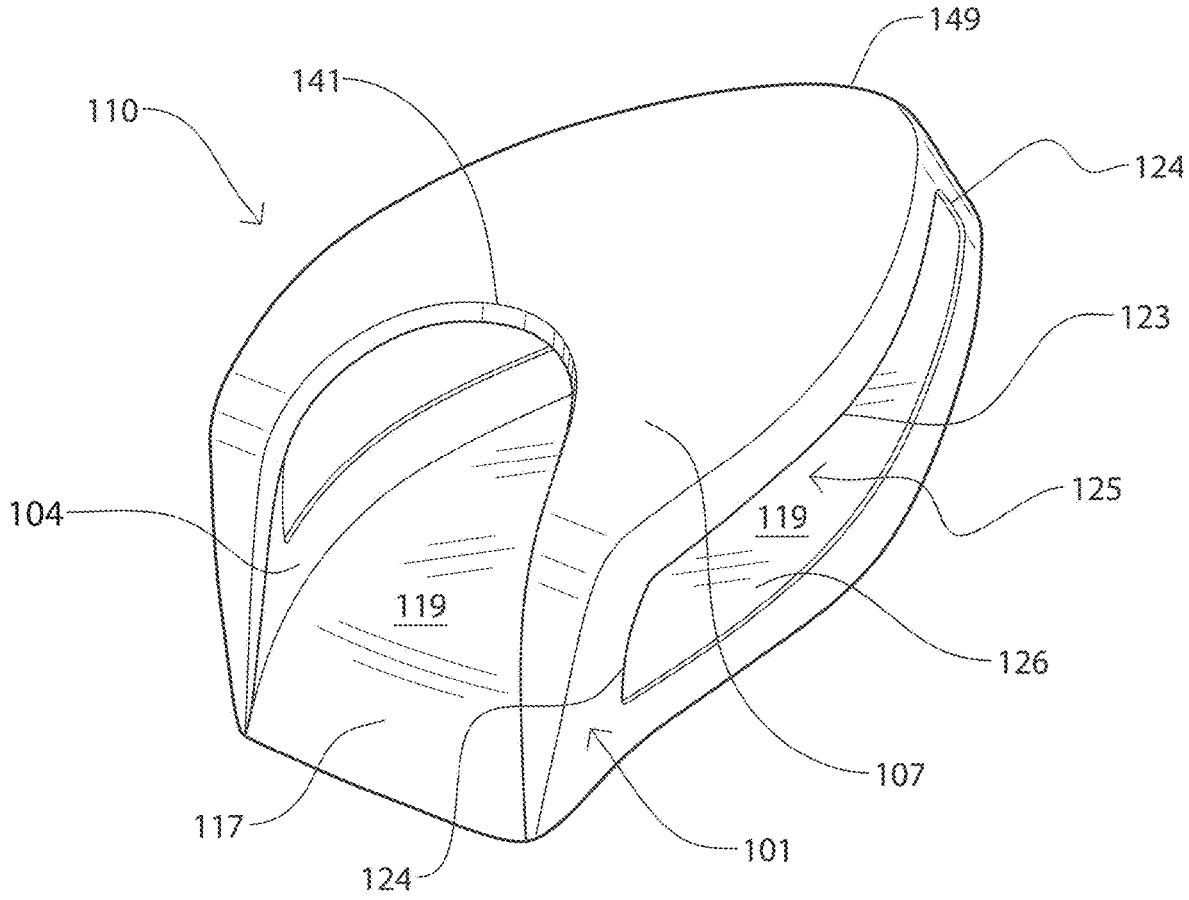
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FIG. 27

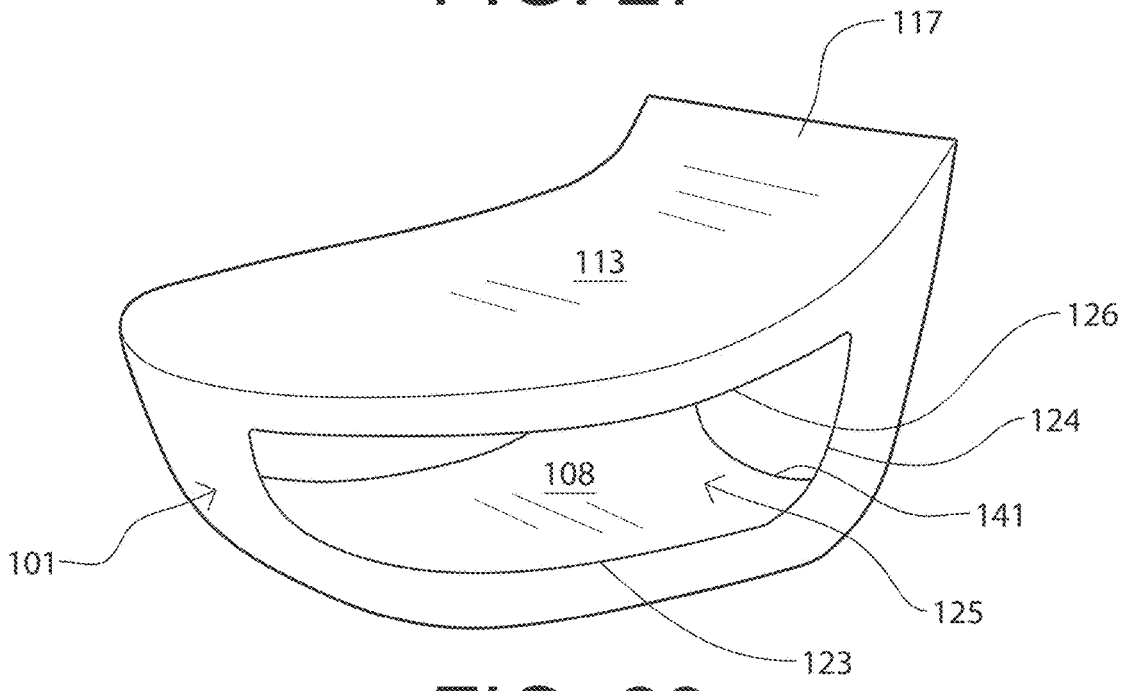
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FIG. 28

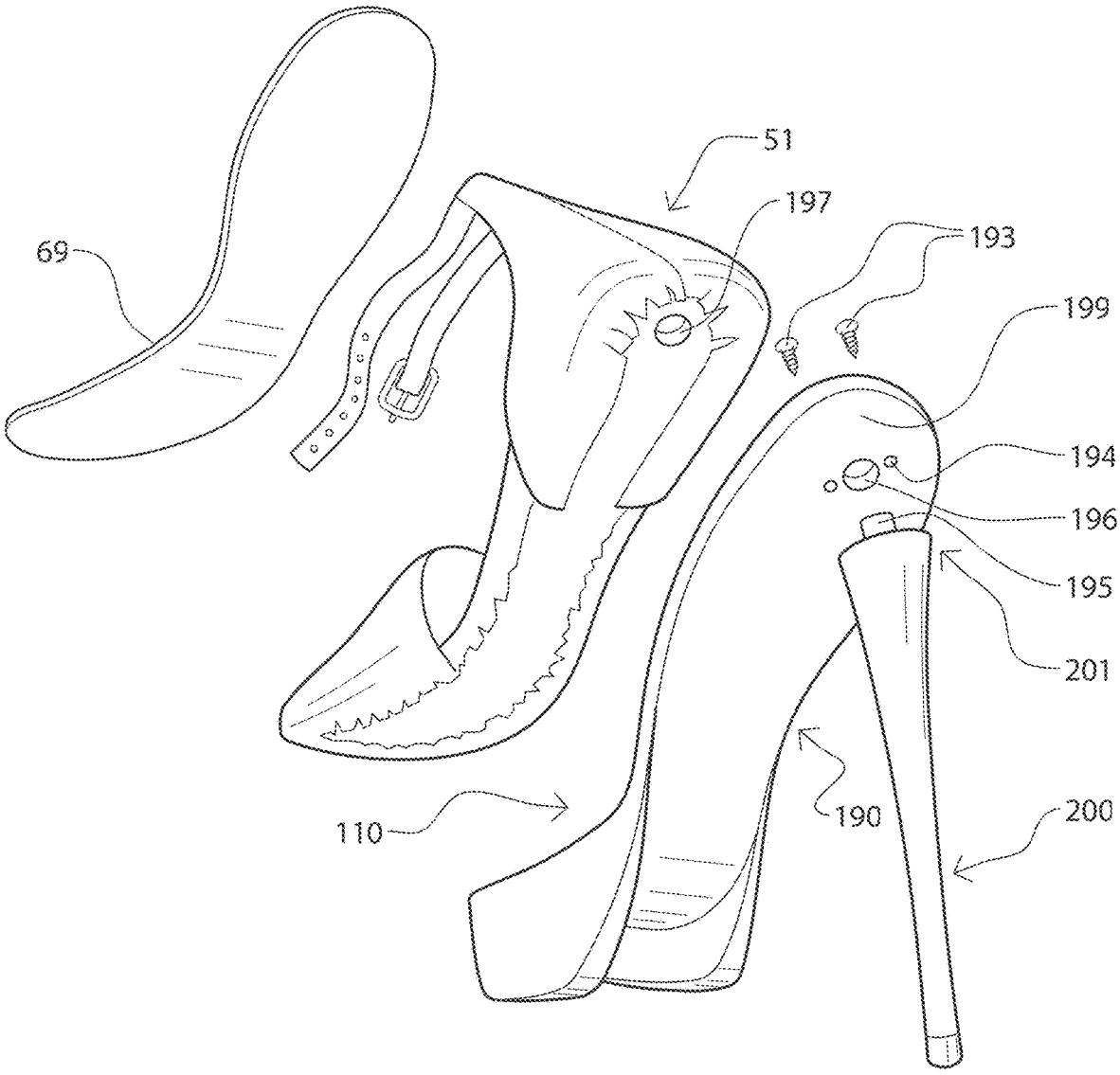


FIG. 29

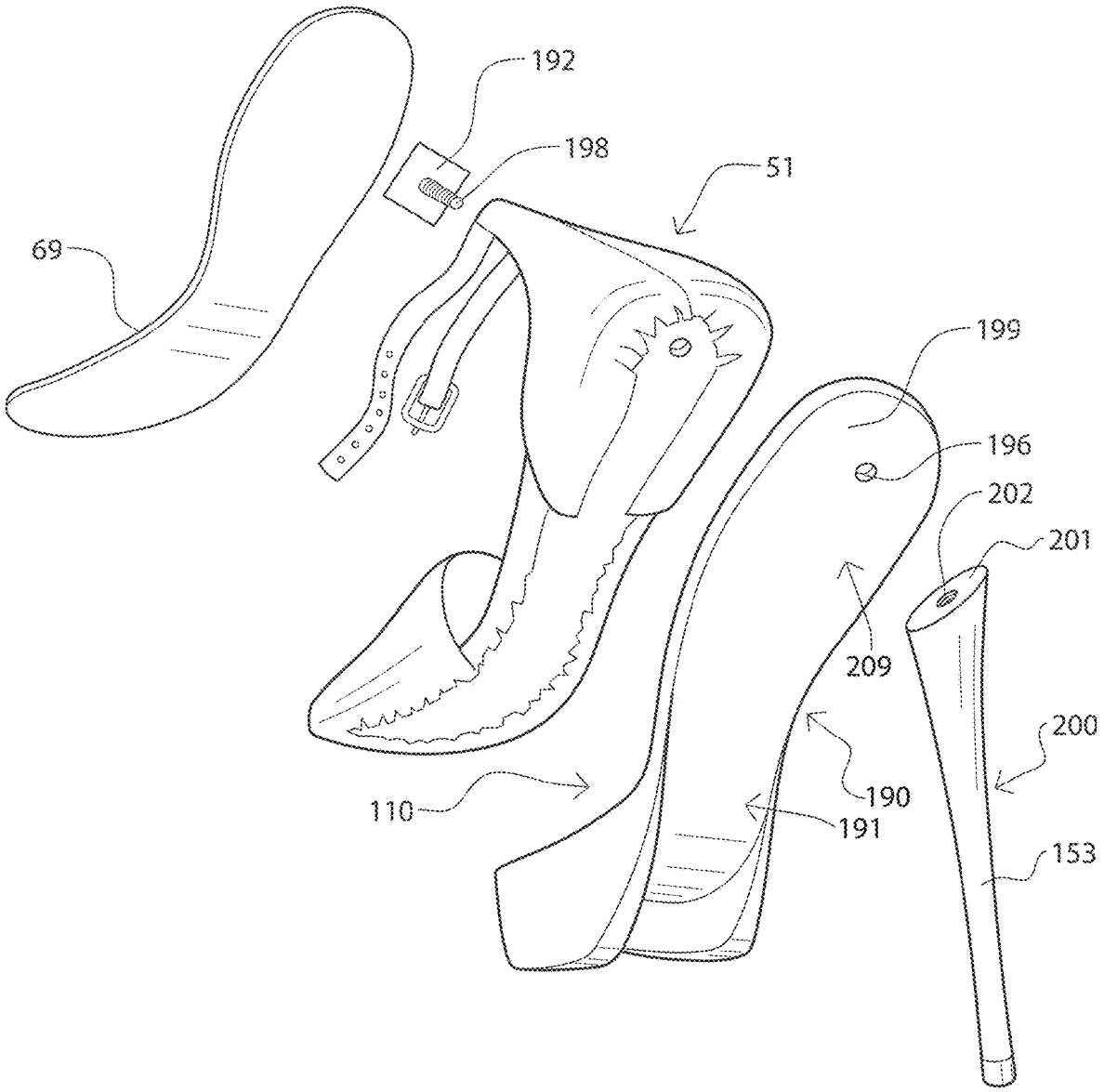


FIG. 30

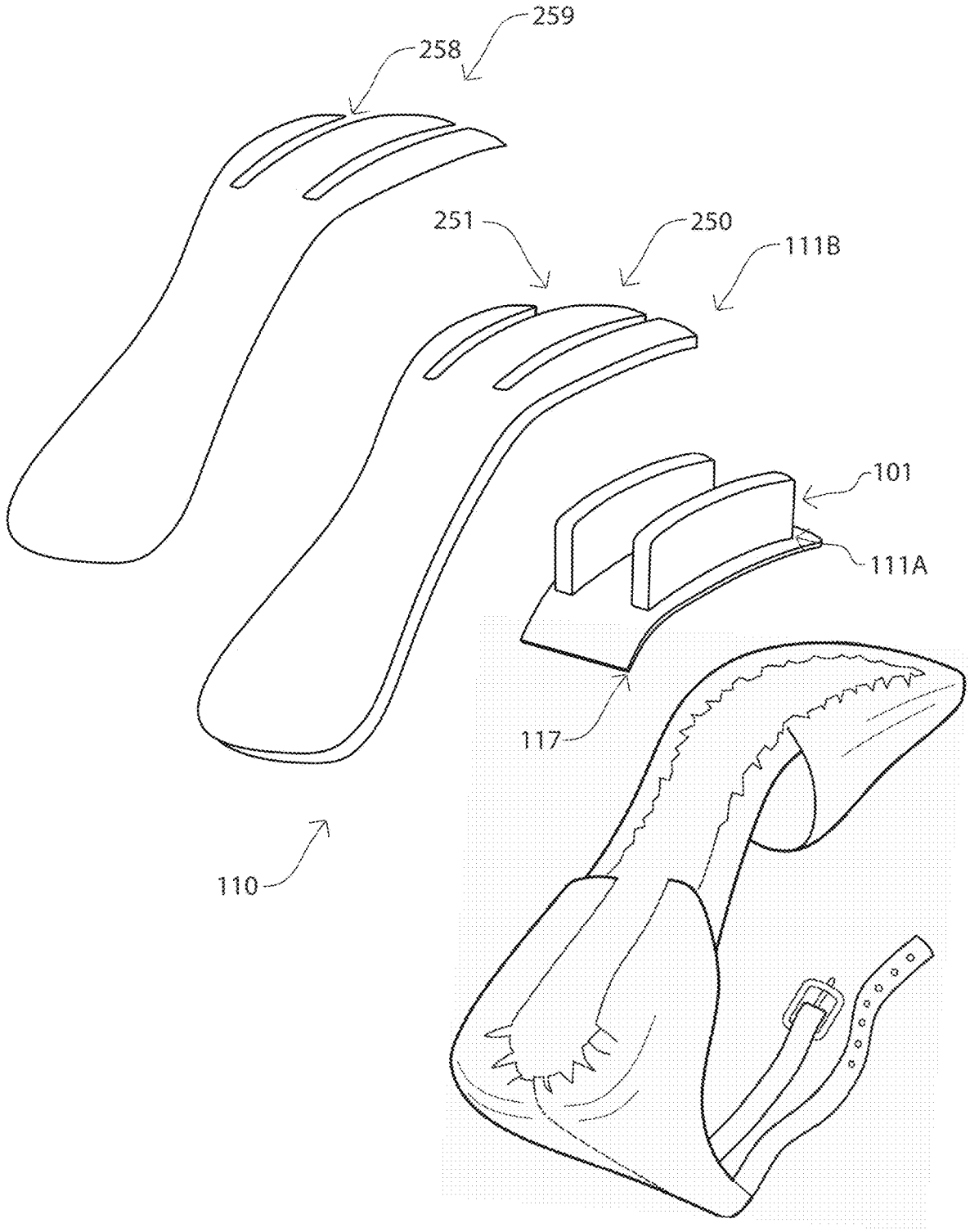
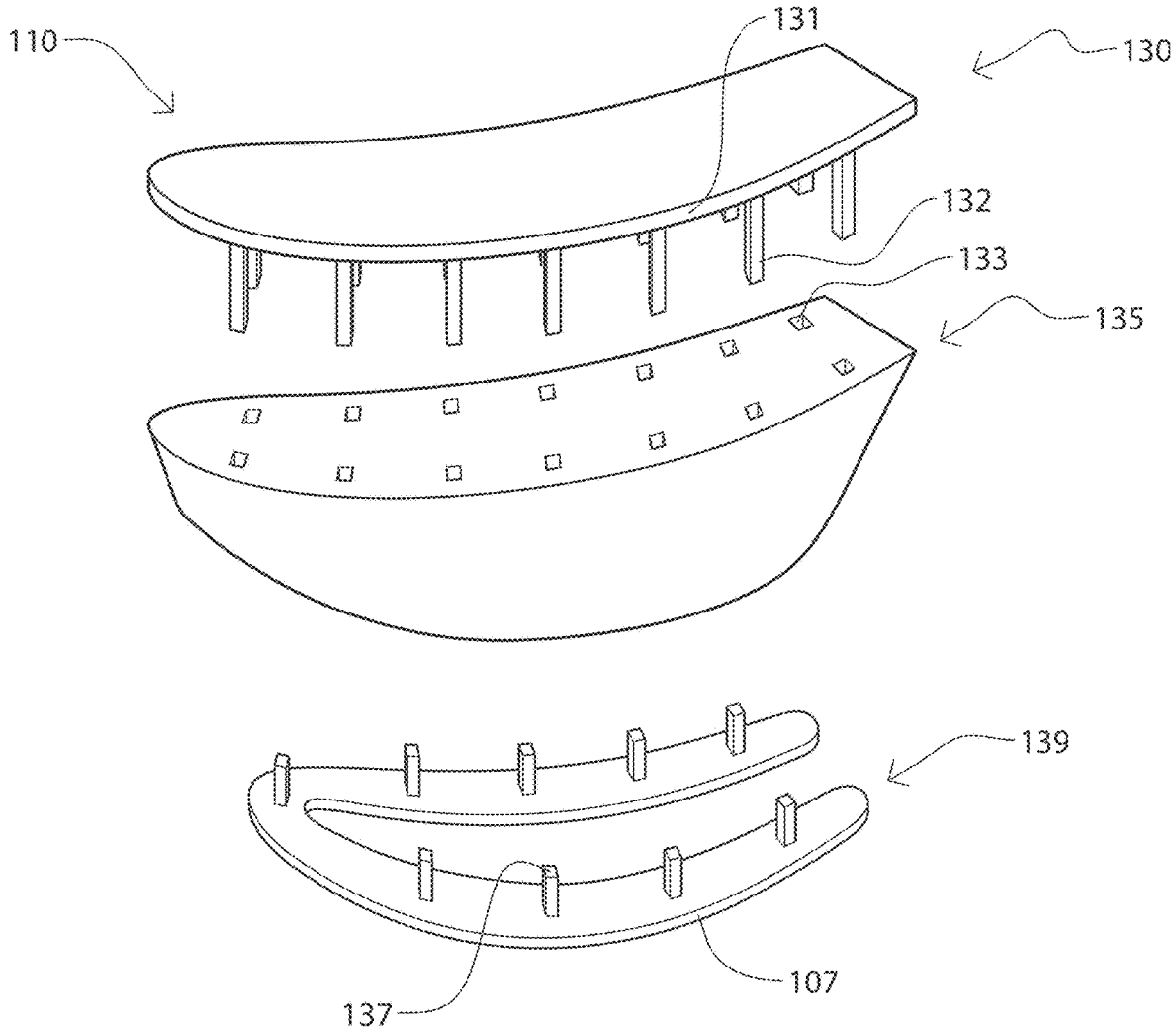


FIG. 31



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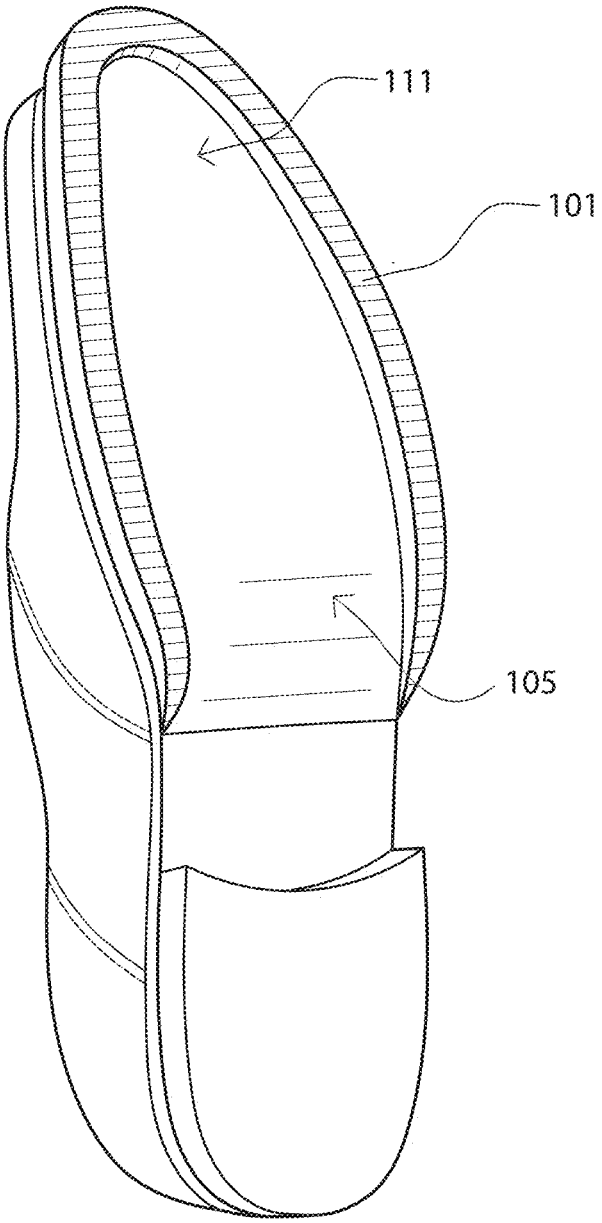

FIG. 33

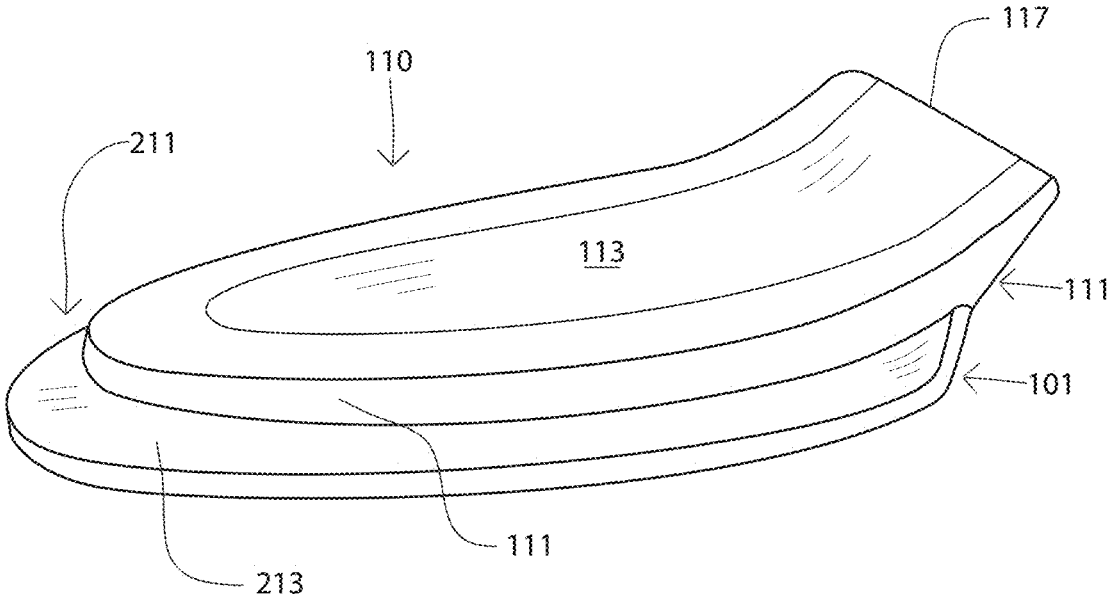

FIG. 34

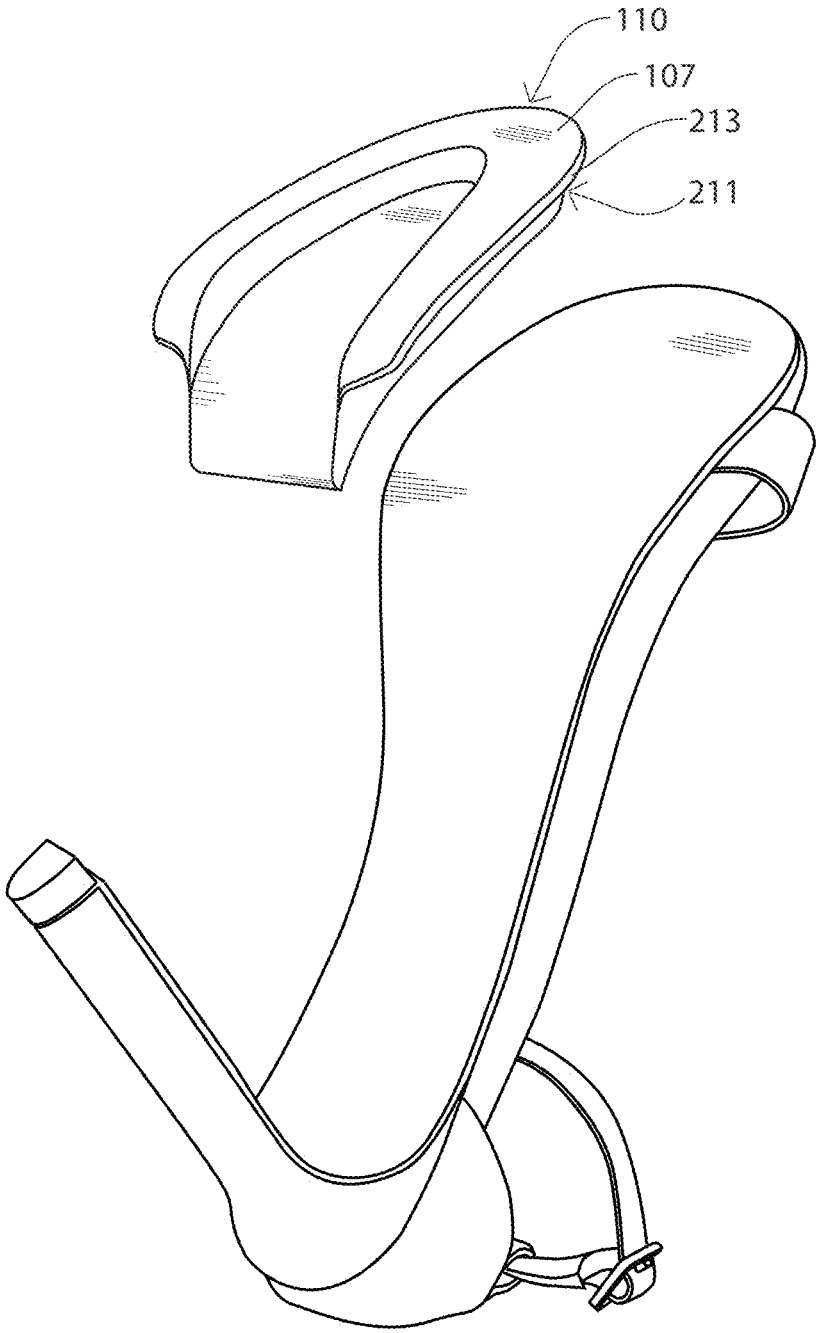

FIG. 35

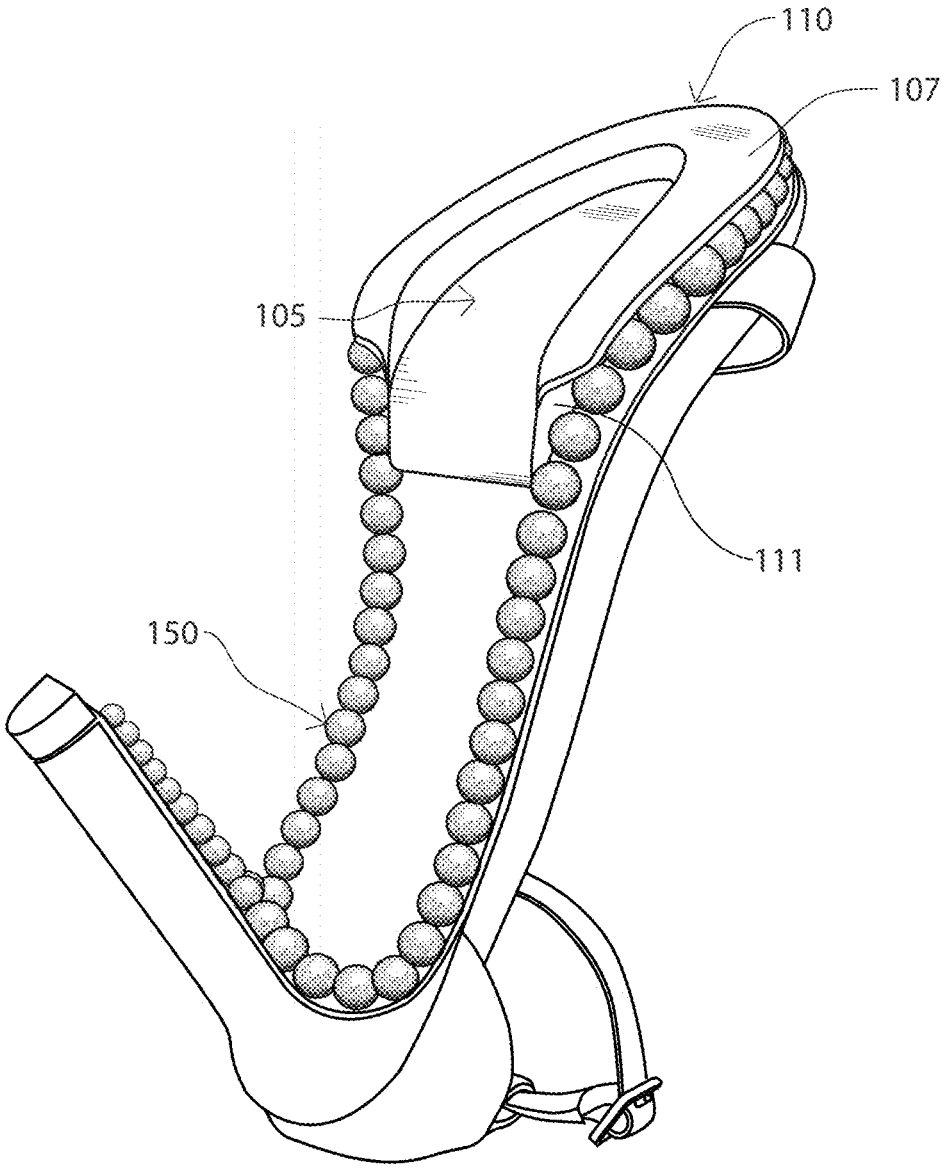

FIG. 36

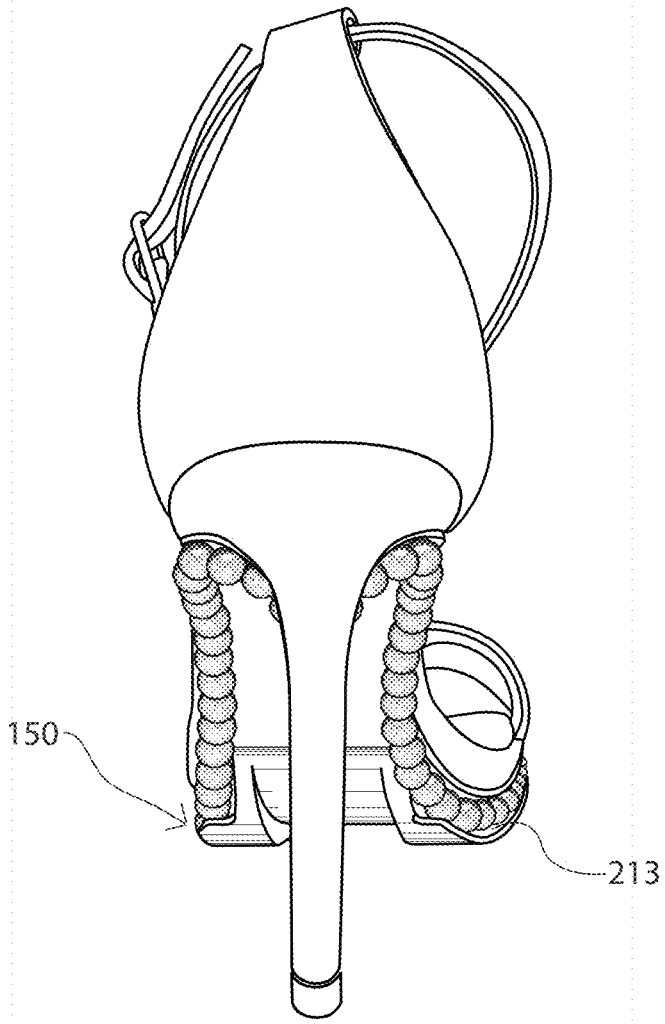

FIG. 37

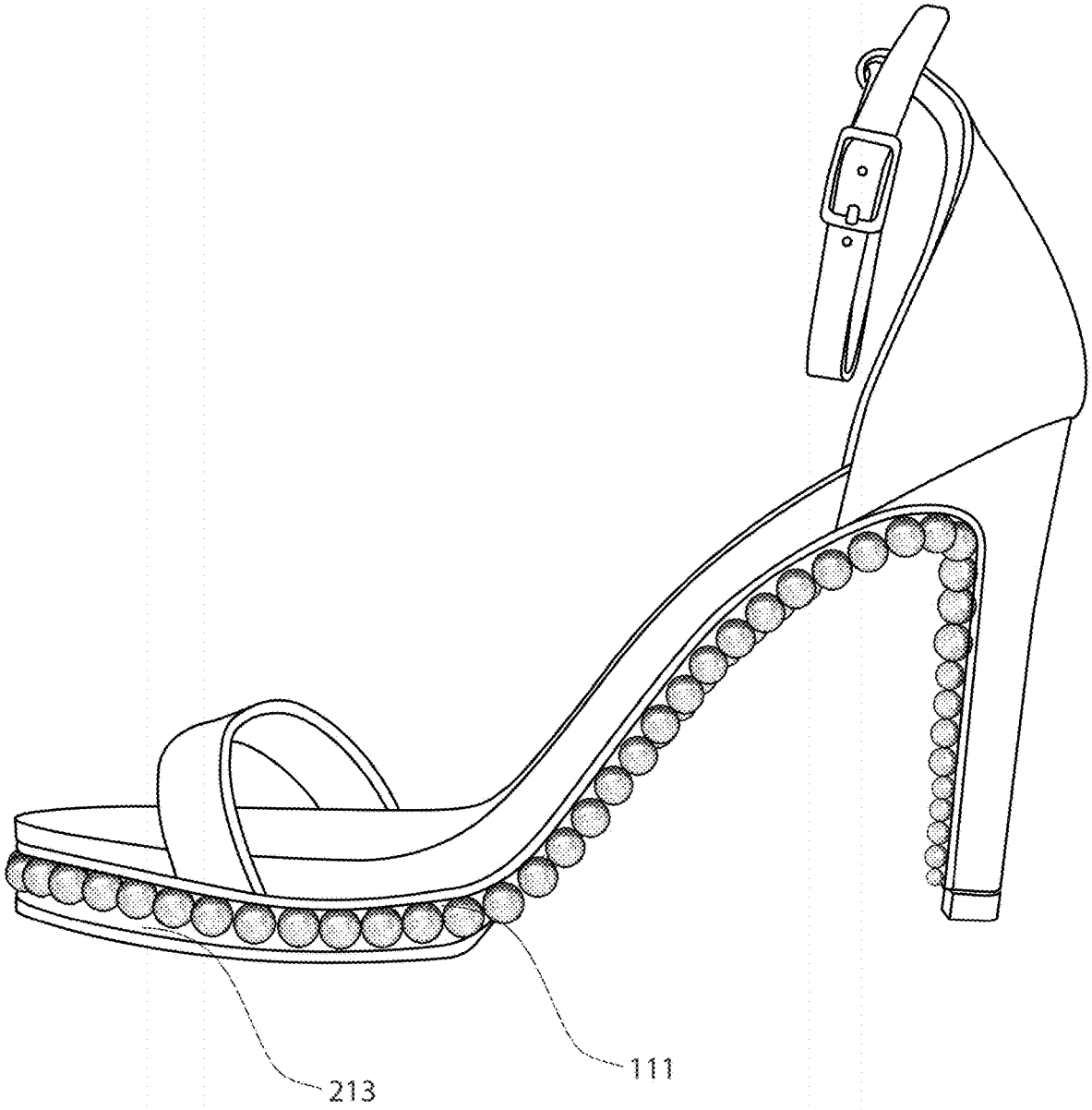

FIG. 38

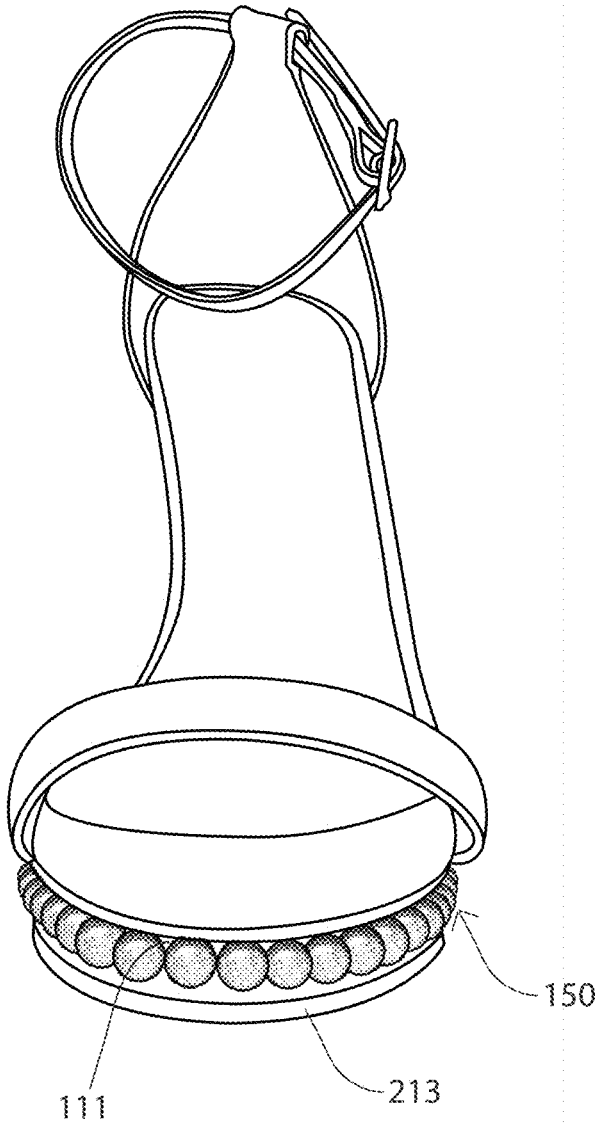

FIG. 39

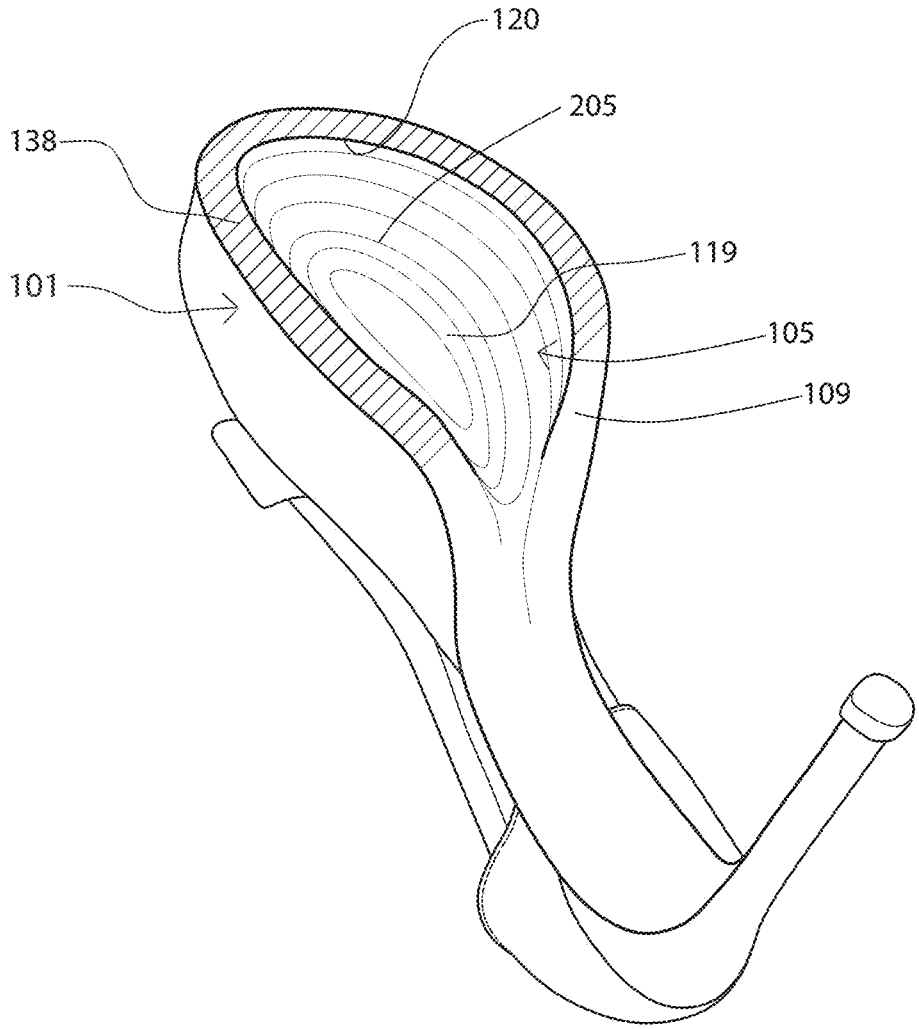

FIG. 40

CONSTRUCTION UNIT AND SHOE INCORPORATING THE CONSTRUCTION UNIT

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation-in-part application of co-pending U.S. patent application Ser. No. 16/983,773 filed on Aug. 3, 2020, which is a continuation-in-part application of co-pending U.S. patent application Ser. No. 16/735,680 filed on Jan. 6, 2020 that issued Aug. 4, 2020 as U.S. Pat. No. 10,729,207, which claims priority to U.S. Provisional Patent Application No. 62/837,374 filed on Apr. 23, 2019, and which is a bypass continuation-in-part of PCT/US20/28739 filed on Apr. 17, 2020; and this application is a continuation-in-part of U.S. Design patent application Ser. No. 29/778,246 filed on Apr. 12, 2021; which are all incorporated herein in their entirety.

FIELD OF INVENTION

[0002] This invention relates generally to footwear, and, more particularly, to a footwear construction unit with an upraised area in the underside for receiving a decorative component and to a shoe incorporating both the footwear construction unit and the decorative component installed in the upraised area.

BACKGROUND OF THE INVENTION

[0003] Shoes can not only protect the foot while walking but can also enhance a fashion ensemble or provide an avenue for personal expression. Shoes vary in style from sporty to casual to formal. Not only are the shoe uppers provided in a variety of styles and with a variety of embellishments, but it is also known in the prior art to incorporate interesting or enhancing designs in the shoe outsole. For example, an outsole may have treads that will print out an appealing design, a figure, a print, a symbol, or a message on a soft walking surface.

[0004] Yet outsoles are limited in their decorative aspects because the outsole provides a flat surface that touches the ground or floor and that bears the weight of the wearer. Any decoration on the bottom of the sole will become soiled. Boggs, et al. attempted to overcome this problem in PCT Application No. WO2009026373 that discloses an outsole having a clear outer layer through which an underlying decorative surface layer can be viewed. However, the clear outer layer will become dirty during the wearing of the shoes, which will obscure the decorative underlayer and make it unattractive for viewing.

[0005] Accordingly, there is a need for a footwear construction unit to create decorative footwear with an underside carrying a decorative element, which adds interest and appeal to the overall look of the shoe, but which is not soiled by touching the walking surface and which is not obscured by the soiling of a clear overlayer. Additionally, there is a need for shoe incorporating the inventive footwear construction unit.

BRIEF SUMMARY OF THE INVENTION

[0006] The present invention is directed to a footwear construction unit that accommodates a decorative component, is directed to a structural assembly that includes both the construction unit and decorative component and is also directed to an embellished shoe incorporating the structural assembly. The decorative component, when installed, is at least partially disposed within a raised lower portion of the construction unit, which supports the decorative component suspended or elevated above the ground. Due to the decorative component's placement in the upraised area, it does not touch the ground, thereby preventing damage or abrasion to the decorative component.

[0007] In some aspects of the invention, the decorative component extends beyond the upraised portion of the construction unit to cover all or part of the bottom surface of the arch and/or to cover all or part of the bottom surface of the remainder of the shoe, such as the inner, forward-facing surface of the heel (heel breast) or a portion of the heel seat surrounding the heel of the shoe.

[0008] The embellished shoe includes at least a heel section, a toe section, an arch section disposed between the heel and toe sections, a shoe upper, the decorative component, and at least one construction unit configured with an upraised area to receive at least a portion of the decorative component. In the first embodiment, the construction unit is a toe construction unit that, when integrated into the finished shoe, is positioned in the toe section of the shoe, and is sized, shaped, and configured to fit below the toe portion of a shoe. In a second embodiment of the invention, the construction unit may be a heel construction unit positioned in the heel section of the shoe. The heel construction unit is sized, shaped, and configured to fit below the heel portion of a shoe. In an aspect of the invention, one (toe or heel) construction unit may be used to form the embellished shoe. In another aspect of the invention, two (toe and heel) construction units may be used to form the embellished shoe. To prevent redundancy, the detailed description is provided herein in application to the toe construction unit without repeating the elements and details for the heel construction unit (spatially reversed compared to the toe construction unit). Though not repeated, one skilled in the art could apply the relevant elements and descriptions to the differing spatial arrangement of the heel construction unit. (To apply the description of the toe construction unit to the heel construction unit, the directions front or forward and back or rearward are reversed.)

[0009] The footwear construction unit includes an upper body and a vertically extending, weight-bearing wall extending downwardly below, and providing support and underpinning to, the upper body portion of the construction unit (and to the shoe itself). The weight-bearing wall extends vertically from the bottom of the upper body of the construction unit to the ground upon which the user walks.

[0010] The weight-bearing wall of the construction unit terminates rearwardly at a right back wall margin and a left back wall margin with a rearward gap defined between the right and left wall margins. The rearward gap allows viewing of the decorative component that is disposed within the interior upraised area. The left and right back wall margins may be of consistent width or may taper vertically.

[0011] The bottom of the upper body (forming the upper body roof) and the inner surface of the weight-bearing wall (forming the sides) together define the interior upraised area that accommodates the decorative component. The upraised area may be shallow or deep. Based on considerations such as artistic design, materials used, and structural stability, the weight-bearing wall may be thin or relatively thick, may be a single wall, may be a double wall, may be a segmented

wall, may be a partial wall or full wall, or may be perforated with cavities or hollows. The weight-bearing wall may be solid or may have cutouts, slits, or other wall openings that enhance ornamentation but still provide support for the user to allow walking. A thicker weight-bearing wall provides a larger surface area to contact the walking surface for stability, but a thinner weight-bearing wall allows for a larger area available for application of, and viewing of, the decorative component.

[0012] The weight-bearing wall may have a height that is greater than, equal to, or less than the height of the upper body of the construction unit.

[0013] The disposition of a decorative element within the protected, upraised area near the bottom of the shoe allows viewing of the decorative element (for example, from behind, at a side angle, or when the wearer is seated) while protecting it from the dirt and grime of a walking surface. The decorative element may be flat or may have a three-dimensional appearance or characteristics. The decorative element is elevated so that it does not touch or encounter the ground.

[0014] In an aspect of the invention (when the construction unit is incorporated into a shoe), the top of the construction unit lies generally in a first, upper plane (near or adjacent to the bottom of the shoe upper). The bottom of the construction unit upper body and the top of the weight-bearing wall lie generally in a second (middle) plane. And the weight-bearing wall comprises a framework that runs along at least a portion of the sides and front of the upper body and extends downwardly to terminate in a bottom boundary lying in a third (lower) plane. The weight-bearing wall may be a peripheral wall or may be inset from the periphery of the shoe.

[0015] In another aspect of the invention, the weight-bearing wall comprises multiple wall sections that extend downwardly from at least one of the sides and/or the front of the upper body of the construction unit and that extend downwardly to terminate in a multi-segment bottom boundary lying in the third, lower plane, as seen in FIG. **12-14**, **31**.

[0016] In an additional aspect of the invention, the weight-bearing wall flares at or near the bottom boundary, which increases the surface area for engagement with the walking surface, as compared to a weight-bearing wall that does not have the flared portion and does not become thicker at the bottom.

[0017] In a further aspect of the invention, the decorative component is disposed only in the upraised area of the construction unit.

[0018] In another aspect of the invention, the decorative component is disposed in the upraised area of the construction unit and extends across the sole of the arch of the shoe.

[0019] In an additional aspect of the invention, the decorative component is disposed in the upraised area of the construction unit, extends across the arch of the shoe, and extends down the inner surface of the heel of the shoe.

[0020] In a further aspect of the invention, the decorative component is disposed on a portion of a heel seat surrounding the heel of the shoe.

[0021] In a further aspect of the invention, a single construction unit is incorporated into the toe of an embellished shoe of the present invention.

[0022] In another aspect of the invention, both a toe construction unit and a heel construction unit are incorporated into the embellished shoe of the present invention.

[0023] In another aspect of the invention, the construction unit includes a tread portion disposed at the bottom boundary of the weight-bearing wall.

[0024] In an additional aspect of the invention, the construction unit comprises an upper shoe-unit interface, a mid-base, and a foundational base.

[0025] In an additional aspect of the invention, an encasement is provided for attachment over at least the body inner roof surface.

[0026] In a further aspect of the invention an inlay is fixedly attached to at least a portion of the outside surface of the encasement.

[0027] In an additional aspect of the invention, the construction unit is formed unitarily as a single piece.

[0028] In another aspect of the invention, the construction unit is formed of multiple, fixedly connected pieces.

[0029] The object of the invention is to provide a construction unit and a shoe incorporating the construction unit along with a decorative component which gives an improved performance over the above-described prior art.

[0030] These and other objects, features, and advantages of the present invention will become more readily apparent from the attached drawings and from the detailed description of the preferred embodiments which follow.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0031] The preferred embodiments of the invention will hereinafter be described in conjunction with the appended drawings, provided to illustrate and not to limit the invention, where like designations denote like elements.

[0032] FIG. **1** is a perspective view of a pair of high-heeled shoes of the prior art.

[0033] FIG. **2** is a perspective view of a first embodiment of the embellished high-heeled shoe of the present invention constructed with a toe construction unit having a tall weight-bearing wall and an upraised portion accommodating a decorative component, where the decorative component covers the floor of the upraised portion, the arch, and the inner forward-facing, breast portion of the heel.

[0034] FIG. **2**A is a cut view taken from line **2**A-**2**A of FIG. **2** of the embellished shoe of the present invention.

[0035] FIG. **3** is a top perspective view of a right side of the construction unit with a tall weight-bearing wall of the present invention.

[0036] FIG. **4** is a perspective bottom rear view of a construction unit with a tall weight-bearing wall of the present invention.

[0037] FIG. **5** is a perspective top rear view of a construction unit with a tall weight-bearing wall of the present invention.

[0038] FIG. **6** is a side perspective view of a partially assembled embellished shoe of the present invention that incorporates a toe construction unit having a short weight-bearing wall.

[0039] FIG. **7** is an expanded bottom rear perspective view of a two-piece construction unit of the present invention with a short weight-bearing wall.

[0040] FIG. **8** is a perspective top rear view of the two-piece construction unit of FIG. **7**.

[0041] FIG. **9** is a bottom perspective view of the embellished shoe of the present invention that includes a toe construction unit with a short weight-bearing wall and

includes a decorative element disposed within the upraised area and extending across the arch and down the heel breast.

[0042] FIG. **10** is a perspective back view of the bottom of a unitarily formed, one-piece construction unit of the present invention with a short, thin weight-bearing wall.

[0043] FIG. **11** is a bottom rear perspective back view of a construction unit of the present invention with a weight-bearing wall including apertures.

[0044] FIG. **12** is a bottom perspective view of a low-heeled or flat-heeled embellished shoe of an embodiment of the present invention having both a toe construction unit and a heel construction unit.

[0045] FIG. **13** is a side perspective view of flat-heeled embellished shoe of an embodiment of the present invention with both a toe and heel construction unit.

[0046] FIG. **14** is a front top perspective view of the toe construction unit of the present invention having a multi-section, discontinuous, partial weight-bearing wall.

[0047] FIG. **15** is a perspective back rear view of the construction unit of the present invention with a weight-bearing wall terminating in a right and left back wall margin of consistent width.

[0048] FIG. **16** is a perspective back view of the bottom of the construction unit of the present invention with a weight-bearing wall terminating in tapering right and left back wall margins.

[0049] FIG. **17** is a perspective view of the bottom of a shoe of the present invention under construction that incorporates a toe construction unit having a weight-bearing wall terminating in tapering right and left back wall margins.

[0050] FIG. **18** is a perspective bottom view of a shoe of the present invention incorporating the construction unit having a weight-bearing wall terminating in tapering right and left back wall margins and having an inset channel in the bottom boundary of the construction unit or an encasement for receiving a protective sole cover.

[0051] FIG. **19** is an expanded side perspective view of the construction of a shoe of the present invention incorporating the construction unit and of an encasement corresponding to the shape of the bottom of the shoe to be received by the body inner roof surface, the inner surface of the weight-bearing wall, the arch, the inner heel, and the bottom boundary.

[0052] FIG. **20** is an expanded side perspective view of the construction of a shoe of the present invention incorporating the construction unit, an encasement corresponding to the shape of the bottom of the shoe, and an inlay corresponding to the shape of the body inner roof surface, the arch surface, and the inner heel surface.

[0053] FIG. **21** is an expanded side perspective view of the construction of a shoe incorporating the construction unit, an encasement corresponding to the shape of the bottom of the shoe, and of an inlay corresponding to the shape of the body inner roof surface, the inner surface of the weight-bearing wall, the arch surface, and the inner heel surface.

[0054] FIG. **22** is a bottom perspective view of an encasement of the present invention configured to receive decorative elements with some decorative elements installed.

[0055] FIG. **23** is a bottom perspective view of an encasement of the present invention.

[0056] FIG. **24** is an expanded side perspective view of the construction of a shoe incorporating the construction unit, an encasement, and an inlay, wherein the encasement corresponds to the shape of the body inner roof surface, the inner surface of the weight-bearing wall, the arch, the heel breast, the bottom boundary, and the wall outer surface; and wherein the inlay corresponds to the shape of the body inner roof surface, the arch surface, and the heel breast surface.

[0057] FIG. **25** is a perspective back view of the bottom of the construction unit of the present invention with a thick weight-bearing wall, which causes the roof of the unit body of the construction unit to be reduced in area and causes the bottom boundary to be increased in area.

[0058] FIG. **26** is a perspective back view of the bottom of the construction unit of the present invention with a thick weight-bearing wall with a concave inner wall having a bottom boundary spanning a portion of the area between the opposing unit sides to form a grotto within the construction unit.

[0059] FIG. **27** is a perspective back view of the bottom of the construction unit of the present invention having a bottom boundary spanning a portion of the area between the opposing unit sides to form a grotto within the construction unit and having large cutouts in opposing sides of the weight-bearing wall.

[0060] FIG. **28** is a perspective top side view of the construction unit of FIG. **27**.

[0061] FIG. **29** is a perspective back view of an aspect of the inventive construction unit having an elongated ramp (including an arch extension and a heel extension), which is shown with a first exemplary small-base heel.

[0062] FIG. **30** is a perspective back view of an aspect of the inventive construction unit having an elongated ramp (including an arch extension and a heel extension), which is shown with a second exemplary small-base heel.

[0063] FIG. **31** is an expanded perspective back view of components of the shoe of the present invention, including a partial weight-bearing wall and a two-portion construction unit with proximal and distal unit body portions.

[0064] FIG. **32** is an expanded side perspective view of a construction unit including a shoe-unit interface, a mid-base, and a foundational base.

[0065] FIG. **33** is a perspective bottom view of a man's shoe incorporating the construction unit of the present invention.

[0066] FIG. **34** is a perspective top view of a construction unit of the present invention having an inset weight-bearing wall, a bottom boundary flange, and a channel defined by the inset wall and flange.

[0067] FIG. **35** is an expanded perspective bottom view of a shoe and inventive construction unit having an inset weight-bearing wall, a bottom boundary flange, and a channel defined by the inset wall and flange.

[0068] FIG. **36** is a perspective bottom view of a shoe, inventive construction unit, and decorative element, wherein the construction unit has an inset weight-bearing wall, a bottom boundary flange, and a channel defined by the inset wall and flange that has received a portion of the decorative element.

[0069] FIG. **37** is a back view of a shoe, inventive construction unit, and decorative element, wherein the construction unit has an inset weight-bearing wall, a bottom boundary flange, and a channel defined by the inset wall and flange that has received a portion of the decorative element.

[0070] FIG. **38** is a side view of a shoe, inventive construction unit, and decorative element, wherein the construction unit has an inset weight-bearing wall, a bottom bound-

ary flange, and a channel defined by the inset wall and flange to receive a portion of the decorative element.

[0071] FIG. **39** is a front view of a shoe, inventive construction unit, and decorative element, wherein the construction unit has an inset weight-bearing wall, a bottom boundary flange, and a channel defined by the inset wall and flange that has received a portion of the decorative element.

[0072] FIG. **40** is a perspective bottom view of a shoe of the present invention incorporating a construction unit with an inwardly curved weight-bearing wall.

[0073] Like reference numerals refer to like parts throughout the several views of the drawings.

DETAILED DESCRIPTION OF THE INVENTION

[0074] Shown throughout the figures, the present invention is directed toward a footwear construction unit for receiving a decorative component and toward an embellished shoe utilizing the footwear construction unit and the decorative component. The decorative component is disposed in at least an upraised portion of the construction unit, which protects the decorative component from dirt and abrasion because it is elevated above the walking surface. In one aspect of the invention, the decorative component extends from the roof of the upraised portion of the construction unit across the arch portion of the shoe sole and further to the breast portion of the shoe heel. In another aspect, the decorative component also extends vertically down the inner surface of the weight-bearing wall of the construction unit. In a further aspect, the decorative component may be additionally disposed on a portion of a heel seat exterior of an attached heel.

[0075] Referring now to the drawings, a conventional shoe **50** of the prior art is shown in FIG. **1**. The prior art shoe **50** includes a heel **53**, a toe **60**, an arch **55**, an outsole **65**, and an upper **51**.

[0076] The upper **51** defines a volume for partially enclosing a wearer's foot and typically includes an upper outer covering **52** (such as leather, imitation leather, fabric, or the like) and may optionally include an insole disposed to cover the footbed of the upper **51** for comfort of the wearer. The upper **51** may be a portion of a shoe of any type, such as a dress shoe, loafer, mule, boot, bootie, sandal, thong, or the like. The upper **51** may be joined to the heel **53** at heel-upper joint **56**. The heel **53** provides support for the heel portion of the upper, and in most aspects of the invention it also elevates it.

[0077] The heel **53** may be a high heel, as illustrated in FIG. **1**, or a medium, low, or flat heel. The outsole **65** forms the finished bottom of the shoe **50** including the walking surface and may also comprise one or more midsole layers (not shown). The outsole **65** may include any, or all, of a toe outsole **57** below the toe section **60**, an arch outsole **54** below the arch section **55**, a heel breast **63** covering, and a heel cap **66** disposed at the bottom surface of the heel **53**. In some aspects of the invention, a platform **58** may be disposed at the lower part of the toe section **60**, as in the exemplary high-heeled shoe illustrated, and may serve to elevate the toe portion of the upper for aesthetic reasons. In this case, toe platform covering material **62** may be disposed on the outer surface of the platform **58** to coordinate with or contrast with the rest of the shoe **50** or to otherwise enhance the look of the shoe **50**.

[0078] In FIG. **2**, an embellished shoe, shown generally as reference number **100**, is illustrated in accordance with a first embodiment of the present invention. As shown, the embellished shoe **100** comprises the heel **53**, toe **60**, arch **55**, and an upper **51** of the prior art shoe **50**, and it also comprises a shoe structural assembly that includes both a decorative component **150** and a construction unit **110**. The construction unit **110** is configured with an upraised area **105** (FIGS. **2**, **4-5**) for receiving at least a portion of the decorative component **150**. The decorative component **150** may be disposed directly or indirectly on part or all of the undersurfaces of the shoe toe **60**, arch **55**, and/or heel breast **63** and may comprise a toe decorative element **155** (FIG. **9**), arch decorative element **140**, and/or heel decorative element **145**.

[0079] In some embodiments of the invention, a single construction unit **110** (a toe construction unit) is utilized to form the embellished shoe **100**, as seen in FIGS. **2**, **6**, **9**, **17-21**, **24**, **29-31**, **33**, **35-40**. In other embodiments of the invention (FIGS. **12-13**), both a toe construction unit **110** and a heel construction unit **160** are utilized to form the embellished shoe **100**.

[0080] The construction unit **110** comprises an upper body **111** and a lower weight-bearing wall **101**, which, in a preferred aspect, are formed unitarily, as in FIGS. **3-5**. In another aspect, they may be formed separately and fixedly attached, as in FIGS. **7-8**.

[0081] In the finished shoe, the construction unit **110** is fixedly joined to the shoe. Specifically, a construction body top surface **113** (FIGS. **3**, **5**, **8**), which is the top surface of the upper body **111** portion of the construction unit, is fixedly attached, directly or indirectly, to the bottom of the shoe upper portion at an upper first level. Various standard shoe elements may be incorporated into the upper **51** or disposed between the upper **51** and the body top surface **113**, such as midsoles, outsoles, portions of the upper, and other elements as known in the art. The body top surface **113** may be configured to enhance the adherence of the top body surface **113** to the toe upper portion. A bonding agent may be used with or without additional mechanical devices. For example, the body top surface **113** may be irregular. The top body surface **113** may be textured or scored or otherwise treated to increase the surface area to enhance bonding, as shown in FIG. **5**. The body top surface **113** may be configured with concave dimples to be received by corresponding convex hollows within the toe upper portion. Or the body top surface **113** and the toe upper portion may be configured with channels **157**, **158** (FIG. **17**) for receiving monofilament **159** (which may be concealed by a covering) to mechanically tie the parts together.

[0082] The upper body **111** of the construction unit extends vertically downward from the body top surface **113** to an intersectional area **114** (FIG. **5**) that is generally at the level of the body inner roof surface **119**. The weight-bearing wall **101** extends downwardly from the intersectional area **114** to the ground.

[0083] The upper body **111** of the construction unit extends horizontally from front to back from a body front surface **118** (FIG. **14**) to a body back surface **116** (FIG. **5**) and extends horizontally from side to side between right and left lateral body lateral outer surfaces **112** (FIG. **3**). The weight-bearing wall **101** extends downwardly from at least a portion of the periphery of the sides and front of the upper body **111** to the ground in the first embodiment but extends

downwardly from an area inset from the periphery in FIGS. **34-39**. The thickness of the weight-bearing wall **101** is the distance between the weight-bearing wall exterior surface **102** (FIG. **3**) and the weight-bearing wall interior surface **104** (FIGS. **4-5**). This thickness may vary in portions of the weight-bearing wall **101** (as seen in FIG. **40**) or remain constant throughout the entirety of the weight-bearing wall **10**. In one aspect, the weight-bearing wall **101** is thin but expands outwardly slightly at the out the bottom to form a flare **103** (FIGS. **4-5**). If the thickness of the wall **101** is thin, more space is allowed in the interior upraised area **105**, which can accommodate the decorative component **150**, while maintaining the functionality of bearing the weight of the wearer. In another aspect of the invention shown in FIG. **25**, the wall **101** is thick, which reduces the space for the decorative component **150** but increases the area of the bottom boundary **107**. The wall **101** surrounds the body inner roof surface **119** that is at the second (middle) level, which is lower than the upper first level at the body top surface **113**.

[0084] The weight-bearing wall **101** ends at the back on the right and on the left at the right and left peripheral back margins **109** (FIGS. **4-5**). An open space is defined between the right and left peripheral back margins **109**, and there is no weight-bearing wall **101** extending downwardly from the center of the back of the upper body **111**. This creates the open space between the right and left peripheral back margins **109** (FIGS. **4-5**), which allows viewing of the decorative component **150** (which will be disposed within the interior upraised area **105**). In the first embodiment, the right, front, and left exterior surface **102** of the weight-bearing wall **101** substantially aligns with the body right outer surface **112**, the body front surface **118**, and the body left outer surface **112**, thereby giving a smooth, finished look.

[0085] The weight-bearing wall **101** extends downwardly from the intersectional area **114** (FIG. **5**) to terminate in a bottom boundary **107**. The bottom boundary **107** extends from a bottom boundary outer edge **149** (FIGS. **15**, **25**, **26**) to a bottom boundary inner edge **141** (FIGS. **15**, **25**, **26**). The bottom boundary **107** meets the inner wall **104** at inner junction **120** (FIG. **15**, **40**), which in some aspects of the invention, such as in FIG. **15**, corresponds to the bottom boundary inner edge **141**. In FIG. **15**, wall-boundary inner junction **120** is a substantially right-angle corner. In other aspects of the invention, the wall-boundary inner junction **120** may not form a right angle but may be curved, less than ninety-degrees, more than ninety-degrees, or curved less than ninety-degrees, more than ninety-degrees, or curved, as seen in FIG. **40**. The bottom boundary **107** is disposed at a third level that is lower than a second level, and which is generally at least partially planar. Bottom boundary **107** may be the walking surface or may be covered entirely or partially with a tread, outsole, protective sole cover **173**, or encasement **180** (FIGS. **20-21**) based on considerations of style and functionality. Bottom boundary **107** may optionally be configured with texturing or grooves **138** (FIGS. **9**, **40**) to increase traction.

[0086] The upraised area **105** is an open space that serves as a decoration-receiving recess. The upraised area **105** has a top (as oriented as in FIG. **5** and as oriented when incorporated into a shoe) defined by the body inner roof surface **119** (FIG. **4**) of the upper body **111** and has sides defined by the inner wall surface **104** of the weight-bearing wall **101**. There is a gap between the right and left peripheral back margins **109** of the weight-bearing wall **101** with nothing bridging the gap, so that the back portion of the weight-bearing wall **101** is open.

[0087] The body inner roof surface **119** is disposed at the second level. The second level is above the third level, which thus elevates the top of the upraised area **105** above the walking surface and thus minimizes or eliminates damage to and sullying of the decorative component **150** carried within the upraised area **105**. The height of the weight-bearing wall **101** is generally the distance between the second and third levels, while the height of the upper body **111** is generally the distance between the first and second levels. The height of the weight-bearing wall **101** may vary based on the height of the decorative component **150** and on stylistic and functional requirements. For example, the height of the wall **101** is significantly less in the man's shoe of FIG. **33** than the woman's platform shoe of FIG. **2**. The height of the weight-bearing wall **101** is greater than the height of the decorative component **150**, so that the decorative component **150** is elevated above the ground.

[0088] Because the back (between the peripheral back margins **109**) of the weight-bearing wall **101** is open, the decorative component **150** can be directly or indirectly fixedly attached to the body inner roof surface **119** and can run continuously out the back of the upraised area **105** between the right and left peripheral back margins **109** (FIGS. **4-5**). In one aspect, the decorative component **150** is further disposed on, and directly or indirectly fixedly attached to, the inner surface of the weight-bearing wall **101**. In another aspect, the decorative component is also disposed on, and directly or indirectly fixedly attached to, the bottom surface of the arch section **55** of the shoe and/or the heel breast **63**. The decorative component **150** comprises one or more of a toe decorative element **155** (FIG. **9**) attached to a toe decoration-receiving surface (body inner roof surface **119**), an arch decorative element **140** (FIG. **9**) attached to an arch decoration-receiving surface (arch surface **54**, FIG. **1**), a heel decorative element **145** (FIG. **9**) attached to a heel decoration-receiving surface, and a body inner floor (grotto) decorative element attached to a body inner floor surface (grotto floor) **108** (FIG. **28**). In some aspects of the invention, the decorative component **150** also is disposed on, and directly or indirectly fixedly attached to, all or at least a portion of the inner wall surface **104** of the weight-bearing wall **101** that partially defines the upraised area **105**.

[0089] The decorative component **150** has a height less than the height that the inner wall surface **104** extends below the body inner roof surface **119**, which prevents scratching or soiling of the decorative component **150**. The decorative component **150** may be substantially flat (such as a brightly colored sheet, dye, or film of iridescent material), may be thin (such as ostrich skin or alligator skin), may have a medium thickness (such as the half pearls of FIG. **9**), or may have a taller height up to a height just less than the height of the recess (such as multi-jeweled chains extending from the body inner roof surface **119** and having a height just less than the height of the inner wall surface **104**). For example, the decorative components may comprise crystals, rhinestones, ceramic beads or particles, glass beads or particles, porcelain, textiles, sequins, mirrors or pliable mirror foiling or plastic mirror film, links of chains, metal electroplating (gold, silver, copper, and the like), fur, dye, precious stones (diamonds, emeralds, rubies, and the like, semiprecious

stones, exotic skins, leathers including quilted or printed leathers, and other two-dimensional and three-dimensional synthetic or natural materials. The decorative component **150** may be individual, linked, or composite elements fixedly attached to the decoration-receiving surface, may be a sheet of material (substrate **177** of FIG. **2**A) with individual, linked, or composite elements fixedly attached to the substrate **177** that is then fixedly attached to the decoration-receiving surface, may be a sheet of material with an attractive pattern, color, or texture, or may be a combination of individual, linked, or composite elements and a sheet of material with an attractive pattern, color, or texture. Individual elements of the decorative component **150** may be set in individual settings or may be set in channels. The elements of the decorative component **150** may be of a consistent size or may vary in size. In an exemplary aspect, shown in FIG. **2**, the decorative component **150** comprises a substrate **177** embedded with or otherwise carrying rhinestones. In an exemplary aspect shown in FIG. **9**, the decorative component **150** comprises multiple half spheres, such as half pearls. In the exemplary aspect of FIGS. **12-13**, the decorative component **150** comprises individual medallions, nail heads, or studs fixedly adhered to the decoration-receiving surface.

[0090] In one aspect of the invention, the height of the weight-bearing wall **101** (around upraised area **105**) of the construction unit **110** has a height that is greater than the height of the upper unit body **111**. This aspect can be seen in FIGS. **3-5** in which the inner wall surface **104** of wall **109** has a height that is greater than the height of the back surface **116** of the body **111**. In this aspect, the distance between the first plane and second plane is smaller than the distance between the second and third planes.

[0091] In another aspect of the invention, the height of the weight-bearing wall **101** has a height that is less than the height of the unit body **111**. This aspect can be seen in FIGS. **7-8** in which the inner wall surface **104** has a height that is much less than the height of the body back surface **116**. In this aspect, the distance between the first plane and second plane is larger than the distance between the second and third planes.

[0092] In an additional aspect of the invention, the height of the weight-bearing wall **101** has a height that is approximately equal to the height of the body **111**, as seen in FIG. **10**.

[0093] The body top surface **113** is shaped, sized, and configured to be fixedly attached to the bottom surface of the toe section **60** of the upper **51**. Thus, the body top surface **113** of the upper body **111** will, in general, correspond to the general shape of the toe section **60** (such as generally V-shaped for pointed-toed shoes or generally U-shaped for rounded-toed shoes). And in some aspects of the invention, the outer body surface and weight-bearing wall **101** will follow the V- or U-shape of the toe, but in other aspects, such as in FIG. **31**, may be varied based on design and functional considerations.

[0094] The direct or indirect (such as with intermediary layers) attachment of the construction unit **110** to the bottom of the toe section may be by means of a glue, adhesive, or other bonding agent; may be by mechanical means such as screws, monofilament **159** (FIG. **17**) tying the two together, or other mechanical devices; or may be by a combination, such as the use of both a bonding agent and one or more mechanical devices. The monofilament **159** may be disposed within a channel **157**, **158** in either, or both of, the construction unit **110** and the shoe upper portion and may be used to sew or bind them together.

[0095] In one aspect, as seen in FIG. **3**, the rear portion of the upper body **111** is configured with a wedge **117**. The wedge **117** extends upwardly at the back of the body top surface **113**, which follows the line of the shoe upper between the toe section and the arch section to form an incline or ramp. The wedge **117** tapers rearwardly to an edge **122**. For some styles of shoes, the inclusion of the wedge **117** enhances the attachment of the body **111** to the upper **51** (or to a midsole disposed between the upper **51** and the wedge **117**) and increases the robustness of the upper body **111**.

[0096] Also seen in FIG. **3**, the body outer surface **112** extends vertically downwardly from the periphery of the body top surface **113**. The weight-bearing wall outer surface **102** also extends vertically downwardly and is generally aligned with the body outer surface **112**. This alignment creates a smooth façade, which may be covered with a covering **62** (FIG. **6**) or may be left exposed based substantially on aesthetic considerations. Similarly, as seen in FIG. **5**, the body back surface **116** extends downwardly from the back edge **122** (FIG. **3**) of the body top surface **113** and/or the back wedge **117**. And the weight-bearing wall back surface **106** extends downwardly in general alignment with the body back surface **116** to create a smooth façade, which may be covered by a footwear material or may remain uncovered.

[0097] FIG. **6** illustrates a partially assembled embellished shoe **100**, which shows a step in an exemplary assembly. In manufacturing the embellished shoe **100**, the body top surface **113** is fixedly attached to the bottom surface of the toe section **60** of the shoe upper. Therefore, preferably, the outer perimeter of the upper body iii and the outer perimeter of the weight-bearing wall **101** conform to the shape of the outer perimeter of the upper toe section **60** to produce a smooth façade. However, based on design decisions or aesthetic considerations, the creation of a smooth façade is not necessary to the invention.

[0098] In an aspect of the invention, as seen in FIG. **6**, the perimeter of the body iii and of the weight-bearing wall **101** are covered with a covering **62**, which may match, coordinate with, or contrast with the material forming the shoe upper **51** based on aesthetic considerations. The covering **62** may be selected by the manufacturer to veneer the body outer surface **112** and wall outer surface **102** with ornamental material that may match with, coordinate with, or contrast with the decorative component **150** and/or the material forming the shoe upper **51**.

[0099] In another aspect of the invention, the perimeter of the body **111** and of the weight-bearing wall **101** remain uncovered with the material forming the construction unit exposed.

[0100] In a further aspect of the invention, the bottom boundary **107** may be textured, smooth, or grooved **138** to provide additional traction.

[0101] In an aspect of the invention shown in FIG. **18**, an additional outsole portion, protective sole cover **173**, is fixedly attached to the bottom surface of an encasement or of bottom boundary **107**. The bottom of the protective sole cover **173** may be textured, smooth, or grooved to form a tread **171**. The protective sole cover **173** may be formed of a rubber or rubber-like material, may be formed of a

slip-resistant material to add grip strength, or may be formed of other conventional outsole materials. The protective sole cover **173** may cover all or a portion of the bottom boundary **107**. If only a portion of the bottom boundary **107** is covered, a concavity (within the bottom boundary **107**) may form a concave channel **179** sized and shaped to receive the protective sole cover **173** with a rim **178** of the bottom boundary **107** remaining at the edge of the protective sole cover **173**. Though FIG. **18** shows the rim **178** on the interior of the protective sole cover **173**, in another aspect the rim **178** is disposed on the exterior of the protective sole cover **173**.

[0102] FIGS. **12-13** illustrate the second embodiment in which an open-back toe construction unit **110** is disposed on the toe of a flat shoe and in which a second construction unit, a heel construction unit **160**, is disposed on the heel of a flat shoe. The heel construction unit **160** may be closed (as seen in FIG. **12**) or may correspond to the toe construction unit **110** and be open, as in FIG. **13**. (The heel construction unit **160** is not discussed separately, as it corresponds to the described toe construction unit, though in a different spatial orientation.) In FIG. **12**, the closed construction unit **160** is disposed on the heel section of the shoe and the open-back construction unit **110** is disposed on the toe section of the shoe. In FIG. **13** two open-back construction units **110** are used (one disposed on the toe and one on the heel). In another aspect, two closed construction units **160** may be used (one disposed on the toe and one on the heel). In a further aspect, the open-back construction unit **110** may be disposed on the heel section and the closed construction unit **160** may be disposed on the toe section.

[0103] The closed heel construction unit **160** comprises at least a full or partial arcuate wall **163** and a full or partial transverse wall **166**. In an aspect of the invention, the arcuate wall **163** and the transverse wall **166** are fixedly attached to the body **111** that is then attached to the upper **51** or to the midsole disposed below the upper **51**. In this aspect, an upraised region **165** is an open space defined by the inner curved sides of the arcuate wall **163**, the inner side of the transverse wall **166**, and an upraised region top surface. The closed upraised region **165** is configured to receive the decorative element.

[0104] Though the heel construction unit **160** is illustrated as a short heel (around three-fourth inches in height), the closed construction unit may be implemented with much taller walls **163**, **166**.

[0105] In the second embodiment illustrated in FIGS. **12-13**, both the body **111** and the weight-bearing wall **101** of the toe construction unit **110** are segmented to enhance the flexibility. Though in the first embodiment the weight-bearing wall **101** and the body **111** are preferably formed unitarily by molding, in this embodiment the weight-bearing wall **101** and the body **111** are formed in segmented members **121**. Each segmented member **121** includes a segment of the wall **101** and a segment of the body **111**. Adjacent segmented members **121** are separated by a horizontal gap **129** between the wall bottom surfaces of adjacent segmented members **121**, a vertical gap **127** along the inner wall surface **104** (FIG. **13**) between adjacent segmented members **121**, and a horizontal gap **128** between the upper body **111** of adjacent segmented members **121**. Having two or more segmented members **121** may provide an advantage to some shoes in that the segments increase the flex or bend of the portion of the sole to which they are applied. However, the segmented members **121** may be utilized by shoe designers for aesthetic reasons on other shoes that do not need the flexing functionality.

[0106] FIGS. **14-17** illustrate an aspect in which a sloped or inclined back wedge **117** at the rear of the construction unit **110** tapers to a very thin back edge **122**. This allows a very smooth transition between the construction unit **110** and the arch, which may have both functional and aesthetic advantages.

[0107] FIGS. **15-17** illustrate an aspect in which the center of the bottom boundary **107** has a greater thickness than the front or the rear of the bottom boundary **107**, which may be advantageous in providing traction and walking stability. The right and left peripheral back margins **109** may be somewhat thinner in thickness than the middle of the bottom boundary **107** and may be generally uniform in thickness, as in FIG. **15**, or may taper to a narrow V-shape, as illustrated in FIGS. **16-17**. The narrow V-shape may allow easier viewing of the interior decorative component **150**.

[0108] FIGS. **15-16** also illustrate a weight-bearing wall **101** that has a narrow width at the front, from wall outer edge **149** to wall inner edge **141**. The inner wall is substantially vertical. This is in contrast to the aspect show in FIGS. **25-26** in which the front of the weight-bearing wall **101** has a wide width from wall outer edge **149** to wall inner edge **141**. And, additionally, in FIG. **26** the inner wall is not substantially vertical, but it is instead inset (such as to form a smooth concavity or grotto). Thus, the inner and outer surfaces of the wall **101** may be generally parallel (as in FIG. **15**) or may not be parallel (as in FIG. **26**). And the width of the wall may be thin or thick. When the wall width is thin, a larger surface area of the body inner roof surface **119** is available for receiving decorative elements. When the wall is thicker, it may provide more traction, but reduces the area of the body inner roof surface **119** available for receiving decorative elements.

[0109] FIG. **17** illustrates the very smooth transition between the construction unit **110** and the arch area **55** that can be achieved when the back of the construction unit **110** is tapered into the wedge **117** ending at edge **122**, as illustrated in FIGS. **15-18**. The shoe under construction in FIG. **17** is shown before an outer covering (such as leather, imitation leather, or cloth) is disposed along the outer side and front surfaces of the construction unit **110** and the toe portion of the midsole to provide a consistent, elegant look. Additionally, to finish the manufacture of the shoe in FIG. **17**, an encasement **180** (FIG. **19**) may be applied to any or all of the upraised area **105**, the wedge portion **117**, and the arch portion **55**; and then a decorative component **150** may be applied to the outside of the encasement **180** or may be integrated into the encasement **180**.

[0110] FIGS. **19-24** illustrate a third embodiment of the invention that further discloses an encasement **180**, where the encasement **180** conforms to the bottom portion of the shoe to give a polished, refined look. The use of the encasement **180** enables the multiple portions of the construction unit and shoe bottom portions to be smoothly covered and enhanced, which is comparable to the finished look achieved by using material to cover the parts of the upper to give a smooth, finished look. The encasement **180** may coordinate or contrast with the upper, based substantially on fashion and aesthetic concerns.

[0111] The encasement **180** comprises at least a recess roof encasing portion **188** (FIGS. **20**, **23**), and preferably

also comprises one or more of a recess wall encasing portion **181**, an arch encasing portion **185**, a heel breast encasing portion **184**, and an underside encasing portion **189**. The recess roof encasing portion **188** is sized and configured to fit over and, in the finished shoe, to be fixedly attached to the body inner roof surface **119**. The recess wall encasing portion **181** is sized and configured to fit over and, in the finished shoe, configured to have its inward-facing surface fixedly attached to the outer surface of the peripheral inner wall **104**. The inner heel encasing portion **184** is sized and configured to fit over and, in the finished shoe, configured to have its inward-facing surface fixedly attached to the outer surface of the inner heel breast **63**. The arch encasing portion **185** is sized and configured to fit over and, in the finished shoe, configured to have its inward-facing surface fixedly attached to the outer surface of the bottom or arch **55**. The underside encasing portion **189** is sized and configured to fit over and, in the finished shoe, configured to have its inward-facing surface fixedly attached to the surface of the bottom boundary **107**. Specifically, the inner side **187** (FIG. **19**) of underside encasing portion **189** is fixedly attached to the outside of the bottom boundary **107**. As shown, the underside encasing portion **189** may be configured with irregularities **171** (FIG. **20**), such as grooves or texturing, to increase traction and facilitate walking stability. In an aspect, the underside encasing portion **189** may be configured with an inset that covers a portion of the bottom boundary **107**. For example, if the encasement **180** is formed of a precious metal, a thermoplastic insert within the underside encasing portion **189** may be included to slightly elevate the precious metal to avoid wear. The insert may be replaceable. In an aspect the underside encasing portion **189** may comprise multiple layers with an inner decorative layer and an outer wearable layer, such as a thin transparent synthetic stratum.

[0112] The encasement **180** may be formed in parts and fixedly joined together or may be formed unitarily, such as by molding. The encasement **180** may be a thin skin to enhance the finished look or may be thicker to provide cushioning and/or to facilitate attachment of the decorative component **150**. In one aspect the encasement **180** is formed of thermoplastic. In another aspect the encasement **180** is formed of metal.

[0113] In the finished shoe, the decorative component **150** is received by, and disposed within, the upraised area **105** and is directly or indirectly attached to at least one of the inner surface of the inner wall **104** or the body inner roof surface **119**. One method of indirect attachment is through the use of an encasement **180**. Another method of indirect attachment is shown in FIG. **2**A where the decorative component **150** is carried by a substrate **177**, which may be formed by an inlay **172** that is fixedly attached to the encasement **180**. In another method of direct or indirect attachment of the decorative component to the surface of the inner wall **104** or the body inner roof surface **119**, the decorative component is formed integrally with the surface of the inner wall **104**, the body inner roof surface **119** or an encasement or inlay covering the wall or roof surface.

[0114] In one aspect, an inlay **172** may be large to substantially cover the entire area of the upraised area **105**, arch bottom surface, and heel inner surface, as seen in FIG. **21**. In a further aspect, the inlay **172** may be larger to substantially cover the entire area of the upraised area **105**, arch bottom surface, heel inner surface, and the toe platform **62** as seen in FIG. **24**. In another aspect, the inlay **172** may only cover a portion of the upraised area **105**. In another aspect, the inlay may cover only the body inner roof surface **119** or the inlay may cover only the recess roof encasing portion **188** that covers the body inner roof surface **119**. In another aspect, as seen in FIG. **20**, the inlay **172** may cover the body inner roof surface **119** (or the recess roof encasing portion **188** that covers the body inner roof surface **119**), the arch bottom surface, and heel inner surface. The inlay **172** corresponds generally in shape to the portions to be covered. In one aspect inlay **172** may be formed of a flexible material that has a degree of elasticity or adjustability to enable to inlay **172** to be applied smoothly.

[0115] Though FIG. **22** shows a single type of decorative component for fixedly attaching to the recess roof encasing portion **188**, the recess wall encasing portion **181**, the arch encasing portion **185**, and the inner heel encasing portion **184**, there is no requirement that a single type of decorative component be used. As dictated by fashion, aesthetics, and functionality, multiple types of decorative components may be used. For example, if sharp spikes are attached to the recess roof encasing portion **188**, metal studs may be attached to the other portions of the outer portion of the encasement **180**. Or in a second example, rhinestones may be attached to the recess roof encasing portion **188**, the arch encasing portion **185**, and the inner heel encasing portion **184** with sequins attached to the recess wall encasing portion **181**. The thickness of the encasement **180** may be based on the type of decorative component **150** that will be attached, as well as aesthetic and functional concerns.

[0116] FIGS. **25-26** illustrate the aspect of the invention having a weight-bearing wall **101** with a front portion that is thicker than the front portion of the weight-bearing wall **101** in earlier embodiments. This thickened front portion creates an expanded front portion of the bottom boundary **107**. The expanded front portion of the bottom boundary **107** provides a variation in the design and a larger surface area for walking. The expanded bottom boundary **107** allows the inner surface **104** of the weight-bearing wall **101** to be vertical (FIG. **25**) or inset (FIG. **26**). The inset inner surface **104** allows for an undercut to form a cavern-like upraised area **105**.

[0117] FIGS. **11**, **14**, **27**, **28** illustrate that the weight-bearing wall **101** need not be solid, but can be configured with one or more cut-throughs, holes, latticework, slits, or the like with the limitation that the weight-bearing wall **101** retains sufficient robustness to bear the weight of the wearer.

[0118] FIG. **11** illustrates an aspect of the invention in which there are one or multiple openings **125** within the weight-bearing wall **101**. Each opening is defined by a top frame **126**, a bottom frame **123**, and opposing side frames **124**. The opening or openings **125** may serve as a type of window allowing a viewer to catch glimpses of the decorative component **150**. The opening or openings **125** may also reduce the weight of the construction unit **110** but can be designed in such a manner as to minimize the reduction in strength.

[0119] FIG. **14** illustrates a slot-type opening **125** in the weight-bearing wall **101** that provides another means for a viewer to view the interior decorative component **150**. The slot-type opening **125** is defined by side frames **124** and a top frame **126**.

[0120] FIGS. **27-28** illustrate a fourth embodiment in which the upraised are **105** is aa grotto-like cavity with a grotto floor **108** spanning the area between the opposing side walls **10**.

[0121] This embodiment adds another area that can receive a decorative component **150**. In the first embodiment, there is a possibility of applying a decorative material or embellishment **150** to any or all of the body inner roof surface **119**, the inner surface **104** of wall **101**, the wedge **117**, the back rearward surface of the unit body **111**, the arch **55**, and the heel breast **63**. This fourth embodiment adds another area to which a decorative component **150** may be applied, and this is the grotto floor surface **108**. When the grotto-type construction unit **110** and decorative component **150** are installed into an embellished shoe **100**, a viewer may glimpse the decorative component disposed on the body inner roof surface when the wearer's legs are crossed, but then, when the wearer changes the angle of the foot, the viewer may glimpse the decorative component disposed on the grotto floor **108**. At various angles, any decorative component disposed on the inner wall **104**, the wedge **117**, the back rearward surface of the unit body **111**, the arch **55**, and the breast **63** of the heel **53** may be viewable.

[0122] The interior of the grotto is viewable from the back (FIGS. **26**, **27**, **28**) or through either of the two openings **125** disposed on opposing sides of the outer wall **101** in FIGS. **27**, **28**. Each of the openings are defined by a top frame **126** at the level of the unit body inner roof surface **119**, a bottom frame **123** at the level of the horizontally extending grotto floor **108**, and a set of side frames **124**. The open space within the grotto is defined by the side opening **125** frames, a front and two back portions of the wall **101**, grotto floor **108**, and body inner roof surface **119**.

[0123] The top frame **126** is disposed at the top of the side opening **125**. It may be aligned with the unit body inner roof surface **119** to form a smooth transition.

[0124] The bottom frame **123** is disposed at the bottom portion of the side opening. The front portion of the bottom frame **123** is at the level of and contiguous with a floor **108**, which extends horizontally between the two opposing sides of a portion of the weight-bearing outer wall **101**.

[0125] More specifically, in the aspect of the invention that is illustrated, the floor **108** extends horizontally side-to-side between the bottom frame **123** of one side opening **125** to the bottom frame **123** of the opposite side opening **125**. The floor **108** extends horizontally front-to-back from the inner surface **104** (FIG. **15**) of the front portion of wall **101** to the rearmost grotto floor edge, which is also the bottom boundary inner edge **141**. In another aspect of the invention, the floor **108** extends horizontally side-to-side between the opposing sides of the inner surface **104** (FIG. **15**) of the wall **101** and extends horizontally front-to-back from the inner surface **104** (FIG. **15**) of the front portion of wall **101** to the rearmost grotto floor edge at bottom boundary inner edge **141**, but it is not disposed at the level of the bottom frame **123**.

[0126] In the first embodiment, the body top portion surface **119** is at an upper first level, the body inner roof surface is at a second level below the first level, and the bottom boundary is at a third level adjacent to the ground and below the second level. This fourth embodiment adds a fourth level, which is the level of the grotto floor **108**. The fourth level is above the third level, but below the second level. Though one or more of the levels may be planar, there is no requirement for this, and, in most cases, the levels will not be planar.

[0127] In the first embodiment the decorative component **150** attached to the body inner roof surface **119** has a height less than the height of the inner wall surface **104**, which elevates the decorative component **150** above the ground. In the fourth embodiment, the decorative component **150** attached to the body inner roof surface **119** (the roof of the grotto) will typically have a vertical height less than the vertical distance between the body inner roof surface **119** and the grotto floor **108**.

[0128] The fifth embodiment of the invention is shown in FIGS. **29-30**. The fifth embodiment provides a construction unit **110** that is lengthened or extended to include not only the toe construction unit portion already described, but to also include an arch extension **190** and a heel extension **209**. Thus, the construction unit **110** is not limited to ending at the back area of the shoe toe, such as at the wedge back edge **122** (as seen in FIGS. **3**, **17**), but it may extend as an elongated ramp to cover the entire shoe base. In this embodiment, the unit body **111** begins at the shoe toe area (which carries the weight-bearing wall **101**), extends past the toe area to the arch area (as arch extension **190**), and further extends past the arch area to end at the distal heel area (as heel extension **209**). In an aspect, the elongated construction unit is formed unitarily for strength.

[0129] Also shown in FIGS. **29-30** is an added area at the bottom of a shoe that can be utilized to display a portion of the decorative component **150**. In this aspect, a shoe heel **200** with a small base **201** is fixedly attached to the shoe. The use of a smaller base **201** than is typical for the heel permits the area around the heel, the perimetric margin **199**, to additionally be available for receiving the decorative component **150**. The perimetric margin **199** is a flat or gently curved area of the elongated construction unit around the base of the heel **200**. Though the small-base heel **200** is illustrated with a tall vertical support portion **153**, a medium or short vertical support portion **153** is within the scope of the invention.

[0130] The small-base heel **200** is fixedly attached to the shoe in any of the various ways known in the art of shoemaking. Two exemplary attachment means are shown in FIGS. **29** and **30**. FIG. **29** shows a peg **195** that corresponds to a receiving aperture **196** disposed within the heel portion of the elongated construction unit. The peg **195** is inserted into the receiving aperture **196** (and may additionally extend into an aperture **197** of the upper) and may secured by adhesive and/or by mechanical devices **193**, such as screws or monofilament, either of which may make use of the holes **194**. FIG. **30** shows a second exemplary attachment means in which the heel **200** includes a concavity **202** aligned with an aperture **196** in the extended construction unit **190** and an aperture in a portion of the bottom of the upper **51**. The heel **200** is attached mechanically and/or adhesively. For example, a bolt **198** (with a large head or base **192**) may be installed to join the upper **51**, the extended construction unit **190**, and the heel **200**. An insole **69** (and/or other inner shoe layers) may function to cover the base **192** of the mechanical attachment.

[0131] When the heel **200** is installed onto the finished shoe, the perimetric heel margin **199** exterior to the outer portion of the heel base **201** provides a foundation upon which the decorative component **150** may be directly or

indirectly disposed. The decorative component **150** may be adhered directly to the perimetric heel margin **199**, or the perimetric heel margin **199** may be covered by a suitable covering with the decorative component **150** fixedly attached to or adhered to the suitable heel covering. Thus, this aspect provides an additional area to which a decorative component **150** may be displayed.

[0132] In all the embodiments, the decorative component **150** is attached securely to the underlying surface. In some aspects, the decorative component **150** may be attached via glue, adhesive, or other bonding agent. In an aspect, the decorative component **150** may be further secured with threading extending from the underlying portion of the shoe and engaged with the decorative component **150**. In an example show in FIG. **22**, the decorative component is rhinestones or rhinestone-like stones **170** disposed within cone-shaped receiving holes **175** that may be held within the receiving holes **175** with glue, adhesive, or mechanical settings. In an aspect, a pavé-type setting may be used, in which multiple small stones, beads, or the like are closely set with minimal visibility of the metal prongs holding them in place to provide the look of a sparkly pavement.

[0133] In the aspect in which the decorative component **150** is disposed on or integrated into the inlay **172**, the edges of the decoration-receiving areas may include a border ridge **115** that is sufficiently deep to hide the inlay **172**. The border ridge **115** is located to obscure viewing of the inlay edge, so it is disposed in a location that allows it to cover the inlay's raw edge when the inlay is installed. For example, without a border ridge **115**, if the inlay **172** is disposed on the peripheral inner wall **104** or on the recess wall encasing portion **181** covering the peripheral inner wall **104**, the edge of the inlay **172** could be seen at the bottom of the shoe. In one aspect, the inlay **172** is to be disposed on the recess roof encasing portion **188** and the recess wall encasing portion **181** of the encasement **180**, so a border ridge **115**B is disposed at the intersection of the underside encasing portion **189** and the recess wall encasing portion **181** to hide the edge of the inlay **172**, as can be seen in FIG. **21**. In an additional aspect shown in FIGS. **20**, **23**, when the inlay **172** is installed, it covers the recess roof encasing portion **188**, which positions the edge of the inlay **172** adjacent to and/or abutting the recess wall **181**; therefore, no border ridge **115** is needed or included at the junction of recess wall **181** and recess roof encasing portion **188**. But as the inlay **172** extends across the arch and down the inner heel, a border ridge **115**B is disposed along the outer edge of the arch encasing portion **185** and inner heel encasing portion **184** to hide the edge of the inlay **172**. In one aspect as seen in FIG. **23**, the border ridge **115**B may run down both sides of the inner heel encasing portion **184** but may have an opening **199** at the end of the inner heel encasing portion **184**, which may provide advantages in assembly.

[0134] In a further aspect in which no encasement is included, the arch and heel may include a border ridge **115**A to obscure viewing of the edge of the substrate **177**, as seen in FIG. **2**A. FIGS. **16-17** illustrate an aspect of the construction unit **110** with a border ridge **115**A, while FIG. **10** illustrates an aspect of the construction unit **110** without a border ridge **115**A.

[0135] FIG. **31** illustrates a sixth embodiment which provides another example of a partial wall **10**, provides a construction unit **110** with a two-part unit body **111**A, **111**B, and provides a weight-bearing wall **101** that is slightly to somewhat inset from the periphery of the shoe.

[0136] Partial weight-bearing walls **101** may be used to meet design or aesthetic considerations with the limitation that they can support the weight of the user. Examples of partial walls **101** have been shown in FIGS. **11**, **14**, **27**, and **28**. In the partial wall **101** of FIG. **31**, the opposing side walls support the weight of the user while the toe area of the wall has been mostly eliminated.

[0137] The portion of the unit body that is proximal to the shoe upper, the proximal unit body portion **111**A, will be fixedly attached to the shoe upper below the shoe toe box. The proximal unit body portion **111**A carries the weight-bearing wall **101**, which may be full (not shown) or partial (as shown). The distal unit body portion **111**B is configured with slits **251** that are sized and shaped to accommodate the weight-bearing wall **101**. The slits **251** are fitted over the wall **101** with the distal unit body portion **111**B then fixedly attached over the proximal unit body portion **111**A with the wall **101** extending through the distal unit body portion **111**B. Thus, the height of the wall **101** must be a greater height than the height of the distal unit body portion **111**B. Optionally, a finishing outsole **259**, encasement, inlay, or the like may be attached to provide functional and aesthetic enhancements. In another option, the unit body portion **111**B comprises a standard sole configured with slits **251**. The wall **101** may be solid or configured with openings.

[0138] The portion of the unit body that is proximal to the shoe upper, the distal unit body portion **111**B, may be formed of a rigid material or may be flexible or somewhat flexible. In most shoe designs, the toe front **250** of distal unit body portion **111**B will substantially align with the toe front of the shoe upper to provide a smooth, integrated look.

[0139] FIG. **31** also illustrates that the weight-bearing wall **101** need not be disposed at the outer edge of the shoe, but all or part of it can be inset from the periphery. Though the toe of a shoe is not wide, the wall **101** may still be inset a small distance based on structural and aesthetic considerations.

[0140] FIG. **32** illustrates a seventh embodiment. In this embodiment, the construction unit **110** is not formed unitarily, but comprises multiple portions. In one aspect the multi-portion construction unit **110** comprises a mid-base **135**, an upper shoe-unit interface **130**, and a lower foundational base **139**. In another aspect the construction unit **110** comprises a mid-base **135** and an upper shoe-unit interface **130** without the lower foundational base **139**. The unit-to-shoe interface **130** is a thin structure that includes an interface foundation **131** and one or more downwardly protruding projections **132** that extend downwardly from the interface foundation **131**. The interface foundation **131** has a bottom surface that conforms substantially to the top of the mid-base **135** and has a top surface that conforms substantially to the portion of the shoe to which it will be attached. The lower foundational base **139** is a thin structure having a top surface that conforms substantially to the mid-base's bottom surface, having upwardly protruding projections **137**, and having a bottom surface for walking that is generally smooth and flat.

[0141] The mid-base **135** includes the upraised area **105** of the construction unit **110** of the first embodiment and additionally includes upper receiving holes **133** and lower receiving holes (not shown). The upper receiving holes **133** are sized and configured to receive the downwardly pro-

truding projections **132**, which are to be fixedly attached within the upper receiving holes **133**. The lower receiving holes are sized and configured to receive the upwardly protruding projections **137**, which are to be fixedly attached within the lower receiving holes. The upper receiving holes **133** may be offset from the downward receiving holes, particularly if the offsetting improves structural robustness.

[0142] The construction unit **110** of the seventh embodiment of FIG. **32** is utilized similarly to the construction unit **110** of the other embodiments, but it may provide advantages in weight reduction and/or in providing versatility in the use of different materials for different portions of the construction unit. The three elements of the construction unit **110** may be formed from the same or different materials. In one aspect, the construction unit **110** is formed of a plastic resin or composite material, while the shoe-unit interface **130** and the foundational base **139** may be formed of a metal or metal alloy (for example, nickel alloy or titanium). This provides a plastic and metal unit **110** of lighter weight than a construction unit **110** that is formed unitarily of metal or metal alloy.

[0143] The eighth embodiment of FIGS. **34-39** discloses a construction unit **110** that at least has a weight-bearing wall **101** that is inset from the periphery of the shoe and may optionally, as illustrated, also have a unit body inset from the shoe periphery.

[0144] In FIGS. **34-39** the unit body **111** and the upper portion of the wall are inset a small distance from the periphery of the shoe upper, in contrast with the fully inset wall **101** of FIG. **31** in which the entire wall was inset and the unit body was not inset.

[0145] FIGS. **34-39** also disclose a bottom boundary flange **213**. In this aspect, the lower portion of the wall **101** extends outwardly beyond the inset unit body in and the inset upper portion of the wall to form the bottom boundary flange **213**. Preferably, the vertical height of the flange **213** is less than the vertical height of the upper portion of the wall **101**. The bottom boundary flange **213** extends outwardly beyond the outer surface of the top portion of the inset wall **101**, may extends outwardly beyond the inset unit body **111** and the inset upper portion of the wall, may extend outwardly to the periphery of the shoe, or may extend beyond the shoe periphery. The outward facing surface of the top portion of the inset wall **101** (and in the aspect shown, the outward facing surface of the unit body **111**) along with the top surface of the flange **213** together define two sides (bottom and side) of an open décor-receiving channel **211**. Décor-receiving channel **211** accommodates the decorative element **150**.

[0146] FIG. **35** shows the construction unit **110** of this eighth embodiment in position for attaching to the bottom of the shoe. When the construction unit **110** of the eighth embodiment is incorporated into the shoe, the shoe forms a third side (the top side) of the décor-receiving channel **211**. As can be seen in the bottom view of FIG. **36**, the back view of FIG. **37**, the side view of FIG. **38**, and the front view of FIG. **39**, a decorative element **150** (shown as a row of pearls or spheres) can be disposed within the disclosed décor-receiving channel **211** to achieve a unique, distinctive look. The row of decorative elements **150** may continue across the arch and down the heel, as illustrated, or may stop at the end of the toe or at other locations, as dictated by design considerations.

[0147] In the aspect in which the unit body **111** is not inset, but only the top portion of the inset wall **101** is inset, the outward facing surface of the top portion of the inset wall **101** and the top surface of the flange **213** together define two sides (bottom and side) of the open décor-receiving channel **211**. In this aspect, when the construction unit **110** is incorporated into the shoe, the bottom of the unit body **111** forms the top third side (top) of the décor-receiving channel **211**.

[0148] FIG. **40** discloses a ninth embodiment in which the upraised area **105** within the construction unit is bowl-shaped. In this embodiment, the inner surface of wall **101** is not vertical, but is instead curved inwardly to form a gradually deepening upraised area **105**. The inner surface of wall **101** curves from wall-boundary inner junction **120** to the body inner roof surface **119** to define the bowl-shape. This figure illustrates that the body inner roof surface **119** may be curved, the surface of wall **101** may be curved, the wall-boundary inner junction **120** may be curved or may form a greater than ninety-degree angle, and the roof-wall interface **205** (the location at which the body inner roof surface **119** meets the surface of the inner wall **104**) may be curved.

[0149] The construction unit **110** of the embodiments may be formed of natural or manmade materials, such as plastic resins, metals, natural or synthetic wood, or a combination of materials. It may be formed unitarily, or it may be formed in parts that are permanently and non-removably joined together.

[0150] Since many modifications, variations, and changes in detail can be made to the described preferred embodiments of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

What is claimed is:

1. A shoe, comprising:

a toe section including a toe section periphery;

an arch section disposed rearwardly of said toe section;

a heel section disposed rearwardly of said arch section;

a construction unit comprising:

an upper body extending rearwardly from a body front portion and extending side-to-side between opposing body side portions; said upper body comprising an outer body top portion surface disposed generally at a first level and a body inner roof surface disposed generally at a second level that is below said first level;

a weight-bearing-wall extending downwardly from at least a portion of said opposing body side portions and said body front portion; said weight-bearing-wall terminating rearwardly at right and left back wall margins and terminating downwardly in a wall bottom boundary lying substantially in a third level disposed below said second level; said right and left back wall margins having a gap therebetween; said weight-bearing wall having a wall interior surface and a wall exterior surface; and

an upraised area defined at least partially by said wall interior surface and said body inner roof surface.

2. The shoe, as recited in claim **1**, further comprising a decorative component disposed within said upraised area.

3. The shoe, as recited in claim 1, wherein said weight-bearing wall extends downwardly from at least a portion of said toe section periphery.

4. The shoe, as recited in claim 1, wherein said weight-bearing wall extends downwardly from a location inset from at least a portion of said toe section periphery.

5. The shoe, as recited in claim 1, wherein said weight-bearing wall comprises a bottom boundary flange that is disposed at the bottom of said weight-bearing wall and that extends outwardly beyond an upper portion of said weight-bearing wall; and wherein said weight-bearing wall comprises a décor-receiving channel defined by a top surface of said bottom boundary flange and said wall exterior surface of said upper portion of said weight-bearing wall.

6. The shoe, as recited in claim 4, said shoe further comprising a decorative component disposed within said décor-receiving channel.

7. The shoe, as recited in claim 1, wherein said body inner roof surface meets said wall interior surface at a curved roof-wall interface.

8. The shoe, as recited in claim 1, wherein said wall interior surface is curved.

9. The shoe, as recited in claim 1, wherein said construction unit is directly or indirectly fixedly attached to said heel section.

10. The shoe, as recited in claim 1, wherein said construction unit further comprises a proximal unit body portion and a distal unit body portion; wherein said weight-bearing wall is fixedly attached to said proximal unit body portion; and wherein said distal body portion is configured with slits that receive said weight-bearing wall.

11. The shoe, as recited in claim 1, wherein said upper body further comprises an arch extension and a heel extension.

12. The shoe, as recited in claim 11, wherein said construction unit further comprises a proximal unit body portion and a distal unit body portion; wherein said weight-bearing wall is fixedly attached to said proximal unit body portion; and wherein said distal body portion is configured with slits receive said weight-bearing wall.

13. A shoe construction unit comprising:

an upper body extending rearwardly from a body front portion and extending side-to-side between opposing body side portions; said upper body comprising an outer body top portion surface disposed generally at a first level and a body inner roof surface disposed generally at a second level that is below said first level;

a weight-bearing-wall extending downwardly from at least a portion of said opposing body side portions and said body front portion; said weight-bearing-wall terminating rearwardly at right and left back wall margins and terminating downwardly in a wall bottom boundary lying substantially in a third level disposed below said second level; said right and left back wall margins having a gap therebetween; said weight-bearing wall having a wall interior surface and a wall exterior surface; and

an upraised area defined at least partially by said wall interior surface and said body inner roof surface.

14. The shoe construction unit, as recited in claim 13, wherein when said construction unit is attached to a shoe, said weight-bearing wall extends downwardly from at least a portion of a periphery of a shoe.

15. The shoe construction unit, as recited in claim 13, wherein when said construction unit is attached to a shoe, said weight-bearing wall extends downwardly from a location inset from a section of a shoe periphery.

16. The shoe construction unit, as recited in claim 13, wherein said weight-bearing wall comprises a bottom boundary flange that is disposed at the bottom of said weight-bearing wall and that extends outwardly beyond an upper portion of said weight-bearing wall; and wherein said weight-bearing wall comprises a décor-receiving channel defined by a top surface of said bottom boundary flange and said wall exterior surface of said upper portion of said weight-bearing wall.

17. The shoe construction unit, as recited in claim 13, wherein said body inner roof surface meets said wall interior surface at a curved roof-wall interface.

18. The shoe construction unit, as recited in claim 13, wherein said wall interior surface is curved.

19. The shoe construction unit, as recited in claim 13, further comprising an arch extension and a heel extension.

20. The shoe construction unit, as recited in claim 19, further comprising a proximal unit body portion and a distal unit body portion; wherein said weight-bearing wall is fixedly attached to said proximal unit body portion; and wherein said distal body portion is configured with slits that receive said weight-bearing wall.

21. The shoe construction unit, as recited in claim 13, further comprising a proximal unit body portion and a distal unit body portion; wherein said weight-bearing wall is fixedly attached to said proximal unit body portion; and wherein said distal body portion is configured with slits that receive said weight-bearing wall.

22. The shoe construction unit, as recited in claim 13, wherein said wall bottom boundary is configured to receive a sole protective cover.

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