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- **NAKAYAMA, Kenji**
1213 NL Hilversum (NL)
- **STAUFFER, Pamela Bogert**
1213 NL Hilversum (NL)

(30) Priority: 01.10.2010 US 89658110

(74) Representative: **Beattie, Alex Thomas Stewart**
Forresters IP LLP
Skygarden
Erika-Mann-Strasse 11
80636 München (DE)

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(71) Applicant: **All Star C.V.**
1213 NL Hilversum (NL)

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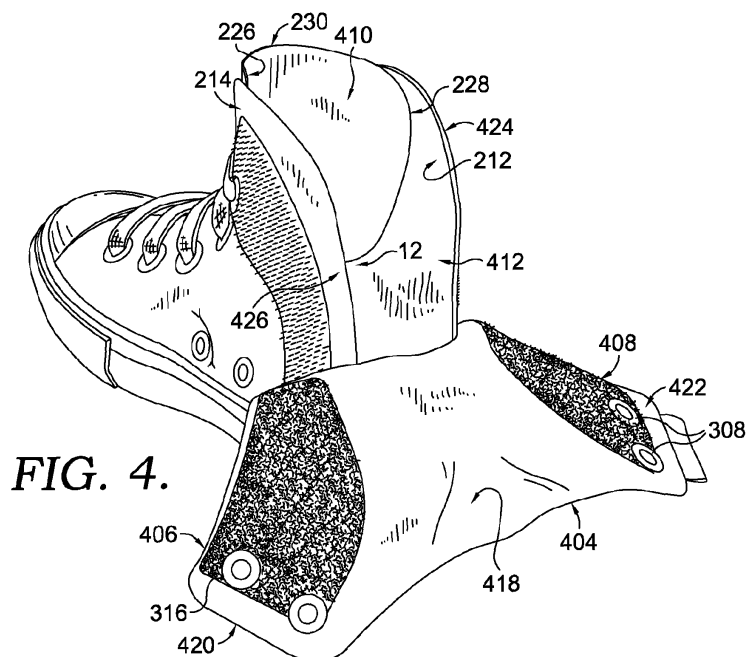
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(72) Inventors:
• **FERRERA, Chris**
1213 NL Hilversum (NL)

(54) **HEEL-END SLIP SHOE**

(57) Embodiments of the present invention relate to the construction of a shoe that is comprised of a disengageable-heel portion that may be disengaged from an upper. Disengagement of the heel portion from the upper allows the heel portion to fold away from the upper, which

exposes a heel-end opening that a foot may pass through to gain entry to the interior of the shoe. Additionally, a stretchable lacing material may be utilized to allow the shoe to absorb energy exerted on to it by a wearer of the shoe without disengaging the heel portion from the upper.



Description

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Nonprovisional Application Serial No. 12/896,581 entitled "HEEL-END SLIP SHOE," filed October 1, 2010.

BACKGROUND OF THE INVENTION

[0002] An athletic style shoe typically requires a foot to be received through an ankle opening along a top edge of the upper. Traditionally, a wearer of this athletic style shoe loosens a lacing structure to allow entry of his or her foot into the shoe. The wearer then may tighten the lacing structure to secure the shoe to the received foot. However, the entry into the shoe through the ankle opening may not be desired by a wearer. Further, a wearer of the shoe may not desire to work with a traditional lacing structure to gain entry to the shoe and to secure the shoe to a foot of the wearer.

SUMMARY OF THE INVENTION

[0003] Embodiments of the present invention relate to the construction of a shoe that is comprised of a disengageable-heel portion that may be disengaged from an upper portion of the shoe. Disengagement of the heel portion from the upper allows the heel portion to fold away from the upper, which exposes a heel-end opening that a foot may pass through to gain entry to the interior of the shoe. Additionally, a stretchable lacing material may be utilized to allow the shoe to absorb energy exerted on it by a wearer of the shoe without disengaging the heel portion from the upper.

[0004] This summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

BRIEF DESCRIPTION OF THE DRAWING

[0005] Illustrative embodiments of the present invention are described in detail below with reference to the attached drawing figures, which are incorporated by reference herein and wherein:

FIG. 1 depicts an exemplary shoe having a disengageable-heel portion that is engaged to an upper, in accordance with embodiments of the present invention;

FIG. 2 depicts a medial side view of a shoe having a disengageable-heel portion that is engaged to an upper, in accordance with embodiments of the present invention;

FIG. 3 depicts a disengageable-heel portion partially engaged with an upper, in accordance with embodiments of the present invention;

FIG. 4 depicts a disengageable-heel portion disengaged from an upper, in accordance with embodiments of the present invention;

FIG. 5 depicts a heel-end view of a shoe having a disengageable-heel portion disengaged from an upper, in accordance with embodiments of the present invention; and

FIG. 6 depicts a lacing structure attached to an interior surface of an upper, in accordance with embodiments of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0006] The subject matter of embodiments of the present invention is described with specificity herein to meet statutory requirements. However, the description itself is not intended to limit the scope of this patent. Rather, the inventors have contemplated that the claimed subject matter might also be embodied in other ways, to include different elements or combinations of elements similar to the ones described in this document, in conjunction with other present or future technologies.

[0007] Embodiments of the present invention relate to the construction of a shoe that includes a disengageable-heel portion that may be disengaged from an upper. Disengagement of the heel portion from the upper allows the heel portion to fold away from the upper, which exposes a heel-end opening that a foot may pass through to gain entry to the interior of the shoe. Additionally, a stretchable lacing material may be utilized to allow the shoe to absorb energy exerted on it by a wearer of the shoe without disengaging the heel portion from the upper.

[0008] Accordingly, in one aspect, the present invention provides a first shoe construction. The shoe construction includes a sole having a toe end and an opposite heel end and having opposite medial and lateral sides extending between the toe end and the heel end. The shoe construction further has an upper of flexible material attached to the sole. The upper extends upwardly from the sole to an upper top edge and the upper top edge defines a forefoot opening. The shoe construction additionally has a disengageable-heel portion attached to the sole at the heel end. The disengageable-heel portion extends upwardly from the sole to a heel portion top edge. The disengageable-heel portion has a medial-front edge that extends from the sole to the forefoot opening on the medial side of the sole and an opposite lateral-front edge that extends from the sole to the forefoot opening on the lateral side of the sole. The disengageable-heel portion is disengageably attached to the upper and defines an ankle opening when attached to the upper.

[0009] In another aspect, the present invention provides a second shoe construction including a sole having a toe end and an opposite heel end and having opposite medial and lateral sides extending between the toe end

and the heel end. The shoe construction also has an upper with opposite interior and exterior surfaces. The upper is attached to the sole along the medial and lateral sides. The upper extends upwardly from the sole to an upper top edge. The upper top edge defines a forefoot opening. The upper also forms a heel-end opening proximate the heel end of the sole. The shoe construction also includes a disengageable-heel portion with opposite interior and exterior surfaces. The disengageable-heel portion is attached to the sole at the heel end. The interior surface of the disengageable-heel portion is disengageably attachable to the exterior surface of the upper, enclosing the heel-end opening of the upper. The disengageable-heel portion has a medial-front edge extending from the sole to the forefoot opening on the medial side of the sole and an opposite lateral-front edge extending from the sole to the forefoot opening on the lateral side of the sole.

[0010] A third aspect of the present invention provides a third shoe construction that includes a sole having a toe end and an opposite heel end, and opposite medial and lateral sides extending between the toe end and the heel end. The shoe construction further has an upper with opposite interior and exterior surfaces. The upper is attached to the sole along the medial and lateral side and extends upwardly from the sole to an upper top edge. The upper top edge defines a forefoot opening. The upper also forms a heel-end opening near the heel end of the sole, such that the heel-end opening prevents the upper from extending around an Achilles region. The shoe construction also includes a disengageable-heel portion with opposite interior and exterior surfaces. The disengageable-heel portion is attached to the sole at the heel end. The interior surface of the disengageable-heel portion is coupled to a hook or loop material that is disengageably attachable to a hook or loop material coupled to the exterior surface of the upper. The disengageable-heel portion encloses the heel-end opening of the upper when attached to the upper. The shoe construction further has apertures in the upper arranged in a line on a medial side and a lateral side of the forefoot opening. A stretchable lacing is attached to the interior surface of the upper extending through an aperture on the medial side to an aperture on the lateral side.

[0011] Having briefly described an overview of embodiments of the present invention, a more detailed description follows.

[0012] The construction of a slip athleisure shoe 10 of the present invention has the basic construction of a basketball-type shoe. However, the slip athleisure shoe 10 is comprised of a disengageable-heel portion 402 that may be removeably attached to an upper 202 in an as-worn position (as best seen in FIGs. 1 and 2) and unattached from the upper 202 to provide an opening to the shoe's interior (as best seen in FIG. 4). Additionally, the slip athleisure shoe 10 may include a stretchable lacing 310. The disengageable-heel portion 402 and/or the stretchable lacing 310 provide the shoe with a unique

opening and fastening configuration.

[0013] In embodiments, the shoe 10 is a high-top basketball style shoe. However, it should be understood that the novel concept of the invention could be employed on other types of shoes. Because much of the construction of the shoe 10 is the same as that of a conventional high-top shoe, the conventional features of the constructions will be described only generally herein.

[0014] The shoe 10 has a shoe sole 102 that is constructed of resilient materials that are typically employed in the construction of soles of athletic shoes. The sole 102 can be constructed with an outsole, a midsole, and an insert, as is conventional. The shoe sole 102 has a bottom surface that functions as the traction surface of the shoe, and an opposite top surface in the interior 12 of the shoe 10. The size of the shoe 10 has a length that extends from a rear sole heel end 106 to a front toe end 104 of the sole 102. As best seen in FIG. 5, the sole 102 has a width that extends between a medial side 108 and a lateral side 110 of the sole 102.

[0015] The shoe 10 also is constructed with the upper 202. The upper 202 is secured to the sole 102 and extends upwardly from the shoe sole top surface. The upper 202 is constructed of a flexible material, for example leather, polymer, or a fabric such as canvas. However, unlike a traditional upper, the upper 102 may not include a traditional heel portion that would extend around the sole top surface at the sole heel end 106. Instead, as will be discussed in greater detail hereinafter, a disengageable heel portion may be utilized in the construction of the shoe 10.

[0016] The upper 202 has a medial side portion 216 and a lateral side portion 218 that extend along the respective sole medial side 108 and the sole lateral side 110. The upper medial side portion 216 extends upwardly from the sole medial side 108 to an upper medial side edge 206. The upper lateral side portion 218 extends upwardly from the sole lateral side 110 to an upper lateral side edge 208. As illustrated in the figures, the upper medial side edge 206 and the upper lateral side edge 208 extend rearwardly from opposite sides of the front toe end 104 of the sole 102. As best seen in FIG. 1, the length of the upper medial side edge 206 and the upper lateral side edge 208 define a forefoot opening 220 in the upper 202 that opens to the shoe interior 12.

[0017] The upper 202 is also constructed with a toe box 204 that extends around and across the sole top surface at the sole toe end 104. The toe box 204 is connected between the upper medial side portion 216 and the upper lateral side portion 218 and encloses a portion of the shoe interior 12 adjacent the sole toe end 104. The upper medial side edge 206 and the upper lateral side edge 208 extend rearwardly from the toe box 204.

[0018] A first plurality of apertures 302 are provided on the upper medial side portion 216 and a second plurality of apertures 304 are provided on the upper lateral side portion 218. The apertures 302 and 304 are lacing openings in an exemplary embodiment. A lacing opening is

an opening that is typically occupied by a portion of a fastener, such as lacing that close the shoe upper over the forefoot opening of the shoe. The apertures 302 and 304 may provide any type of lacing openings on the shoe, for example, D-rings or speed lacing hooks. However, in an exemplary embodiment, the apertures 302 and 304 are an eyelet or grommet style aperture. The apertures 302 and 304 are arranged in lines along the upper medial side portion 216 and the upper lateral side portion 218, as is conventional. As illustrated in the figures, the apertures 302 and 304, in an exemplary embodiment, extend substantially the entire length of the upper medial side edge 206 and the upper lateral side edge 208.

[0019] The shoe upper 202 includes a vamp 222 or a throat positioned rearwardly of the toe box 204, and a tongue 224 that extends rearwardly from the vamp 222 through the forefoot opening 210. The tongue 224 extends along the lengths of the upper medial side portion 216 and the upper lateral side portion 218 to a distal end of the tongue, a tongue upper edge 230, near an ankle opening 410. As best seen in FIGs. 4 and 5, the tongue 224 has a width between a medial side edge 226 and a lateral side edge 228 of the tongue. The length and width of the tongue position the tongue side edges beneath the upper medial side portion 216 and the upper lateral side portion 218, respectively, and extend the tongue over the forefoot opening 210 of the shoe.

[0020] In an exemplary embodiment, the construction of the shoe 10 includes the disengageable-heel portion 402. The disengageable-heel portion 402 is secured to the sole 102 around the sole heel end 106 and extends upwardly from the sole 102. The disengageable-heel portion 402 is constructed, in an exemplary embodiment, from a flexible material. For example, disengageable-heel portion 402 may be constructed of the same material as the upper 202, or in an exemplary embodiment, the disengageable-heel portion 402 may be constructed of a different material than the upper 202.

[0021] The disengageable-heel portion 402 extends upwardly from the sole 102 to a heel portion top edge 404. The heel portion top edge 404 defines the ankle opening 410, which provides an entry to the interior 12 of the shoe 10. As best seen in FIG. 4, the disengageable-heel portion 402 is comprised of a heel medial side portion 420 and a heel lateral side portion 422. The heel medial side portion 420 extends from the sole 102 upwardly to the heel portion top edge 404 along the medial side of the shoe. Similarly, the heel lateral side portion 422 extends from the sole 102 upwardly to the heel portion top edge 404 along the lateral side of the shoe. In an exemplary embodiment, a forward edge of the heel medial side portion 420 is a medial front edge 406 that extends from the sole 102 to the forefoot opening 210. Similarly, a forward edge of the heel lateral side portion 422 is a lateral front edge 408 that extends from the sole 102 to the forefoot opening 210. As will be discussed hereinafter, the disengageable-heel portion 402 may be removeably affixed to the upper 202 that defines the fore-

foot opening 210; therefore, depending on a method of affixing (e.g., location of hook and loop attachment by a user), the medial front edge 406 may only extend proximate to the forefoot opening 210. Consequently, when it is stated herein that an edge, portion, or the like extends to another edge, portion, or the like, it is understood that an approximate positional relationship is implied.

[0022] In an exemplary embodiment, the medial front edge 406 angles forward as it extends upwardly. For example, the farthest forward (e.g., toe end) point of attachment along the sole 102 of the medial front edge 406 and the lateral front edge 408 is rearward of the uppermost ends of the respective front edge. Therefore, in an exemplary embodiment, the medial front edge 406 and the lateral front edge 408 trend forward as they extend upward away from the sole 102. Consequently, the disengageable-heel portion 402 is adapted to provide additional ankle support without constricting the side portions of a wearer's foot near the sole 102.

[0023] In an exemplary embodiment, as best seen in FIG. 5, the disengageable-heel portion 402 includes a plurality of apertures 306 on the heel medial side portion 420 and a plurality of apertures 308 on the heel lateral side portion 422. One or more of the plurality of apertures 306 may appear as if aligned or in line with the plurality of apertures 302 of the upper 202 when the disengageable-heel portion 402 is affixed to the upper 202, as illustrated in FIG. 1. Similarly, one or more of the plurality of apertures 308 may appear as if aligned or in line with the plurality of apertures 304 of the upper 202 when the disengageable-heel portion 402 is affixed to the upper 202. Alignment of the respective apertures on the upper 202 and the disengageable-heel portion 402 provides aesthetic continuity of the apertures. Additionally, in an exemplary embodiment, the alignment of respective plurality of apertures allows for a fastening mechanism, such as a lace, to extend through at least one of the plurality of apertures on the upper 202 to an aperture on the disengageable-heel portion 402. In this example, the disengageable-heel portion 402 may be affixed to the upper 202 by way of the fastening mechanism.

[0024] FIG. 2 depicts a medial side view of the shoe 10 in accordance with embodiments of the present invention. As previously discussed, the sole 102 has a toe end 104 and a heel end 106. The medial side portion 216 of the upper 202 extends upwardly from the sole 102 to the upper medial side edge 206. Also illustrated in FIG. 2 is the lacing 310 extending through the apertures 302. Also illustrated are the apertures 306 on the heel medial side portion 420 of the disengageable-heel portion 402. The medial front edge 406 of the disengageable-heel portion 402 is illustrated extending in a forward trend as it upwardly extends from the sole 102.

[0025] FIG. 3 depicts the disengageable-heel portion 402 partially engaged with the upper 202, in accordance with embodiments of the present invention. The disengageable-heel portion 402 is attached to the sole 102 around the heel end 106. In an exemplary embodiment,

the disengageable-heel portion 402 is attached by stitching, adhesive, or other conventional methods to the sole 102. The affixing method utilized between the sole 102 and the disengageable-heel portion 402, in an embodiment, allows the disengageable-heel portion 402 to remain pliable or flexible proximate the sole 102. This pliability allows the disengageable-heel portion 402 to fold away from the upper 202, which facilitates exposing a heel-end opening 412.

[0026] The disengageable-heel portion 402, in an exemplary embodiments depicted in FIG. 3, has affixed to an interior surface 418 a loop material 414. Further, a corresponding hook material 416 is affixed to an exterior surface 214 of the upper 202. The hook material 416 and the loop material 414, when used in combination are referred to as a hook and loop material. While the hook material 416 is illustrated as being affixed to the upper 202 and the loop material 414 is illustrated as being affixed to the disengageable-heel portion 402, it is contemplated that the hook material 416 and the loop material 414 may be used in any combination to allow the disengageable-heel portion 402 to be engaged with the upper 202 (e.g., any combination of hook and/or loop materials may be disposed on any portion of the shoe 10). The hook and loop materials may be permanently attached to the shoe. For example, the hook and loop materials may be sewn, stitched, glued, or otherwise attached. It is contemplated herein that other coupling structures may be implemented in place of a hook and loop material. For example, lacing, cord, snaps, buttons, zippers, clasps, or the like may be utilized to attach, even temporarily, the disengageable-heel portion 402 to the upper 202.

[0027] At least one of the plurality of apertures 302 on the upper 202 may be aligned with at least one aperture of the plurality of apertures 306 on the disengageable-heel portion 402. For example, as best seen in FIG. 3, an aperture 312 is positioned such that when the disengageable-heel portion 402 is engaged (e.g., a substantial portion of the hook material 416 is mated to a substantial portion of the loop material 414), the aperture 312 is aligned with an aperture 316. As previously discussed, the alignment of apertures on the upper 202 with apertures on the disengageable-heel portion 402 may facilitate maintaining a consistent appearance and/or allow a fastener to extend through the aligned apertures.

[0028] As illustrated in the FIG. 3, the aperture 316 is disposed within at least a portion of the loop material 414. Similarly, the aperture 312 is disposed, at least partially, within the hook material 416. The close proximity, if not complete encompassment, of the hook and loop material with one or more apertures allows the disengageable-heel portion 402, when engaged (e.g., affixed, attached) to the upper 202, to maintain a close locational relationship (e.g., alignment) of the aperture 316 and the aperture 312. Consequently, advantages of such a proximal relationship among the apertures may be achieved.

[0029] FIG. 4 depicts the disengageable-heel portion 402 disengaged from the upper 202 in accordance with

embodiments of the present invention. The upper 202 has both an interior surface 212 and the exterior surface 214. The interior surface 212 of the upper 202 in combination with the interior surface 418 of the disengageable-heel portion 402 partially define the shoe interior 12 when the disengageable-heel portion 402 is engaged with the upper 202. However, when the disengageable-heel portion 402 is disengaged from the upper 202, as depicted in FIG. 4, a heel-end opening 412 is exposed.

[0030] The heel-end opening 412 is formed by a heel-end edge 424 on a lateral side of the upper 202 and a heel-end edge 426 on a medial side of the upper 202. In an exemplary embodiment, the heel-end opening 412 extends upwardly from the sole 102. As a result of the heel-end opening 412, the upper is discontinuous around the ankle opening 410. For example, without the disengageable-heel portion 402 engaged to the upper 202, the ankle opening 410 is not continuously defined at a location conventionally associated with such an opening.

[0031] The disengagement of the loop material 414 from the hook material 416 allows for the disengageable-heel portion 402 to fold downwardly from the ankle opening 410 to expose the heel-end opening 412. Consequently, a wearer of the shoe 10 may insert a foot into the shoe 10 through the heel-end opening 412 without adjusting the lacing 310. For example, a child or other wearer that has difficulty adjusting a typical lacing structure may instead disengage the disengageable-heel portion 402 from the upper 202 to allow the shoe 10 to be removed from or placed on a foot.

[0032] A disengageable fastener, such as hook and loop material, may be implemented to engage the disengageable-heel portion 402 to the upper 202. The disengageable fastener, in an exemplary embodiment, provides a greater degree of disengaging force proximate the upper portion of the disengageable-heel portion 402. For example, the loop material 414 covers a greater surface area as the material extends upwardly from the sole 102. This greater amount of surface area may translate into a greater degree of engaging force by the hook and loop materials. This greater degree at the upper portion may be desired to prevent unintentional disengagement of the disengageable-heel portion 402 from the upper 202 because of the greater distance from a folding location of the upper portion of the disengageable-heel from the sole 102.

[0033] In an exemplary embodiment, the lacing 310 is a stretchable lacing. For example, an elastic lace material may be utilized to connect one or more apertures on the medial side of the shoe 10 to one or more apertures on the lateral side of the shoe 10. In an exemplary embodiment, a stretchable or elastic structure, such as an elastic lacing, may be desired to provide flexibility to the shoe 10. For example, when a wearer of the shoe 10 exerts force on the shoe, that force may cause the hook and loop material that is used to mate the disengageable-heel portion 402 to the upper 202 to disengage when not desired. Therefore, it is contemplated that utilization of a

stretchable lacing across the forefoot opening 220 provides flexibility and absorption of the force exerted by the wearer in a magnitude sufficient to prevent the hook and loop materials from unintentionally disengaging. Additionally, a stretchable material across the forefoot opening 220 may also provide a securing force to form the shoe 10 to a foot of a wearer without a user having to tie or otherwise manipulate a traditional lacing.

[0034] A fastener may not be a continuous piece of material among all or even some of the apertures. For example, a pairing of apertures along the medial side and the lateral side may be implemented (e.g., a most toe-end aperture on the medial side is paired with a most toe-end aperture on the lateral side; a second most toe-end aperture on the medial side is paired with a second most toe-end aperture on the lateral side, etc). This pairing may be implemented so that a discrete portion of fastener extends through each aperture within a pairing. For example, a portion of a fastener may extend through a first aperture on the medial side to a first aperture on the lateral side; a second discrete portion of a fastener may extend through a second aperture on the medial side to a second aperture on the lateral side.

[0035] FIG. 5 depicts a heel-end view of the shoe 10, in accordance with embodiments of the present invention. The disengageable-heel portion 402 is disengaged from the upper 202 to be in a folded down position. As a result of the disengageable-heel portion 402 being in a folded down position, the heel-end opening 412 is exposed allowing entry of a foot into the interior 12 of the shoe 10. The heel-end opening 412 is defined, in part, by the medial heel-end edge 426 and the lateral heel-end edge 424 of the upper 202 extending upwardly from the sole 102. The heel-end opening 412 is also defined, in part, by an upper portion of the medial side edge 226 and the lateral side edge 228 of the tongue referred to as a tongue upper edge 230. Therefore, as illustrated in the FIG. 5, the heel-end opening 412 is defined as extending upwardly from the sole 102 along the medial heel-end edge 426, along the tongue upper edge 230, and extending downwardly to the sole 102 along the lateral heel-end edge 424. In an exemplary embodiment, the heel-end opening 412 is an opening of the shoe 10 that corresponds to an area proximate an Achilles heel of a wearer of the shoe 10 when wearing the shoe 10.

[0036] FIG. 6 depicts the interior surface 212 of the upper 202 in accordance with embodiments of the present invention. The disengageable-heel portion 402 is illustrated at least partially disengaged from the upper 202 proximate the heel medial side portion 420. The medial side of the upper 202 includes the plurality of apertures 302, which is comprised of an aperture 324 and a second aperture 328 in the illustrated embodiment. In an exemplary embodiment, a fastening structure, such as a lace extends through one or more of the plurality of apertures 302. In a further embodiment, as illustrated in FIG. 6, a separate fastening structure passes through the aperture 324 than that which passes through the ap-

erture 328.

[0037] In an exemplary embodiment, a lacing material 326 extends through the aperture 324 to terminate proximate the interior surface 212 of the upper. The lacing material 326 may pass through an opening 314 of the interior surface 212 of the upper. The lacing structure may be secured to the upper 202 as being stitched or otherwise affixed to the upper. For example, a first stitching 320 and a second stitching 322 may be effective for securing a portion, such as an end, of the lacing structure 326 to the shoe 10. Similarly, in the illustrated embodiment, a lacing structure 330 extends through the aperture 328 to be secured proximate the interior surface 212 by passing through an opening 318 of the interior surface 212 by stitching 320 and/or stitching 322. Therefore, in this example, the lacing structure 326 and the lacing structure 330 are discrete lacing portions, which unlike traditional lacing that utilizes a common lacing structure to extend through at least a majority of apertures, the lacing structures 326 and 330 are separate fastening structures.

[0038] Additionally, unlike traditional lacing of a shoe that may be adjusted, the lacing structures 326 and 330 are secured to the shoe in a manner that prevents traditional adjustments (e.g., tightening by tying). However, in an exemplary embodiment, the lacing structures 326 and 330 are constructed from a stretchable (i.e., elastic) material, as previously discussed. Consequently, unlike a traditional lacing that required a tightening of the lacing through a tying action, properties of a stretchable material allows for the lacing material 326 and 330 to tighten around a wearer's foot. Additionally, the attachment location of the disengageable-heel portion 402 may be adjusted when engaged to the upper 202 to facilitate "tightening" of the shoe 10 to a wearer's foot. However, it is contemplated that a continuous lacing structure may extend through the apertures 324 and 328 as would be utilized in a traditional shoe.

[0039] Although the shoe construction is described above by referring to particular embodiments, it should be understood that the modifications and variations could be made to the shoe construction described without departing from the intended scope of protection provided by the following claims.

Representative features

[0040] The representative features set out in the following clauses stand alone or may be combined, in any combination, with one or more features disclose in the text and/or drawings of the specification.

1. A shoe (10) construction comprising: a sole (102) having a toe end (104) and an opposite heel end (106) and having opposite medial and lateral sides (108, 110) extending between the toe end (104) and the heel end (108); an upper (202) of flexible material attached to the sole (102), the upper extending up-

wardly from the sole (102) to an upper top edge, the upper top edge defining a forefoot opening (210); a disengageable-heel portion (402) attached to the sole (102) at the heel end (106), the disengageable-heel portion (402) extending upwardly from the sole (102) to a heel portion top edge (404); the disengageable-heel portion (402) having a medial-front edge extending from the sole (102) to the forefoot opening (210) on the medial side (108) of the sole (102) and an opposite lateral-front edge extending from the sole (102) to the forefoot opening (210) on the lateral side (110) of the sole (102); and the disengageable-heel portion (402) disengageably attached to the upper (202), the heel portion top edge defining an ankle opening (410) when disengageably attached to the upper (202) a first plurality of apertures (302) in the upper (202) and arranged in a line on a medial side (108) of the forefoot opening (210); and a second plurality of apertures (304) in the upper (202) and arranged in a line on a lateral side (110) of the forefoot opening (210), wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) utilizing a hook and loop fastener.

1. The shoe (10) construction of clause 1, further comprising: a third plurality of apertures (306) in the disengageable-heel portion (402) and arranged proximate the medial edge; and a fourth plurality of apertures (308) in the disengageable-heel portion (402) and arranged proximate the lateral edge side.

2. The shoe (10) construction of clause 1, further comprising: a fastener extending between the first plurality of apertures (302) and the second plurality of apertures (304) across the forefoot opening (210), and preferably wherein the fastener is an elastic material, and more preferably wherein the fastener extends through a first aperture of the first plurality of apertures (302) and the fastener extends through a second aperture of the second plurality of apertures (304), and the fastener is attached to the upper (202) proximate the first aperture and the second aperture.

3. The shoe (10) construction of clause 2, wherein at least one aperture of the first plurality of apertures (302) aligns with at least one aperture of the third plurality of apertures (306) and at least one aperture of the second plurality of apertures (304) aligns with at least one aperture of the fourth plurality of apertures (308) when the disengageable-heel portion (402) is disengageably attached to the upper (202).

4. The shoe (10) construction of clause 1, wherein the upper (202) defines a heel-end opening (412).

5. The shoe (10) construction of clause 1, wherein the upper (202) is discontinuous around the ankle

opening (410), or wherein the front-lateral edge and the front-medial edge of the disengageable-heel portion (402) extends from a heel end near the sole toward a toe end at the ankle opening (410).

6. The shoe (10) construction of clause 1, wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) along the medial-front edge and the opposite lateral-front edge, or wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) along either the medial-front edge or the opposite lateral-front edge.

7. The shoe (10) construction of clause 1, wherein the disengageable-heel portion (402) has a permanently attached hook or loop portion extending from the heel top edge (404) down towards the sole (102) along the medial-front edge or the lateral-front edge, wherein the width, measured from the toe end to the heel end, of the hook or loop portion decreases, in part, as it extends down toward the sole (102).

8. The shoe (10) construction of clause 1, wherein:

the upper (202) has opposite interior and exterior surfaces (212, 214), is attached to the sole (102) along the medial and lateral side (108, 110) and forms a heel-end opening (412) proximate the heel end (106) of the sole (102);

the disengageable-heel portion (402) is of flexible material with opposite interior (418) and exterior surfaces, and the interior surface (418) of the disengageable-heel portion (402) is disengageably attachable to the exterior surface (214) of the upper (202) enclosing the heel-end opening (412) of the upper (202).

9. The shoe (10) construction of clause 11, further comprising: a first plurality of apertures (302) in the upper (202) and arranged in a line on a medial side (110) of the forefoot opening (210); a second plurality of apertures (304) in the upper (202) and arranged in a line on a lateral side (108) of the forefoot opening (210); a third plurality of apertures (306) in the disengageable-heel portion (402) and arranged proximate the medial edge; and a fourth plurality of apertures (308) in the disengageable-heel portion and arranged proximate the lateral edge side.

10. The shoe (10) construction of clause 9, further comprising: a fastener extending from a first aperture of the first plurality of apertures (302) to a second aperture of the second plurality of apertures (304), wherein the fastener is attached to the interior surface (212) of the upper (202), and preferably wherein the fastener is a stretchable lacing that is stitched to

the interior surface (212) of the upper (202) proximate the first aperture and the second aperture.

11. The shoe (10) construction of clause 9, further comprising: a first portion of a hook and loop material attached to the interior surface (418) of the disengageable-heel portion (402); a second portion of the hook and loop material attached to the exterior surface (214) of the upper (202); and wherein the first portion is one of a hook material or a loop material and the second portion is the opposite of the hook material or the loop material of the first portion.

12. The shoe (10) construction of clause 1, wherein:

the upper (202) is of flexible material with opposite interior (212) and exterior surfaces (214), is attached to the sole (102) along the medial and lateral side (108, 110), and forms a heel-end opening (412) proximate the heel end (108) of the sole (102), such that the heel-end opening (412) prevents the upper (202) from extending around an Achilles region; and

the disengageable-heel portion (402) is of flexible material with opposite interior (418) and exterior surfaces, and the interior surface (418) of the disengageable-heel portion (402) is coupled to a hook or loop material disengageably attached to a hook or loop material coupled to the exterior surface (214) of the upper (202), the disengageable-heel portion (402) enclosing the heel-end opening (412) of the upper (202), the shoe construction further comprising:

a first plurality of apertures (302) in the upper (202) and arranged in a line on a medial side (110) of the forefoot opening (210);

a second plurality of apertures (304) in the upper (202) and arranged in a line on a lateral side (102) of the forefoot opening (210); and

a stretchable lacing attached to the interior surface (212) of the upper (202) extending through a first aperture of the first plurality of apertures (302), the stretchable lacing extending through a second aperture of the second plurality of apertures (304), the stretchable lacing is attached to the interior surface (212) of the upper (202) proximate the second aperture.

Claims

1. A shoe (10) construction comprising: a sole (102)

having a toe end (104) and an opposite heel end (106) and having opposite medial and lateral sides (108, 110) extending between the toe end (104) and the heel end (108); an upper (202) of flexible material attached to the sole (102), the upper extending upwardly from the sole (102), the upper (202) defining a heel-end opening (412), in part, by a medial heel-edge (426) and a lateral heel-end edge (424) of the upper (202) proximate the heel end (106) of the sole (102), wherein the heel-end opening (412) extends upwardly from the sole (102); a disengageable-heel portion (402) of flexible material attached to the sole (102) at the heel end (106), the disengageable-heel portion (402) comprising a medial front edge (406) and a lateral front edge (408); wherein when the disengageable-heel portion (402) is disengageably attached to the upper (202), the disengageable-heel portion (402) extends upwardly from the sole (102) to a heel portion top edge (404) with the medial-front edge (406) extending from the sole (102) to a forefoot opening (210) on the medial side (108) of the sole (102) and an opposite lateral front edge (408) extending from the sole (102) to the forefoot opening (210) on the lateral side (110) of the sole (102) to define an ankle opening (410); and wherein when the disengageable-heel portion (402) is disengageably detached from the upper (202), having the disengageable-heel portion (402) fold downwardly from the ankle opening 410 to expose the heel-end opening (412).

2. The shoe (10) construction of claim 1 further comprising a first plurality of apertures (302) in the upper (202) and arranged in a line on a medial side (108) of the forefoot opening (210); and a second plurality of apertures (304) in the upper (202) and arranged in a line on a lateral side (110) of the forefoot opening (210).

3. The shoe (10) construction of claim 1, wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) utilizing a hook and loop fastener.

4. The shoe (10) construction of claim 3, wherein the hook and loop fastener covers a greater amount of surface area proximate the ankle opening (410) than proximate the sole (102).

5. The shoe (10) construction of claim 2, further comprising: a third plurality of apertures (306) in the disengageable-heel portion (402) and arranged proximate the medial edge; and a fourth plurality of apertures (308) in the disengageable-heel portion (402) and arranged proximate the lateral edge side.

6. The shoe (10) construction of claims 5, wherein at least one aperture of the first plurality of apertures

- (302) aligns with at least one aperture of the third plurality of apertures (306) and at least one aperture of the second plurality of apertures (304) aligns with at least one aperture of the fourth plurality of apertures (308) when the disengageable-heel portion (402) is disengageably attached to the upper (202). 5
7. The shoe (10) construction of claim 1, further comprising: a fastener extending between the first plurality of apertures (302) and the second plurality of apertures (304) across the forefoot opening (210), and preferably wherein the fastener is an elastic material, and more preferably wherein the fastener extends through a first aperture of the first plurality of apertures (302) and the fastener extends through a second aperture of the second plurality of apertures (304), and the fastener is attached to the upper (202) proximate the first aperture and the second aperture. 10
8. The shoe (10) construction of claim 1, wherein the upper (202) is discontinuous around the ankle opening (410), or wherein the front-lateral edge and the front-medial edge of the disengageable-heel portion (402) extends from a heel end near the sole toward a toe end at the ankle opening (410). 15
9. The shoe (10) construction of claim 1, wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) along the medial front edge (406) and the opposite lateral front edge (408), or wherein the disengageable-heel portion (402) is disengageably attached to the upper (202) along either the medial front edge (406) or the opposite lateral front edge (408). 20
10. The shoe (10) construction of claim 1, wherein the disengageable-heel portion (402) has a permanently attached hook or loop portion extending from the heel top edge (404) down towards the sole (102) along the medial-front edge or the lateral-front edge, wherein the width, measured from the toe end to the heel end, of the hook or loop portion decreases, in part, as it extends down toward the sole (102). 25
11. The shoe (10) construction of claim 1, wherein: 30
- the upper (202) has opposite interior and exterior surfaces (212, 214);
- the disengageable-heel portion (402) has opposite interior (418) and exterior surfaces, and the interior surface (418) of the disengageable-heel portion (402) is disengageably attachable to the exterior surface (214) of the upper (202) enclosing the heel-end opening (412) of the upper (202). 35
12. The shoe (10) construction of claim 11, further comprising: a first plurality of apertures (302) in the upper (202) and arranged in a line on a the medial side (108) of the forefoot opening (210); a second plurality of apertures (304) in the upper (202) and arranged in a line on a lateral side (110) of the forefoot opening (210); a third plurality of apertures (306) in the disengageable-heel portion (402) and arranged proximate the medial edge ; and a fourth plurality of apertures (308) in the disengageable-heel portion and arranged proximate the lateral edge. 40
13. The shoe (10) construction of claim 12, further comprising: a fastener extending from a first aperture of the first plurality of apertures (302) to a second aperture of the second plurality of apertures (304), wherein the fastener is attached to the interior surface (212) of the upper (202), and preferably wherein the fastener is a stretchable lacing that is stitched to the interior surface (212) of the upper (202) proximate the first aperture and the second aperture. 45
14. The shoe (10) construction of claim 11, further comprising: a first portion of a hook and loop material attached to the interior surface (418) of the disengageable-heel portion (402); a second portion of the hook and loop material attached to the exterior surface (214) of the upper (202); and wherein the first portion is one of a hook material or a loop material and the second portion is the opposite of the hook material or the loop material of the first portion. 50
15. The shoe (10) construction of claim 1, wherein: 55
- the upper (202) comprises opposite interior (212) and exterior surfaces (214), is attached to the sole (102) along the medial and lateral side (108, 110), such that the heel-end opening (412) prevents the upper (202) from extending around an Achilles region; and
- the disengageable-heel portion (402) comprises opposite interior (418) and exterior surfaces, and the interior surface (418) of the disengageable-heel portion (402) is coupled to a hook or loop material disengageably attached to a hook or loop material coupled to the exterior surface (214) of the upper (202), the disengageable-heel portion (402) enclosing the heel-end opening (412) of the upper (202).

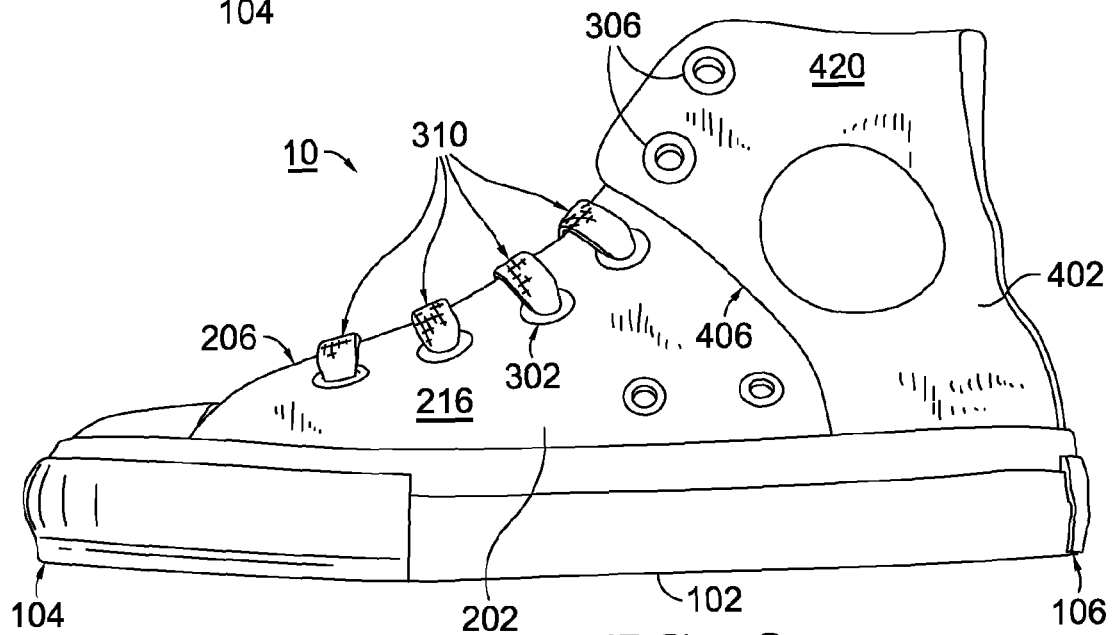
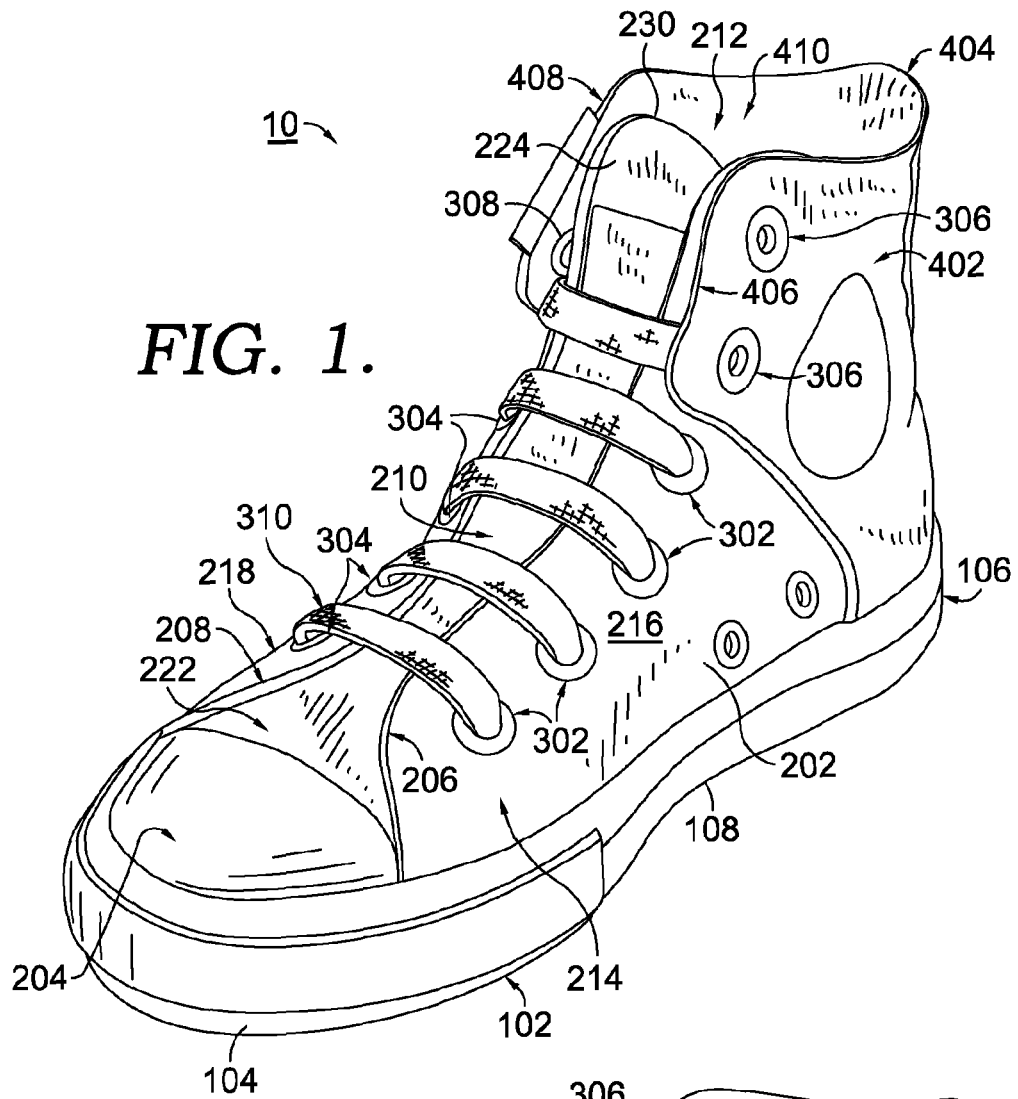


FIG. 3.

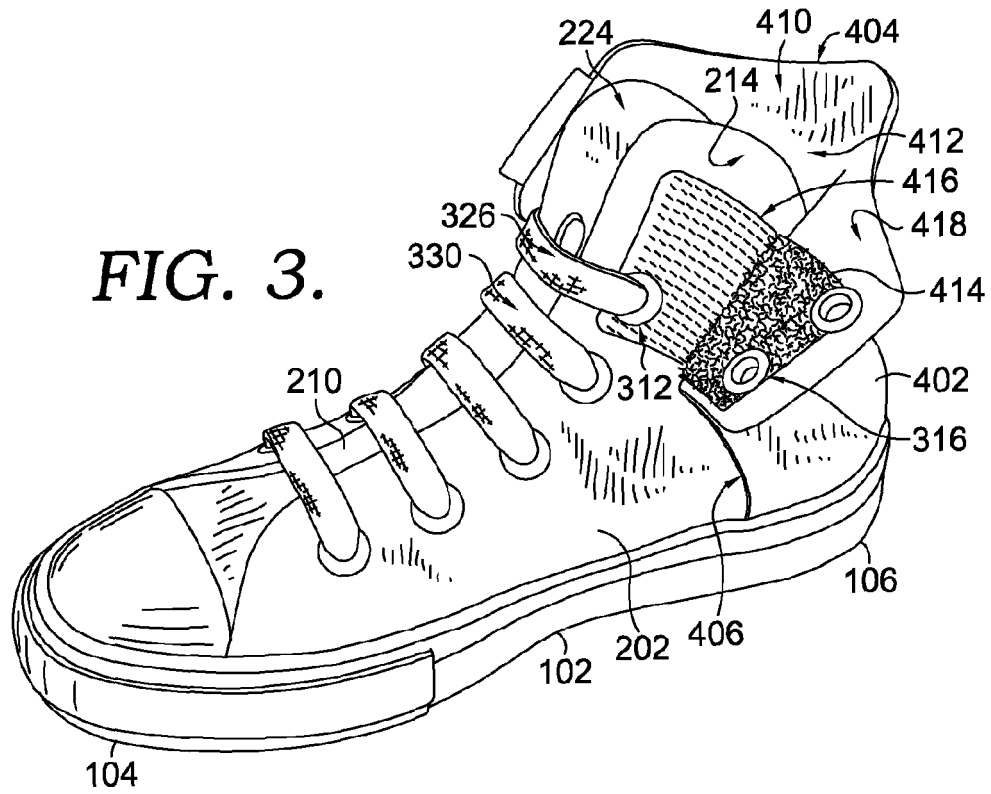
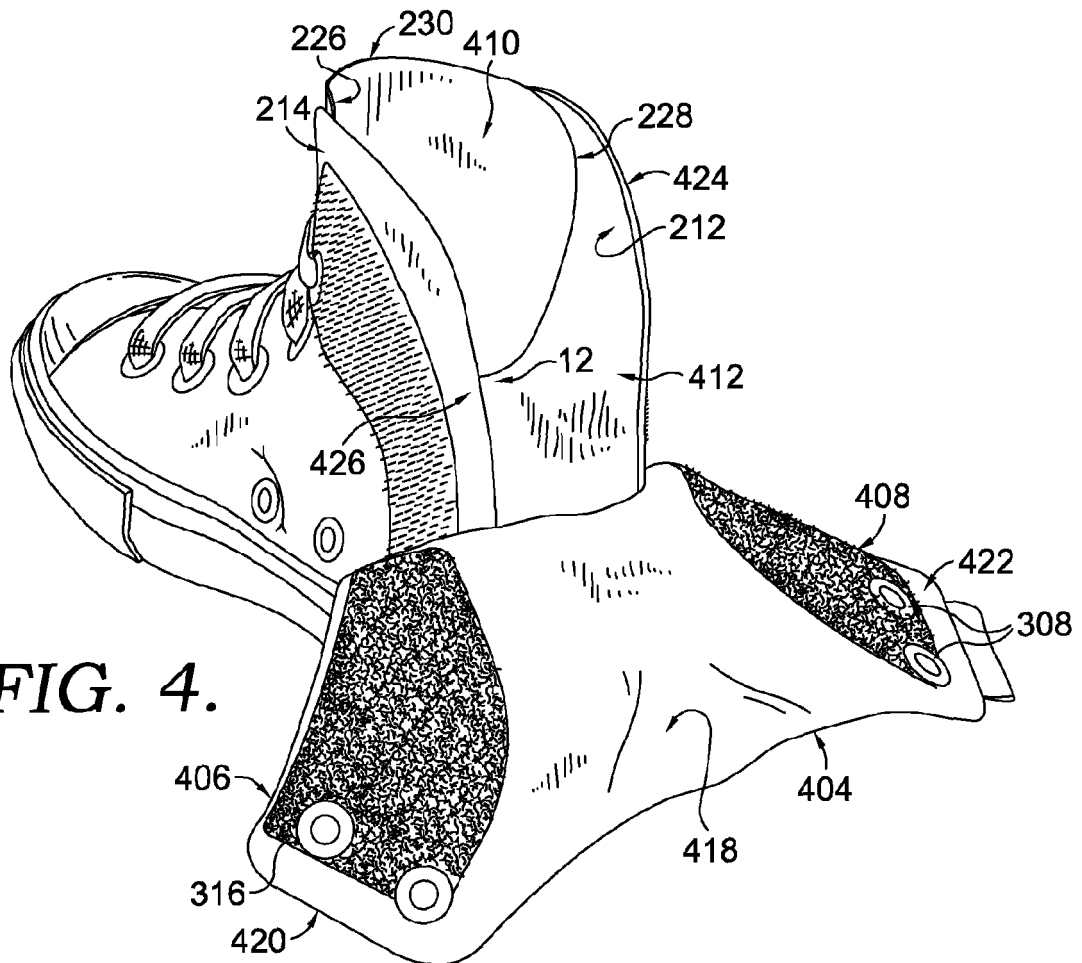


FIG. 4.



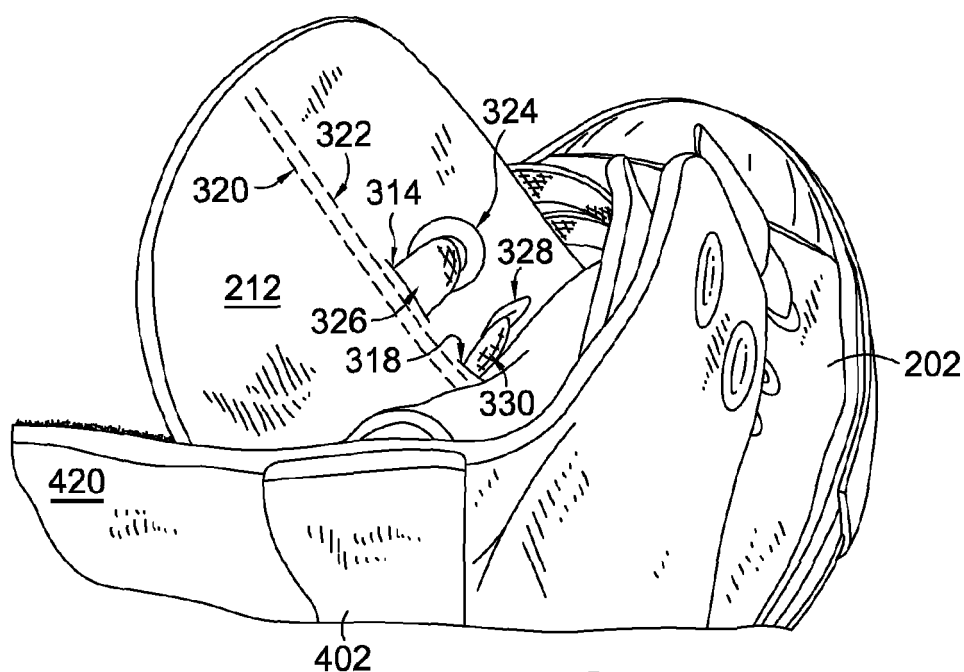
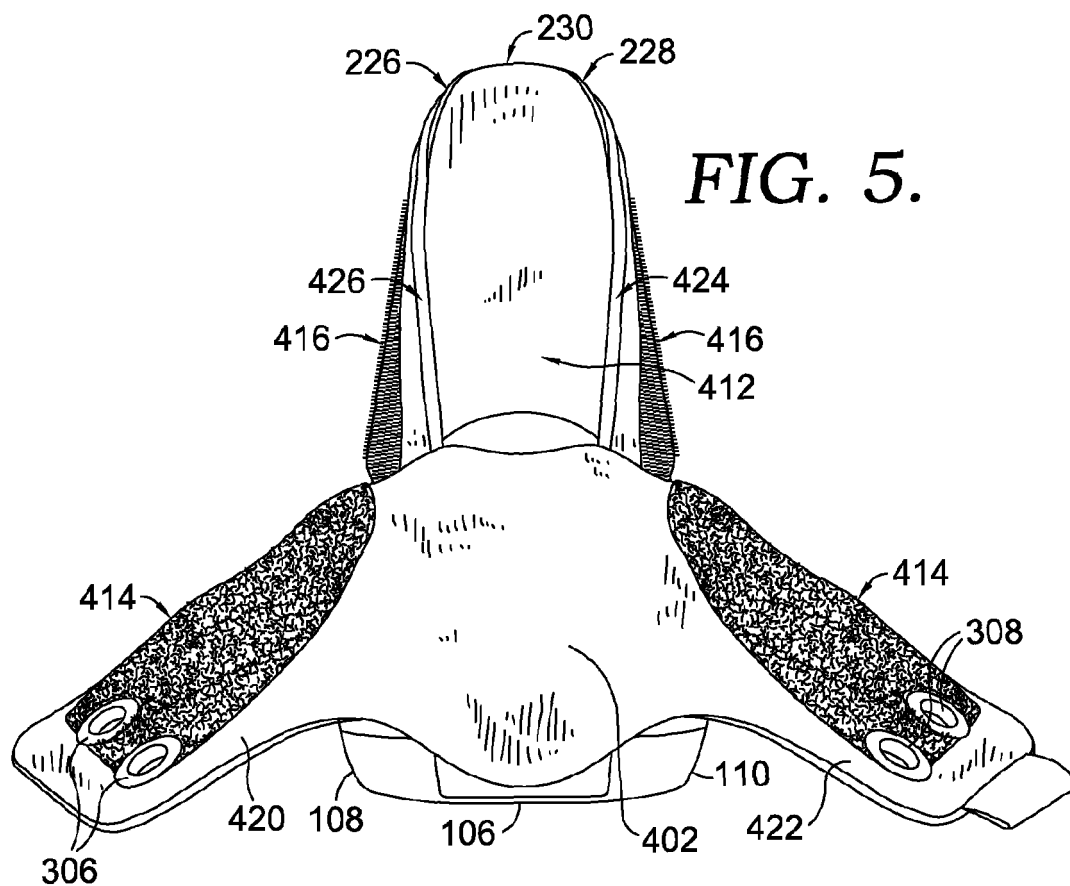


FIG. 6.



EUROPEAN SEARCH REPORT

Application Number
EP 18 16 5245

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 June 2018	Examiner Claudel, Benoît
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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