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(54) Title: SIDE ENTRY FOOTWEAR AND METHODS OF MAKING

(57) Abstract: Footwear and methods of making footwear including an upper disconnected from the sole on at least a portion of one lateral side of the sole to enable a foot to enter the footwear laterally through a side gap, wherein the footwear is made by molding the footwear in a mold are disclosed. The foot may be held in place in the footwear, in part, with a resilient foot holder extending over the top of the foot. A lateral motion of the foot may overcome the force of the foot holder enabling hands-free removal of the footwear.

SIDE ENTRY FOOTWEAR AND METHODS OF MAKING

PRIORITY

[001] This application claims priority to U.S. Patent Application No. 11/187,966, filed July 25, 2005, which is a continuation-in-part of Application No. 11/066,322, filed February 25, 2005, which is a continuation of Application No. 10/405,935, filed April 3, 2003, now United States Patent No. 6,874,255, which is a continuation of Application No. 09/893,908, filed June 29, 2001, now United States Patent No. 6,578,288, which are incorporated herein by reference in their entirety.

BACKGROUND OF THE INVENTION

Field of the Invention

[002] The invention relates to footwear that may be donned and removed with minimum effort. More particularly, the invention relates to side entry footwear in which the foot enters and exits laterally through a side opening in the footwear.

Description Of Related Art

[003] Footwear can generally be divided into two categories: those with fasteners and those without. Footwear with fasteners typically require manual fastening. This means bending over, reaching for the feet, and fastening (whether it be laces, Velcro, buckles, or other closures) using rather precise motor skills. There are generally two types of footwear without fasteners: "slip-on" footwear and other footwear that uses elastic material to hold the foot in place. Slip-on footwear usually does not require any fastening, but may not hold the foot well. Footwear employing elastic material to hold the foot in place often requires the wearer to bend down and manually pull on the footwear using force.

[004] Due to physical limitations or simply a desire for footwear that is easier to don or remove, individuals might prefer a shoe with a nontraditional design. For example, the elderly might suffer from common conditions such as

arthritis, osteoporosis, deterioration of eyesight, and loss of flexibility of tendons and muscles. Neural problems resulting from diabetes (also common among elderly) and hip replacements add to conditions that make donning traditional footwear difficult.

[005] Existing footwear often is not fitted for use by the elderly. "Slip-on" shoes, though common and practical, might not provide the traction or structural support needed to prevent falls. Donning other types of shoes is often so difficult that the elderly may opt not to use shoes at all. In some cases, the traction afforded by bare and feeble feet might pose more of a risk than wearing a loose fitting pair of slip-on shoes. Among the elderly, accidents are not only a cause for lack of independence, but are also a common cause of death. Of these accidents, many are associated with falls in the home.

SUMMARY OF A FEW ASPECTS OF THE INVENTION

[006] The invention may include footwear having a sole with a toe region, a heel region, and first and second opposing lateral sides. An upper may be connected to the sole along at least a portion of the first lateral side and may be disconnected from the sole in an opening region along at least a portion of the second lateral side. A resilient foot holder is at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region. The foot holder may exert a holding force on the foot to help prevent the foot from slipping out of the opening region during walking. The foot holder may deform to permit the foot to slip out through the opening region in response to a lateral foot motion. While the resilient foot holder may be connected or disconnected from the sole, in a preferred embodiment it is connected to the sole along a first side of the sole.

[007] The footwear may include at least one protrusion extending from the sole. The protrusion is configured to engage another protrusion on an opposite foot of a wearer, to thereby assist the wearer in removing the footwear.

[008] In addition to the foot holder, the footwear may also include a heel holder to cooperate in preventing the foot from slipping out of the opening region during walking. One or more of the heel holder and the foot holder may include a curved surface such as a flipped-back lip for guiding the foot into the opening region. The flipped-back lip may be in the form of a loop and may have an outer radius that is greater than an inner radius. The foot holder may be curved to generally conform to a metatarsal portion of the foot. One or more of the foot holder and the heel holder may be made of a semi-rigid resilient material capable of deforming during entry and egress of a foot.

[009] The sole may include a peripheral ridge for at least partially surrounding the foot to assist in preventing the foot from slipping out of the opening region during walking. The sole may further include texture on a foot-contacting surface. The texture may be oriented to make it easier for the foot to slip into the opening region than for the foot to exit the opening region. In another optional embodiment, the sole may include a depression for the insertion of an additional insole, as known in existing art.

[010] While the footwear may have particular benefit for the elderly and those with physical limitations, the invention in its broadest sense is not so limited. It may be configured for use by those without physical constraints, but who desire an alternative approach to footwear. Thus, the invention can be used in slippers, sandals, or in any other appropriate footwear product.

[011] Other aspects of the invention will be evident from the description of preferred embodiments and the brief description of the drawings that follow. The following drawings constitute a part of the specification, and together with the Description of Preferred Embodiments, exemplify aspects and principals of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[012] Figure 1 is a perspective view of one example of footwear in accordance with the invention;

[013] Figure 2A is a dimensioned top view of the footwear of Figure 1 with the fabric of the upper removed;

[014] Figure 2B is a side view of the footwear of Figure 2A;

[015] Figure 3A is a perspective view of the foot holder illustrated in Figure 2A;

[016] Figure 3B is a dimensioned top view of the foot holder of Figure 3A;

[017] Figure 3C is a dimensioned front view of the foot holder of Figure 3A;

[018] Figure 3D is a dimensioned side view of the foot holder of Figure 3A;

[019] Figure 4A is a perspective view of the heel holder illustrated in Figure 2A;

[020] Figure 4B is a dimensioned top view of the heel holder of Figure 4A;

[021] Figure 4C is a dimensioned front view of the heel holder of Figure 4A;

[022] Figure 4D is a dimensioned side view of the heel holder of Figure 4A;

[023] Figure 5 is a top view of the orientation of a pair of footwear during the removal process in accordance with the invention;

[024] Figure 6 is a top view of another embodiment of footwear in accordance with the invention;

[025] Figure 7 is a top perspective view of the footwear of Figure 6;

[026] Figure 8 is an exploded perspective view of the footwear of Figure 6;

[027] Figure 9A is a side view of a second embodiment illustrating the open side of the footwear in accordance with the invention;

[028] Figure 9B is a side view of a third embodiment illustrating the open side of the footwear in accordance with the invention;

[029] Figure 9C is a side view illustrating the open side of the footwear of Figure 6;

[030] Figure 10A is a side view illustrating the close side of the footwear of Figure 9A;

[031] Figure 10B is a side view illustrating the close side of the footwear of Figure 9B; and

[032] Figure 10C is a side view illustrating the close side of the footwear of Figure 9C.

DESCRIPTION OF PREFERRED EMBODIMENTS

[033] In accordance with the invention and as illustrated in Figure 1, footwear 10 may include a sole 12 having a toe region 14 and a heel region 16. As illustrated in Figure 2A, the sole 12 may have first and second opposing lateral sides 18 and 20, respectively.

[034] While the invention, in its broadest sense, does not require any particular material for the sole, in a preferred embodiment, the sole is made up of lightweight material having a coefficient of friction sufficient to prevent slipping and being configured to absorb shock and/or force and substantially return to its original shape thereafter. One material that may be particularly suitable for the sole is polyurethane foam.

[035] As illustrated in Figure 2A, a ridge 24 surrounds the perimeter of the sole. The ridge assists in preventing the foot from slipping out of the opening during walking. In an alternative embodiment (not shown), the ridge may only partially surround the periphery of the sole. In a further alternative embodiment (not shown), the ridge may be divided into a series of disconnected sections. If the sole is made of polyurethane foam, the ridge 24 may be integrally molded into the sole. Alternatively, the ridge may be formed in another suitable way. Depending on construction, comfort considerations, and design considerations, the invention may be practiced without ridge 24.

[036] In a preferred embodiment, and as illustrated in Figure 2B, the sole 12 curves slightly upward in the toe region 14 and the heel region 16.

[037] The bottom of the sole (not shown) may include a texture or pattern to improve friction. A foot contacting portion of the sole 26 may include texture such as bumps to stimulate blood flow and to provide neural stimulation.

[038] As illustrated in Figures 2A and 2B, the thickness of the sole on side 18 may be greater than the thickness on side 20 to aid in entry/egress of the foot.

[039] In accordance with the invention there is also provided an upper connected to the sole along at least a portion of the first lateral side and being disconnected from the sole in an opening region along at least a portion of the second lateral side. In a preferred embodiment of the invention, and as illustrated in Figure 1, upper 22 is connected to sole 12 along lateral first side 18 and is disconnected from sole 12 along a portion of second side 20. The disconnection of the upper from the sole defines opening region 28 generally extending from the toe region 14 toward the heel region 16. Depending on how it is constructed, the upper 22 may be designed for esthetics and/or warmth. The upper may include layers of fabric stitched together. Interposed between the layers may be material somewhat less flexible than the outer fabric to give the footwear a measure of form. Padding may be stitched between layers of fabric to add comfort.

[040] While the opening region 28 is illustrated on lateral side 20 of the sole 12, it is within the scope of the invention to reverse the orientation of the upper and foothold 80 that the opening region is on the first lateral side 18 of sole 12.

[041] In the upper, the interior layer of fabric may be designed with a directional grain. Such a directional grain may make it easier to slide the foot in one direction than in the opposite direction. When assembling the footwear, the directional grain could be oriented to make donning easier than removal.

[042] In accordance with the invention there may be provided a resilient foot holder located at least partially in a region of the upper and at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region, the foot holder for exerting a holding force on the foot to help prevent the foot from slipping out of the opening region during walking, and for deforming to permit the foot to slip out through the opening region in response to a lateral foot motion.

[043] As disclosed in connection with one embodiment of the invention, and as illustrated in Figures 2A and 2B, resilient foot holder 30 extends over a region of the sole intermediate the toe region 14 and the heel region 16. An inside surface of foot holder 30 and a portion of the upper surface 26 of sole 12 define an envelope for a foot. Preferably, foot holder 30 is made of a resilient material such as semi-rigid plastic. The plastic may, for example, be polyethylene having a nominal thickness of 5 mm. The invention, in its broader sense, is not limited to any particular material for the foot holder. Any type of plastic, metal, composite, or other material having the requisite elastic properties may be used. As illustrated in Figure 2A, foot holder 30 is connected to and extends from the sole at first side 18, and is disconnected from the sole at second side 20. Further details of the foot holder are illustrated in Figures 3A-3D.

[044] Figure 3A illustrates, in perspective view, three general regions of the foot holder: sole connection region 32, metatarsal region 34, and flipped-back lip region 36. Sole connection region 32 is designed to provide a connection to sole 12. The connection may be formed by embedding sole connection region 32 within the sole. In a broader aspect of the invention, the foot holder may connect to the sole in differing ways or may not directly connect to the sole.

[045] Metatarsal region 34 of the footholder 30 is curved to accommodate the upper curvature of the metatarsal bones in the foot. Flipped-back lip region 36 defines two radii 38 and 40. During donning of the footwear, radii 40 serves as a guide surface to direct the foot into the opening region 28. Once the foot has entered the footwear, radii 38 serves to resist the lateral movement of the foot to assist in preventing the foot from slipping out of opening region 28 during walking. Figure 3C illustrates a front view of the foot holder. During entry of the foot into the footwear, the material of the foot holder 30 flexes, in part, at a connection region 44. This enables gap 42 to expand and accommodate the foot within the footwear. Once the footwear is donned, the gap 42 may diminish somewhat, at least with respect to a maximum aperture. Because the material of foot holder 30 is resilient, it will exert a holding force on the foot to prevent the foot from egress through gap 42. However, a lateral motion of the foot sufficient to overcome the holding force

will permit egress of the foot. The size/existence of gap 42 may be a matter of design choice. For example, it may be that with the foot removed, the gap is non-existent.

[046] As is evident from Figure 2A, sole connection region 32 of foot holder 30 extends beneath the arch of the sole. The metatarsal region 34 curves forward in an area 44 in the center of the footwear. This forward curve 44 enables foot holder 30 to exert a holding force on the foot beyond the center line 48.

[047] The exemplary footwear illustrated in Figure 1 is constructed with a fabric upper designed in part for both warmth and aesthetics. However, the invention may be embodied within open footwear, such as a sandal. In such a case, the finished good may have an appearance quite similar to the illustrations of Figures 2A and 2B. In such an instance, the upper and the foot holder may be one in the same component. Similarly, in footwear that includes an upper, depending on the materials selected and/or the design, the upper itself may serve as a foot holder, eliminating the need for a separate foot holder structure. Thus, as used in the claims, the term "upper" may include a "foot holder," the term "foot holder" may include an upper, and the recitation of both does not necessarily require two separate structural elements.

[048] In accordance with the invention, there may also be provided a heel holder located proximate the heel region, the heel holder for cooperating with the resilient foot holder to prevent the foot from slipping out of the opening during the walking. As illustrated in Figure 2B, heel holder 50 is located near the heel region 16.

[049] Detailed exemplary views of the heel holder 50 are illustrated in Figures 4A-4D. As can be seen in the perspective view of Figure 4A, heel holder 50 may include a U-shaped structure for containing the heel of a wearer. A first leg 52 and a second leg 56 are joined by a linkage 54. As may be evident from Figure 2A, linkage 54 is embedded within the sole 12 in the heel region 16, as is hidden from view in Figure 2A. Like foot holder 30, heel holder 50 may have a curved surface such as flipped-back lip 58 defining radii 60 and 62. Radii 60 may be smaller than radii 62 for guiding a wearer's heel into the footwear. The greater

diameter of radii 62 may assist in preventing the heel from slipping out through opening region 28 during walking.

[050] Like foot holder 30, heel holder 50 is preferably made of a resilient material such as one of the same materials discussed above in connection with the foot holder 30. A series of perforations (not shown) may be made in the material of the heel holder 50. These perforations may reduce weight and they may facilitate ventilation. The invention may be constructed with or without perforations, and similar perforations may be provided in the foot holder 30.

[051] While a preferred embodiment of the invention is illustrated as including a heel holder 50, the invention, in its broadest sense, does not necessarily require a resilient heel holder. It is possible that a non-resilient material might be used for the heel holder, the heel holder might be eliminated in its entirety, or some other mechanism may be used to reduce heel slippage.

[052] As illustrated in Figure 1, the curved radii 40 of the foot holder is embedded within fabric portion 40' and the curved radii 58 of heel holder 50 is embedded within fabric region 58'. Regions 40' and 58' may cooperate to funnel or guide a foot into the footwear.

[053] In accordance with the invention, the sole may have at least one protrusion extending therefrom, the protrusion being configured to engage another protrusion on an opposite foot of a wearer, to thereby assist the wearer in removing the footwear. By way of example, and as illustrated in Figure 2A, sole 12 includes outwardly facing tabs 64 and 66, respectively located at the toe region 14 and heel region 16 of the sole 12. Tabs 64 and 66 are designed to facilitate removal of the footwear without requiring tactile control and without requiring the wearer to bend at the waist. Although only a right shoe is illustrated in the figures, the left shoe may be a mirror image of the right. Thus, when a heel tab 66 of a right shoe passes in front of a toe tab 64 of a left shoe, the tabs will engage. This motion is illustrated in Figure 5 where a wearer with a left shoe 68 firmly planted on the ground moves a right shoe 70 in front of the left so that heel tab 66 on shoe 70 engages toe tab 64 on shoe 68. As right leg 72 continues its lateral movement, shoe 70 is prevented from moving by the engagement of tabs 66 and 64. Thus, the right foot is ejected

from shoe 70 when the lateral movement overcomes the holding forces exerted by shoe 70. To remove the left shoe, a wearer might thereafter step on removed shoe 70 to plant it firmly on the ground, and slide shoe 68 in front of shoe 70 to engage the tabs and affect shoe removal.

[054] While an exemplary disclosed embodiment is directed to footwear that permits hands-free donning and removal, the invention in its broadest sense does not exclude the use of manual closures. Such manual closers may be appropriate for wearers who desire the ease of lateral foot entry in combination with the added security of a closure mechanism.

[055] While tabs 64 and 66 are illustrated as outward facing, the invention, in its broadest sense is not so limited. The direction the tabs face might be reversed. In addition, any protrusion or other means of engaging the shoe of an opposite foot may be employed in connection with the invention. And in its broadest sense, the invention may not employ a mechanism for hands-free removal.

[056] Listed below are a series of exemplary dimensions for the dimensional characters presented in the figures. The dimensions as well as the shapes illustrated are provided for purposes of disclosing the inventor's best mode of practicing the invention. However, the invention, in its broadest sense, is not limited to the particular shapes and dimensions disclosed. It is to be understood that various shapes and dimensions may be employed without departing from the scope and spirit of the invention.

Figure	Dimensional Reference Character	Exemplary Dimension (mm)
2A	A	19.1
2A	B	77
2A	C	25.7
2A	D	94.9
2A	E	19.1

2A	F	20.2
2A	G	21.7
2A	H	42.6
2B	I	63
2B	J	55.6
3B	K	32.9
3B	L	53.3
3C	M	63.8
3C	N	6.8
3D	O	52.5
3D	P	14
3D	Q	27.7
3D	R	39.5
4B	S	13.5
4B	T	49.5
4C	U	22.3
4C	V	3.7
4C	W	1.8
4C	X	44.2
4C	Y	9.1
4D	Z	22.7
4D	A'	36.3
4D	B'	60.8
4D	C'	21.5

[057] Referring to Figure 6, another embodiment of the invention includes footwear 100 having a toe region 104, heel region 106, lateral sides 108 and 110, respectively, and an upper 114. In one embodiment described above, these elements are integrally formed, as a single component. Lateral side 110 includes

an opening region 112 for foot entry and egress. The upper 114, which may be at least partially open along lateral side 110, may include a heel holder portion 118, a foot holder portion 120, and/or a metatarsal region 122. In another embodiment, the opening region may be located on lateral side 108.

[058] Referring to Figures 7 and 8, the opening region 112 is shown more readily along with the sole region 102. In one embodiment, the sole region 102 may be an integrally formed member of footwear 100. An insole 116 may be placed within footwear 100 in order to provide additional support and cushioning when needed. The metatarsal region 122 contacts and is proximal the metatarsal area of a human foot. The foot holder portion 120 and heel holder portion 118 may be configured to securely hold the human foot when footwear 100 is placed on the human foot resulting in a holding force exerted from footwear 100 to the human foot inserted therein. This holding force is exerted proximal foot holder portion 120 and heel holder portion 118 due to the configuration of these portions wrapping around the human foot.

[059] Referring to Figures 9A-9C, embodiments of the invention are shown facing lateral side 110 and having varying styles with similar parts and configuration.

[060] Referring to Figures 10A-10C, embodiments of the invention are shown facing lateral side 108 and corresponding to the varying styles with similar parts and configuration as in Figures 9A-9C.

[061] Referring again to Figure 8, the edge defining the bottom of the opening region 112 may be the result of an integrally formed sole region 102 and foot holder portion 120.

[062] The manufacturing of footwear 100 can be performed using a variety of techniques known in the art, such as molding or thermoforming techniques, for example. Molding techniques can include blow molding, rotation molding, and injection molding, for example. In a molding process, the whole form of the final footwear would be formed, in negative space, in a mold split into two or more elements. One of these elements would be the core, creating the inside space of the final footwear. Once closed together, the mold material in liquid form would be

poured or injected under pressure, and would cool, and/or harden (i.e. solidify), filling the mold and taking on a positive form of the negative space of the mold. These techniques are well known in the art, and as such, a detailed description is not necessary for one skilled in the art to practice this embodiment of the invention. Such techniques can be found in, for example, U.S. Patent Nos. 6,855,281; 5,743,027; 4,302,169; and 3,500,502, incorporated by reference herein.

[063] Using various preformed elements inserted in the mold or a combination of injection processes in the same or various molds, the same resulting function could be achieved in various forms.

[064] Another exemplary technique which may be used, and which is discussed in U.S. Patent No. 6,464,907 incorporated by reference, is the process of blow molding. In blow molding, a technique is used that creates the shoe shell, including the space for the foot, by inflating a molten preformed tube of material inside a mold, so that the final form of the exterior surfaces is that of the internal surface of the mold. The internal surfaces of this preformed tube cure in open air inside the mold. Variable wall-thickness and structure can be achieved using a variable preformed cross-section, and a variable spacing between the original preformed tube and the internal surfaces of the mold.

[065] The principal for each of these techniques is primarily the same. By varying the material and its cross-section throughout the form, one can manipulate the rigidity of the form, from flexible and/or elastic to semi-rigid and structural as needed. In this manner, regions requiring rigidity will be of thicker cross-section and perhaps of a more rigid material. An example of such a region would be the foot holder portion 120 of the present invention, which instead of a distinct element, can be integrally formed as a local ridge of thicker cross-section, to exert the required holding force upon the metatarsal region of the human foot.

[066] In one embodiment, the method produces footwear where any combination of the sole, upper, resilient foot holder, and heel holder are integrally formed as a single unit. For example, in one embodiment the upper and the resilient foot holder may be integrally formed. In yet another embodiment, the sole, the upper, and the resilient foot holder may be integrally formed, and so on.

[067] Although the invention has been described in exemplary embodiments with a certain degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example, and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention.

[068] Other embodiments of the invention will be apparent to those skilled in the art from consideration of the specification and practice of the invention disclosed herein. It is intended that the specification and examples be considered as exemplary only, with a true scope and spirit of the invention being indicated by the following claims.

WHAT IS CLAIMED IS:

1. A method of making footwear comprising

a sole having a toe region and a heel region;

a medial side and a lateral side, of which at least one is partially open, to allow foot entry and egress;

an upper connected to the sole along at least a portion of the lateral side, and being disconnected from the sole in an opening region along at least a portion of the second lateral side; and

a resilient foot holder located at least partially in a region of the upper and at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region, the foot holder for exerting a holding force on a foot to help prevent the foot from slipping out of the opening region during walking, and for deforming to permit the foot to slip out through the opening region in response to a lateral foot motion,

wherein the footwear is made by molding the footwear in a molding process.

2. A method of making footwear comprising

a sole having a toe region and a heel region;

a medial side and a lateral side, of which at least one is partially open, to allow foot entry and egress;

an upper connected to the sole along at least a portion of the lateral side, and being disconnected from the sole in an opening region along at least a portion of the second lateral side; and

a resilient foot holder located at least partially in a region of the upper and at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region, the foot holder for exerting a holding force on a foot to help prevent the foot from slipping out of the opening region during walking, and for deforming to permit the foot to slip out through the opening region in response to a lateral foot motion,

wherein the footwear is made by a thermoforming process.

3. A method of making footwear according to claim 1, wherein the process comprises the steps of introducing the material to be molded into the mold in liquid form and allowing the liquid material to solidify.

4. A method of making footwear according to claim 3, wherein the mold comprises two or more elements.

5. A method of making footwear according to claim 1, wherein the molding is a blow-molding technique comprising inflating a molten preformed tube of material inside a mold and allowing it to cure.

6. A method of making footwear according to claim 1 wherein the footwear further comprises a heel holder located proximate the heel region.

7. A method of making footwear according to claim 6, wherein any combination of the resilient foot holder, the upper, the sole, and the heel holder are integrally formed.

8. A method of making footwear according to claim 2, wherein the footwear further comprises a heel holder located proximate the heel region.

9. A method of making footwear according to claim 8, wherein any combination of the resilient foot holder, the upper, the sole, and the heel holder are integrally formed.

10. A method of making footwear comprising
a sole having opposing lateral sides;
an upper connected to the sole and,

the upper including a resilient foot holder at least partially connected to the sole along a first lateral side thereof, and at least partially disconnected from the sole in an opening region on a second lateral side thereof, the resilient foot holder for exerting a holding force on a foot of a wearer to help prevent the foot from slipping out of the opening region during walking, and for deforming, in response to lateral foot movement, to thereby permit the foot to be removed through the opening region,

wherein the footwear is made by molding the footwear in a molding process.

11. A method of making footwear comprising

a sole having opposing lateral sides;

an upper connected to the sole and,

the upper including a resilient foot holder at least partially connected to the sole along a first lateral side thereof, and at least partially disconnected from the sole in an opening region on a second lateral side thereof, the resilient foot holder for exerting a holding force on a foot of a wearer to help prevent the foot from slipping out of the opening region during walking, and for deforming, in response to lateral foot movement, to thereby permit the foot to be removed through the opening region,

wherein the footwear is made by a thermoforming process.

12. A method of making footwear according to claim 10, wherein the process comprises the steps of introducing the material to be molded into the mold in liquid form and allowing the liquid material to solidify.

13. A method of making footwear according to claim 12, wherein the mold comprises two or more elements.

14. A method of making footwear according to claim 10, wherein the molding is a blow-molding technique comprising inflating a molten preformed tube of material inside a mold and allowing it to cure.

15. A method of making footwear according to claim 10, wherein any combination of the resilient foot holder, the upper, and the sole are integrally formed.

16. A method of making footwear according to claim 11, wherein any combination of the resilient foot holder, the upper, and the sole are integrally formed.

17. A method of making footwear comprising

a sole having first and second lateral sides; and

a foot holder integrally formed with the sole and configured to exert a holding force on a metatarsal region of a foot, wherein a surface of the foot holder and the sole define an opening region configured to enable a foot to enter and exit through the opening region in response to a generally lateral motion of the foot,

wherein the footwear is made by a process chosen from thermoforming and molding processes.

18. A method of making footwear comprising

a sole having a toe region, a heel region, and first and second opposing lateral sides;

an upper integrally formed with the sole along at least a portion of the first lateral side, and being disconnected from the sole in an opening region along at least a portion of the second lateral side; and

a resilient foot holder located at least partially in a region of the upper and at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region,

wherein the footwear is made by a process chosen from thermoforming and molding processes.

19. Footwear comprising:

a sole having a toe region and a heel region;

a medial side and a lateral side, of which at least one is partially open, to allow foot entry and egress;

an upper connected to the sole along at least a portion of the lateral side, and being disconnected from the sole in an opening region along at least a portion of the second lateral side; and

a resilient foot holder located at least partially in a region of the upper and at least partially disconnected from the second side of the sole at the opening region to thereby permit lateral foot entry through the opening region, the foot holder for exerting a holding force on a foot to help prevent the foot from slipping out of the opening region during walking, and for deforming to permit the foot to slip out through the opening region in response to a lateral foot motion,

wherein the footwear is made by a process chosen from thermoforming and molding processes.

20. The footwear of claim 19, wherein any combination of the resilient foot holder, the upper, and the sole are integrally formed.

21. Footwear comprising:

a sole having opposing lateral sides;

an upper connected to the sole and,

the upper including a resilient foot holder at least partially connected to the sole along a first lateral side thereof, and at least partially disconnected from the sole in an opening region on a second lateral side thereof, the resilient foot holder for exerting a holding force on a foot of a wearer to help prevent the foot from slipping out of the opening region during walking, and for deforming, in response to lateral foot movement, to thereby permit the foot to be removed through the opening region,

wherein the footwear is made by a process chosen from thermoforming and molding processes.

22. The footwear of claim 21, wherein any combination of the resilient foot holder, the upper, and the sole are integrally formed.

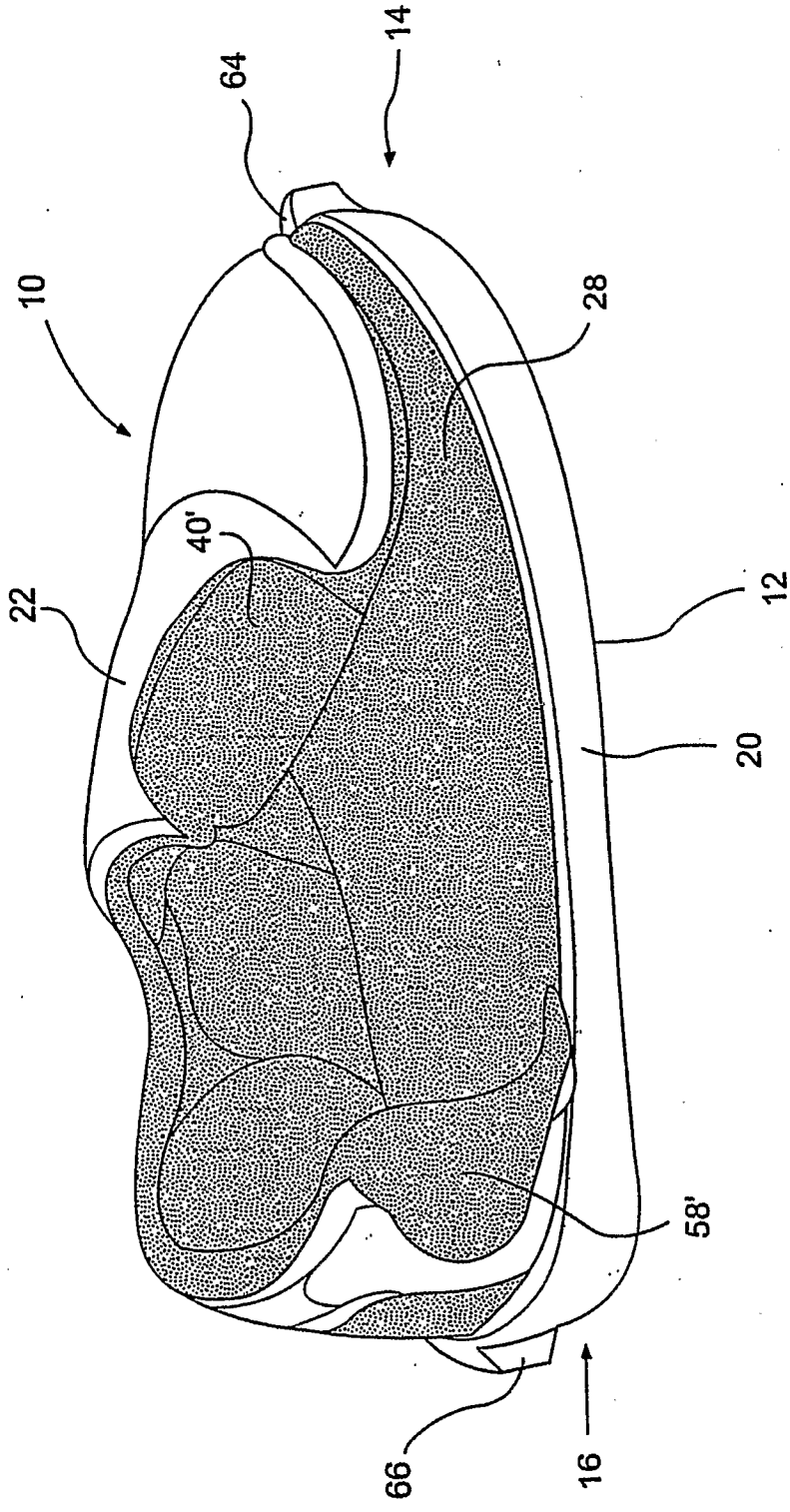

FIG. 1

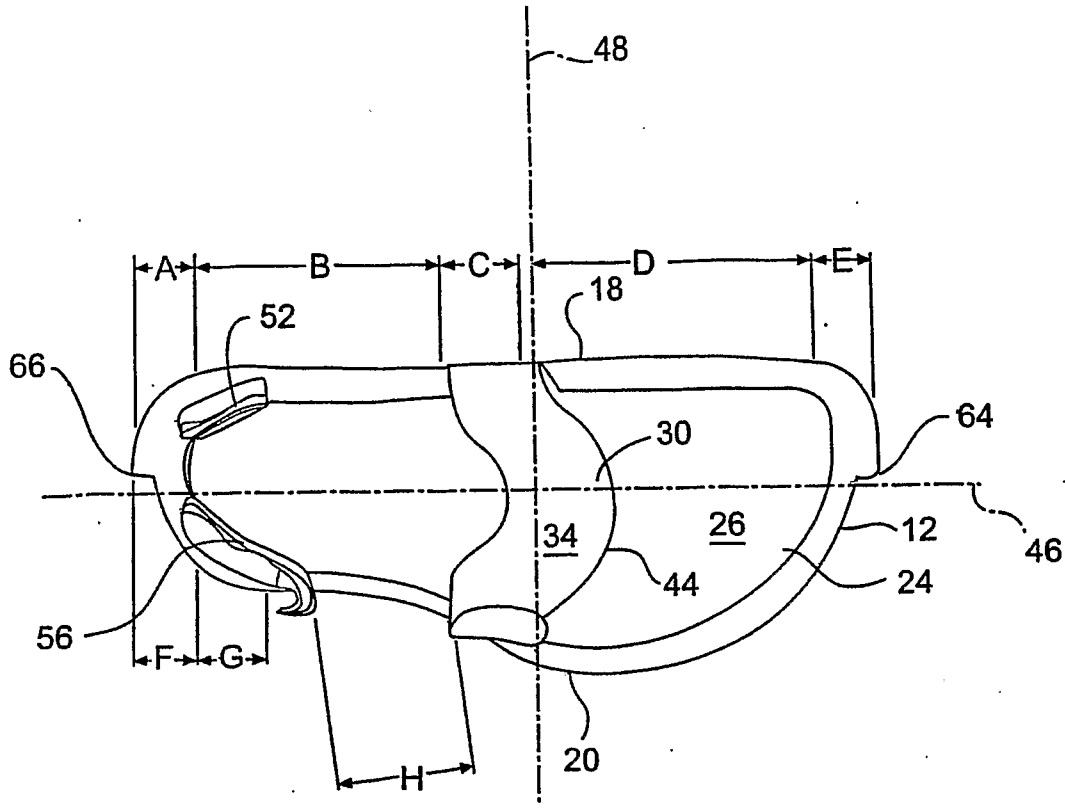

FIG. 2A

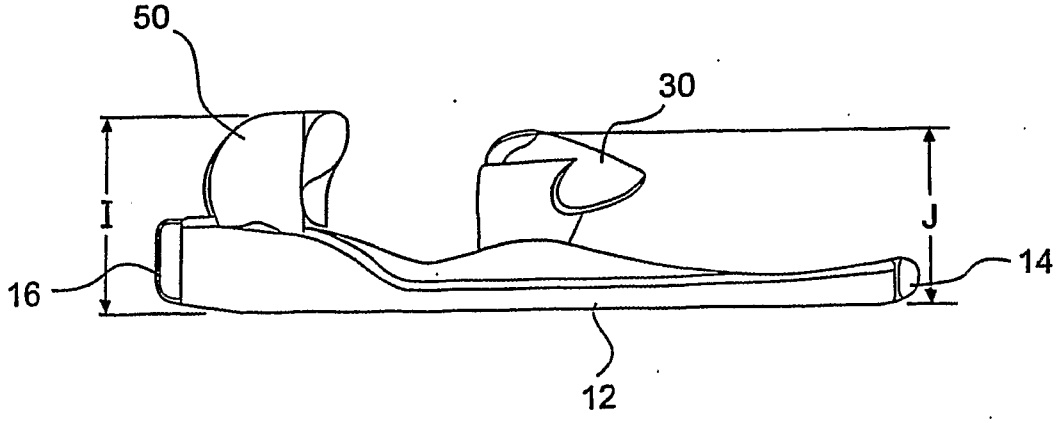

FIG. 2B

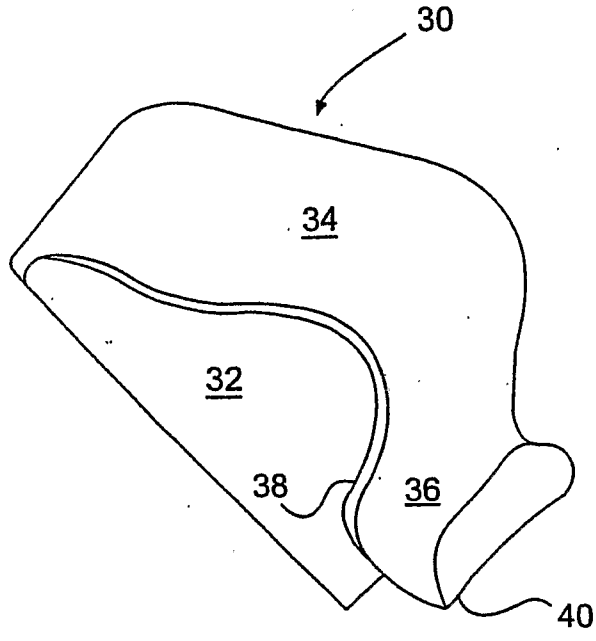

FIG. 3A

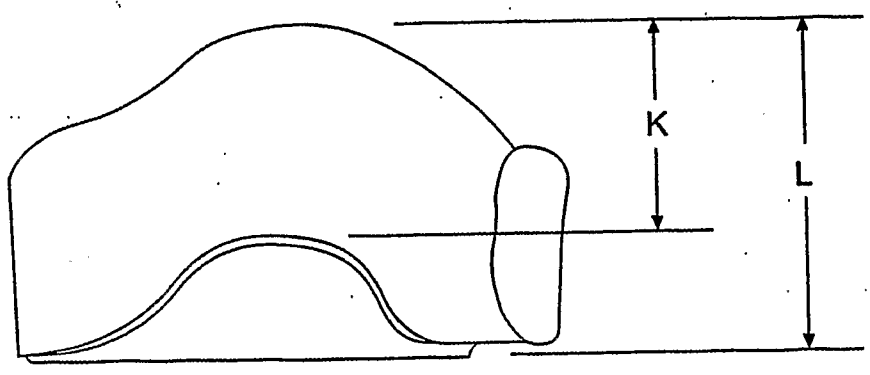

FIG. 3B

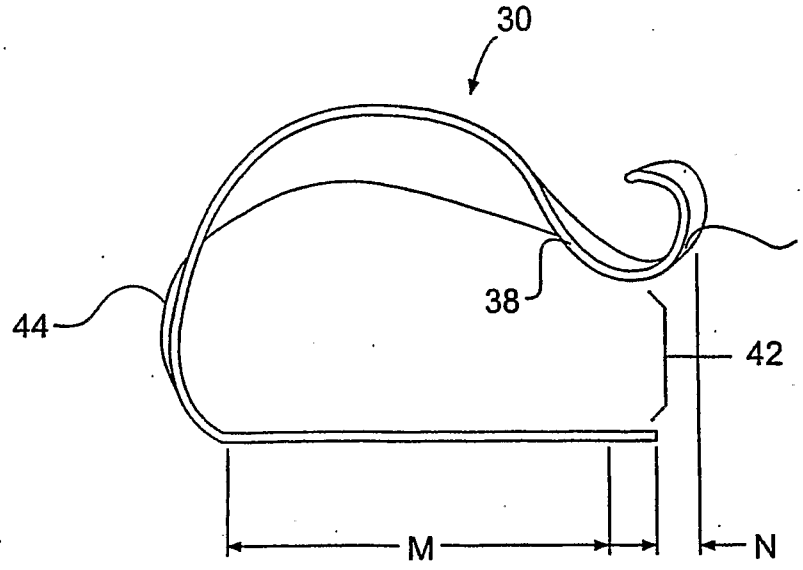

FIG. 3C

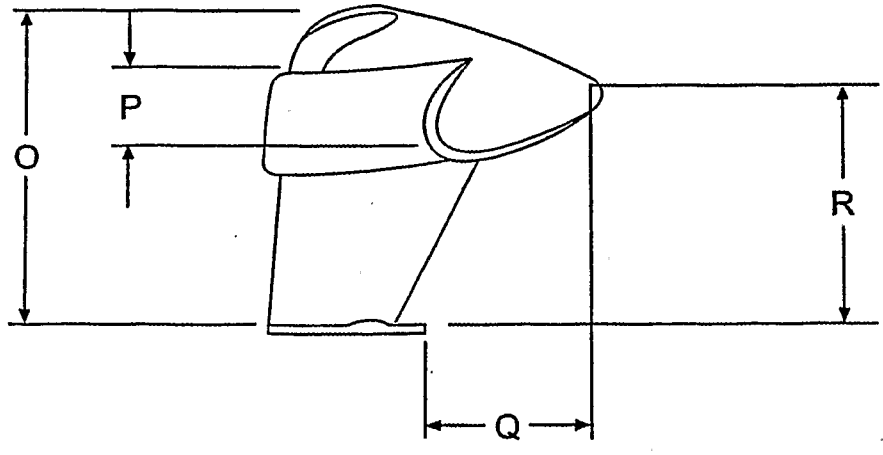

FIG. 3D

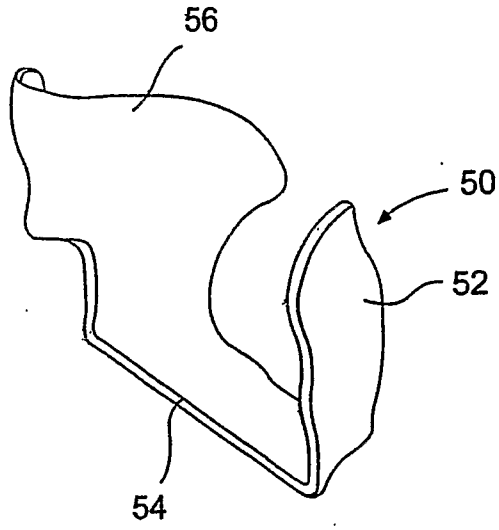

FIG. 4A

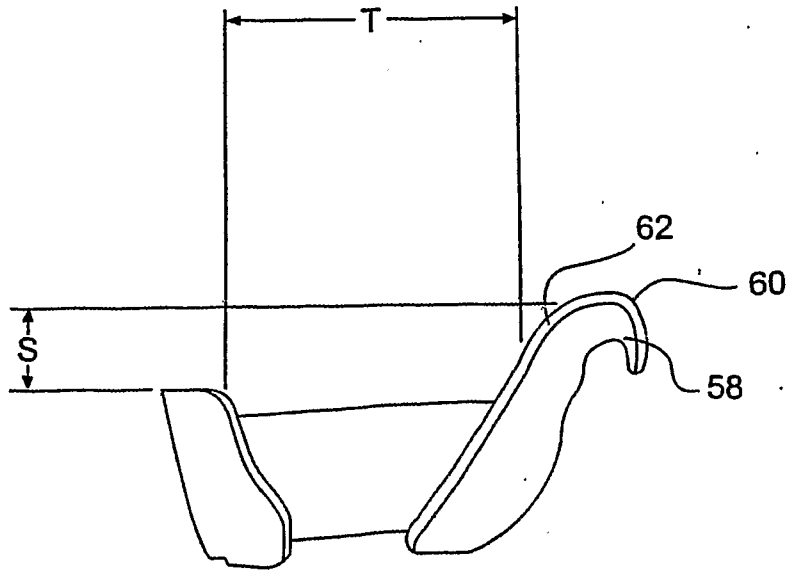

FIG. 4B

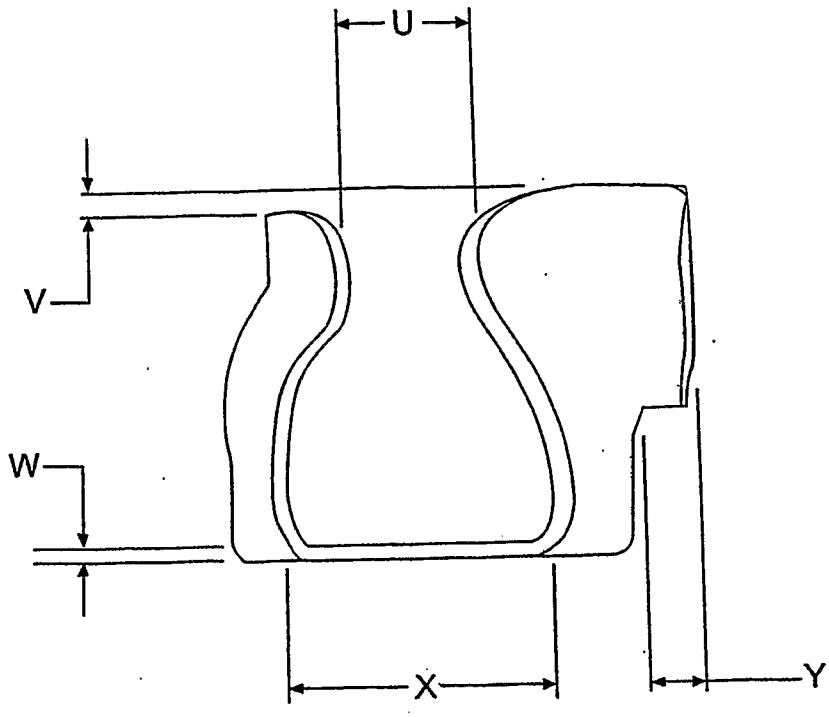

FIG. 4C

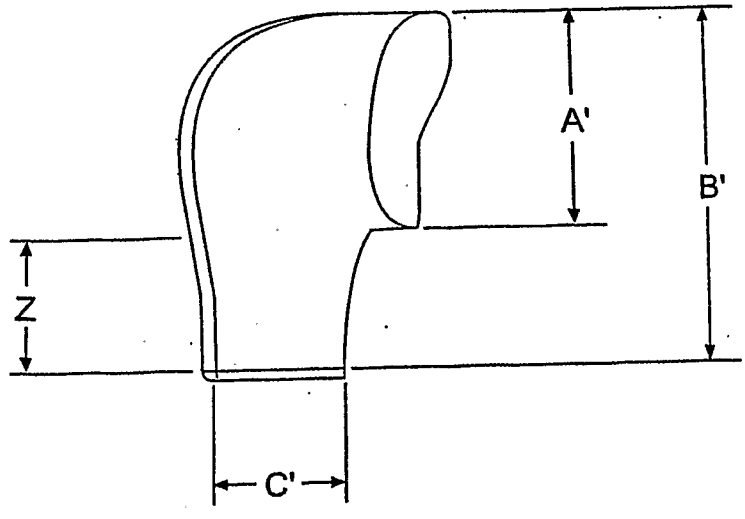

FIG. 4D

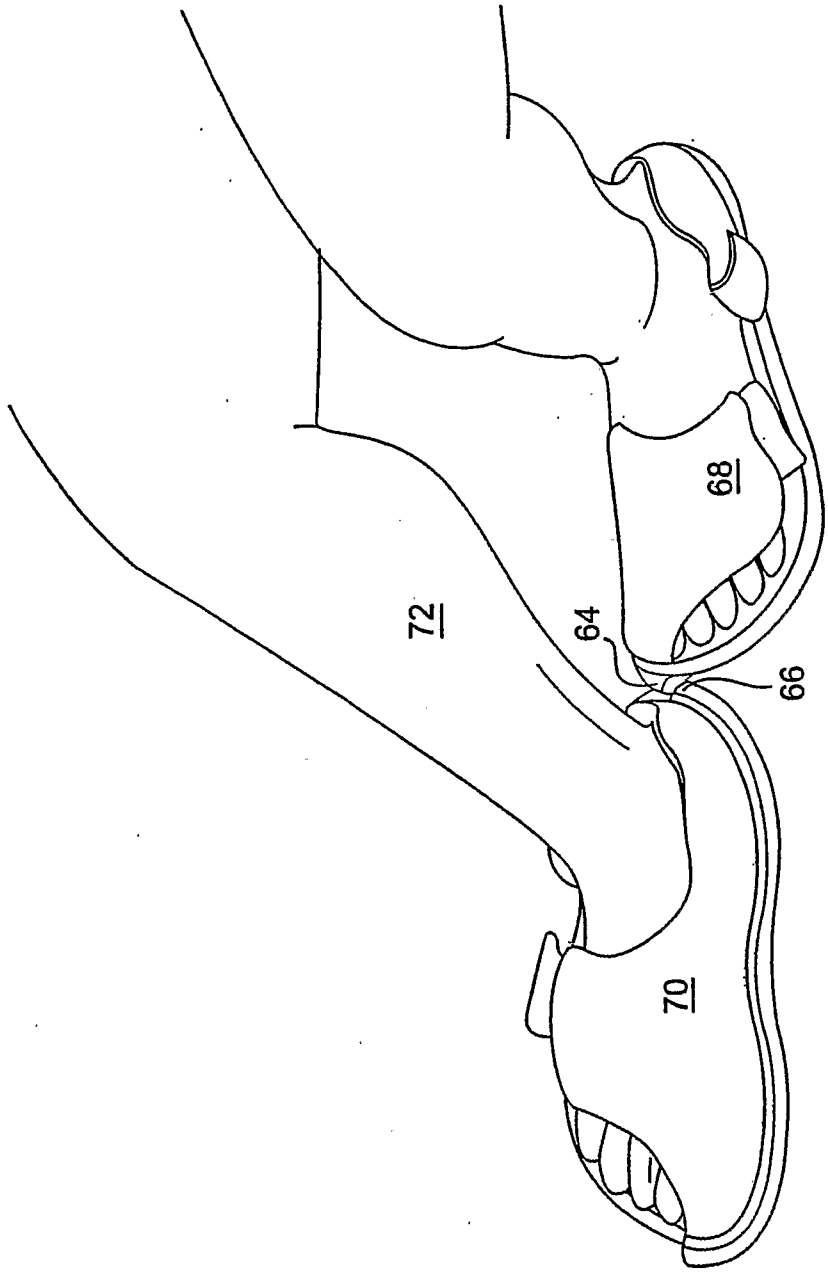

FIG. 5

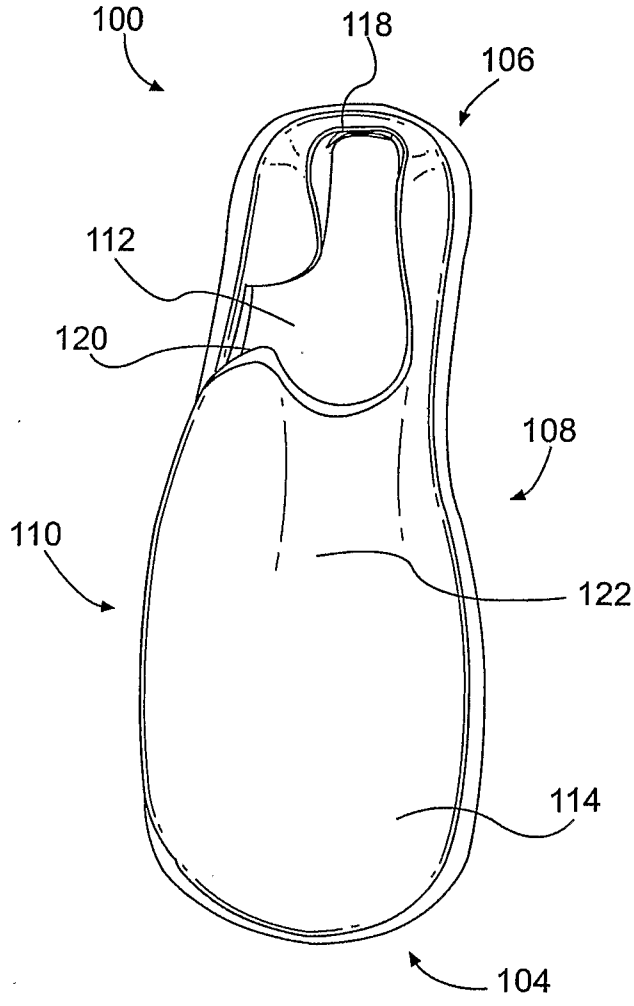

FIG. 6

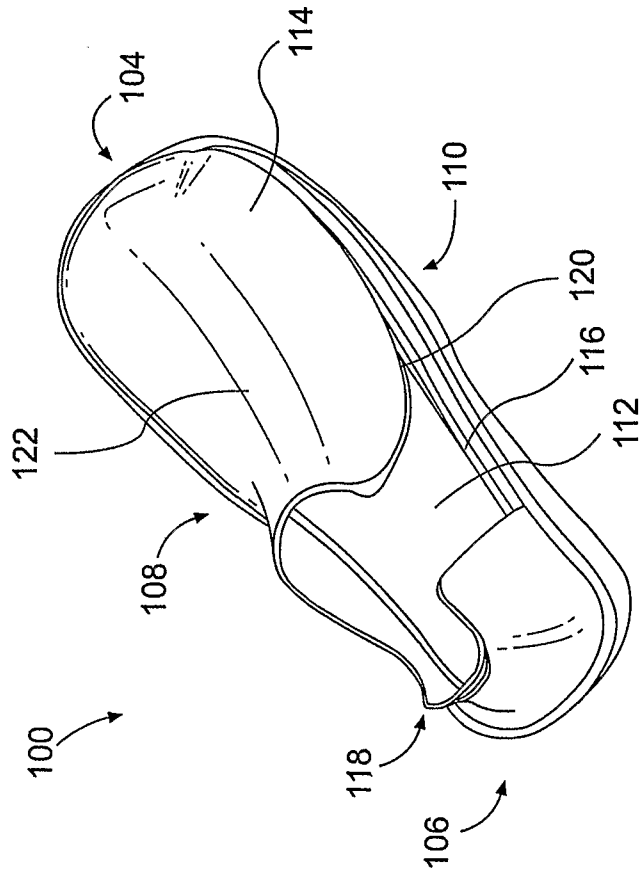

FIG. 7

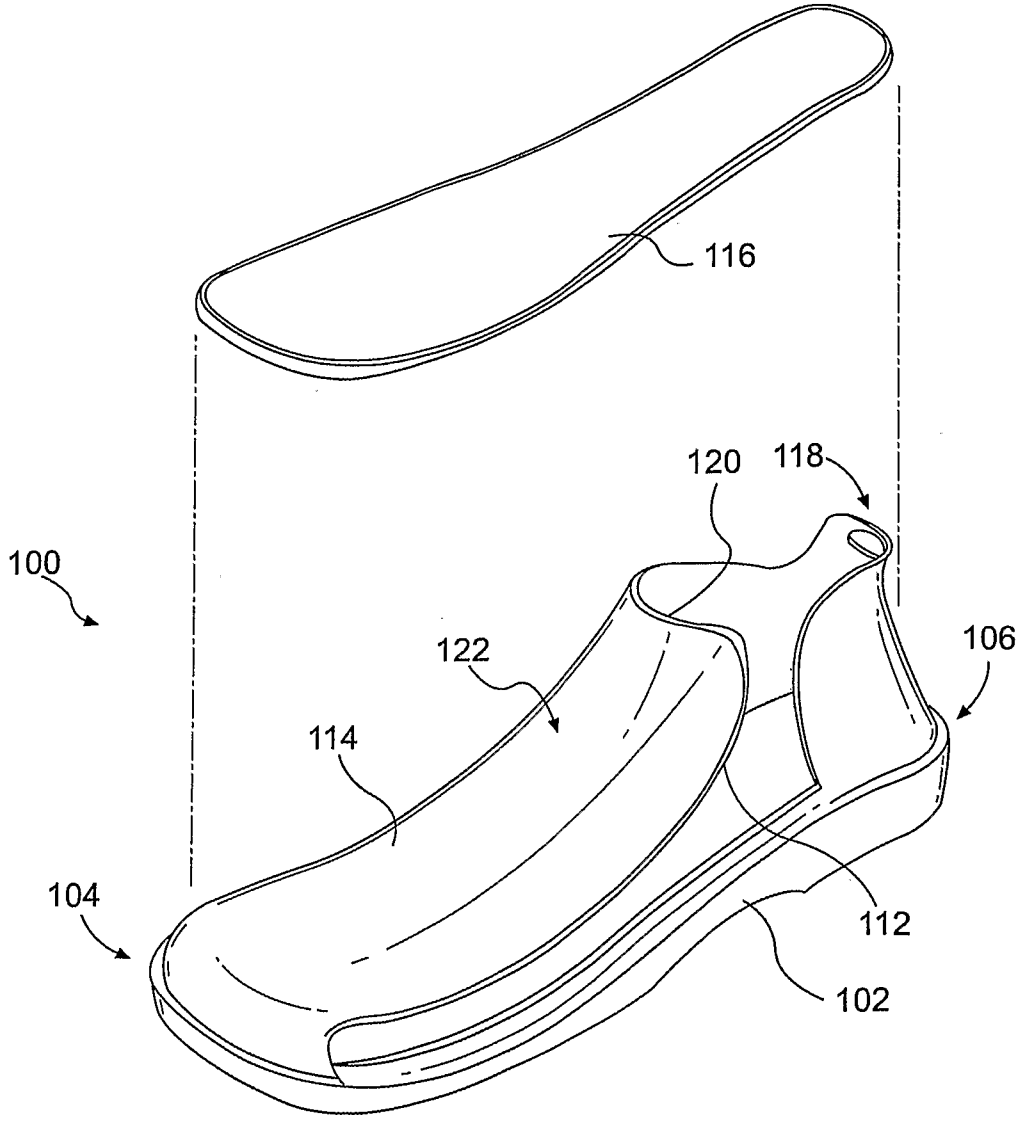

FIG. 8

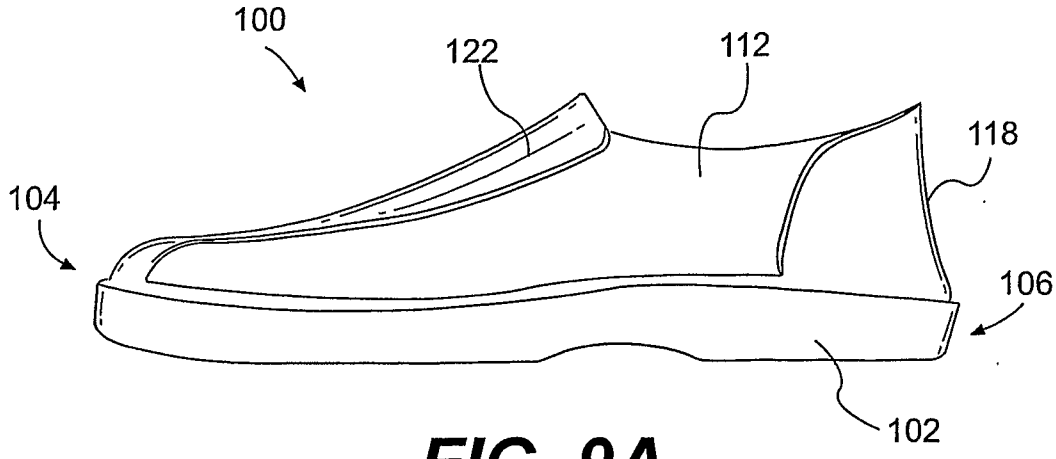

FIG. 9A

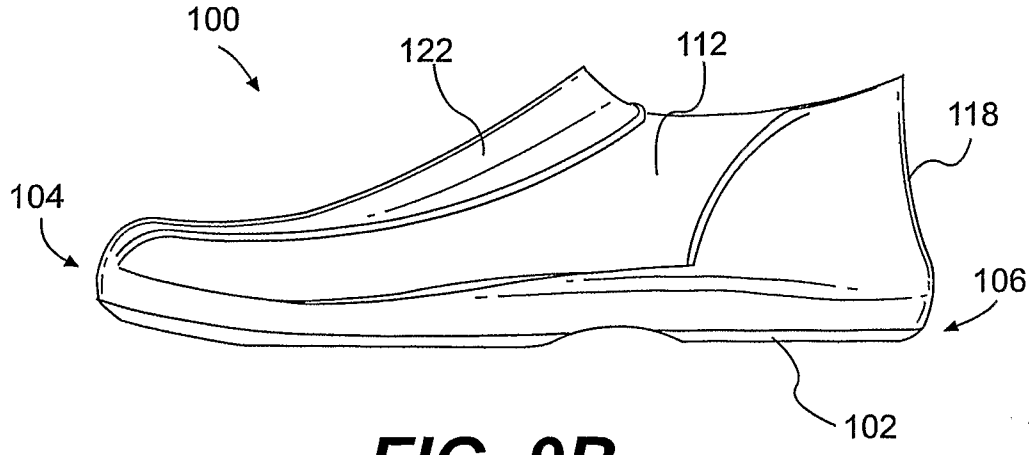

FIG. 9B

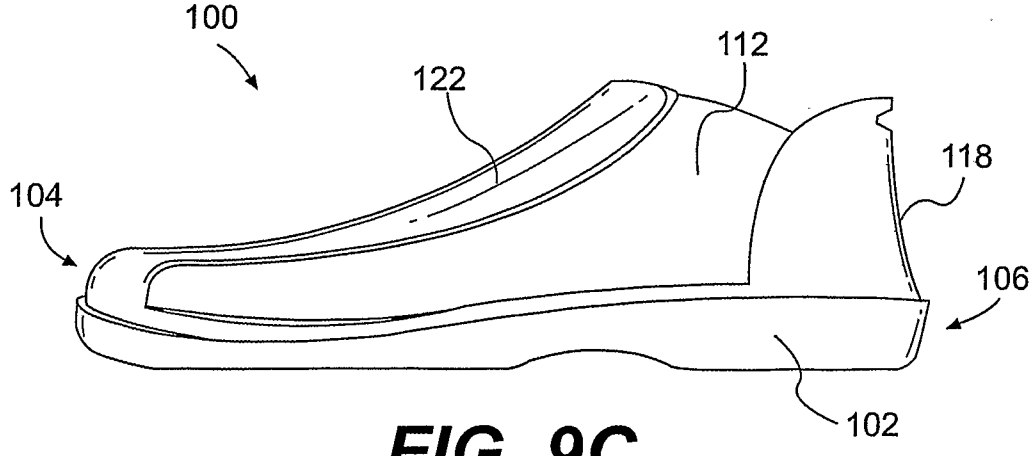

FIG. 9C

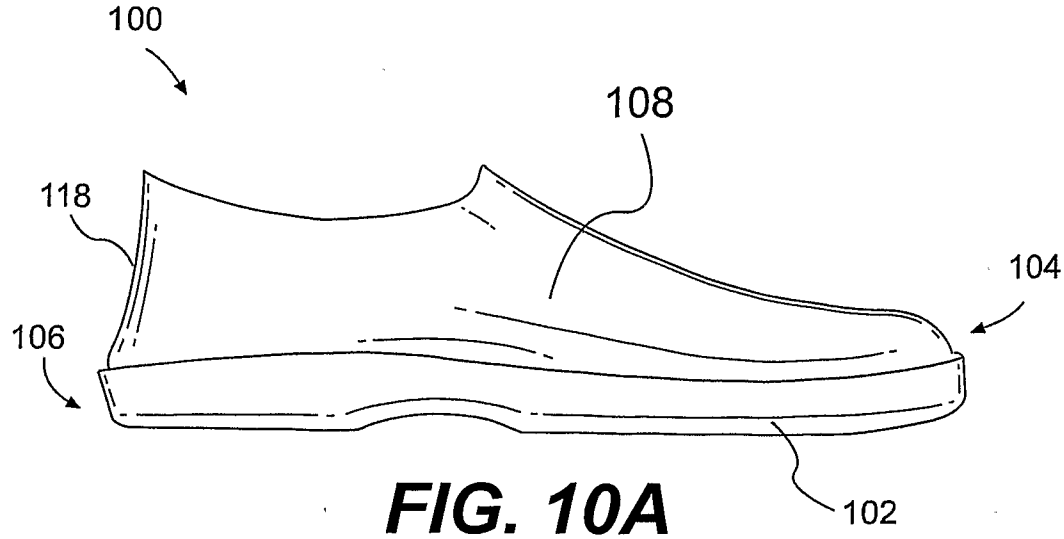

FIG. 10A

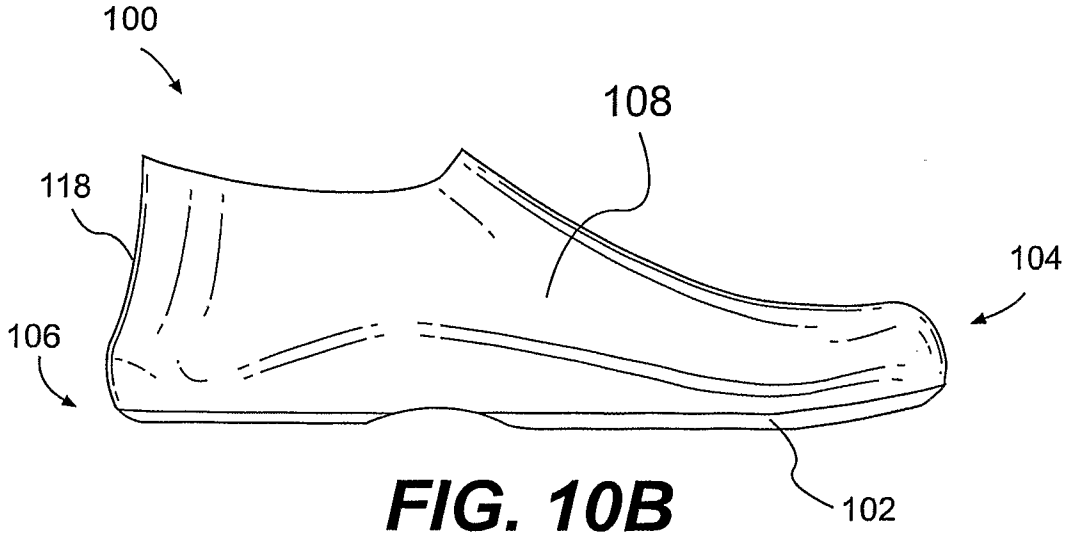

FIG. 10B

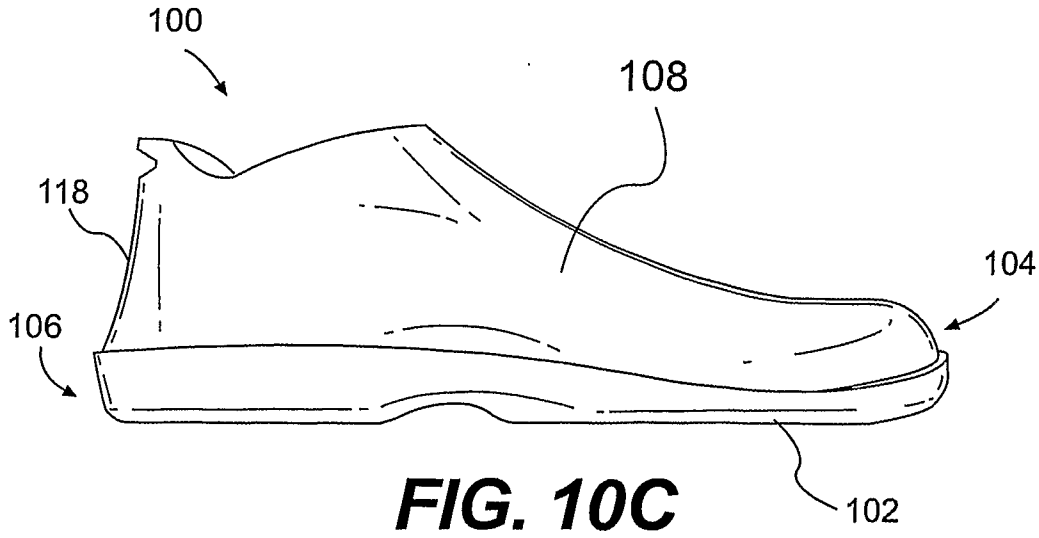

FIG. 10C