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(54) PATIENT MITTENS

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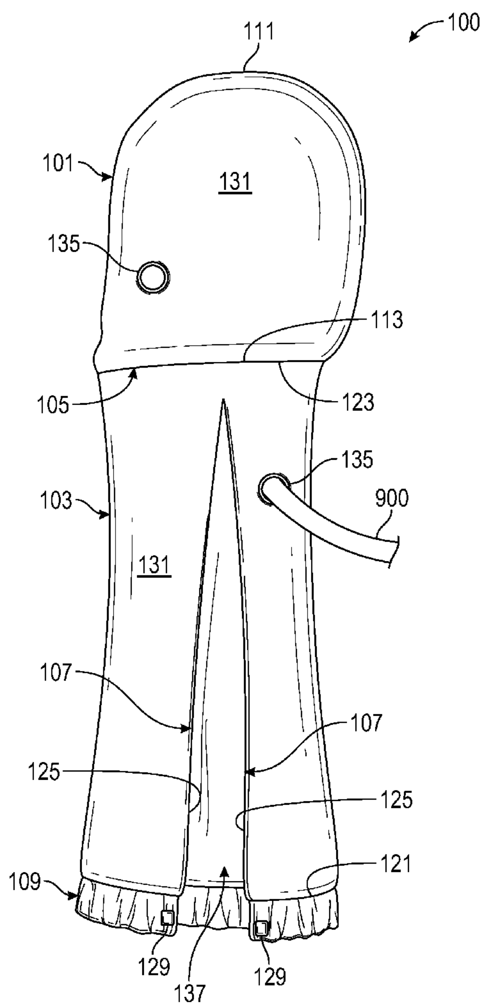
(57) **ABSTRACT**

Various embodiments of patient-mittens are disclosed and described. Such embodiments may include a hand-cover portion attached to a hollow elongate-sleeve portion. The hand-cover portion may cover the hand and fingers, preventing the patient from scratching themselves. The elongate-sleeve portion may cover a majority of an arm. Opposite from the hand-cover portion, there may be an arm-grabber attached at an end of the elongate-sleeve. This arm-grabber may squeeze the upper arm, above the elbow, to help keep the patient-mitten from coming off. Some embodiments, may include an access-slit on the elongate-sleeve for placing IVs and the like in a patient wearing the patient-mitten. The patient-mitten may help to minimize IVs and vital sign sensors from becoming dissociated from the patient. Some embodiments may be UV permeable to encourage vitamin D production in the patient. Some embodiments may provide a conducive environment for treating skin conditions on the arm, hand, or fingers.



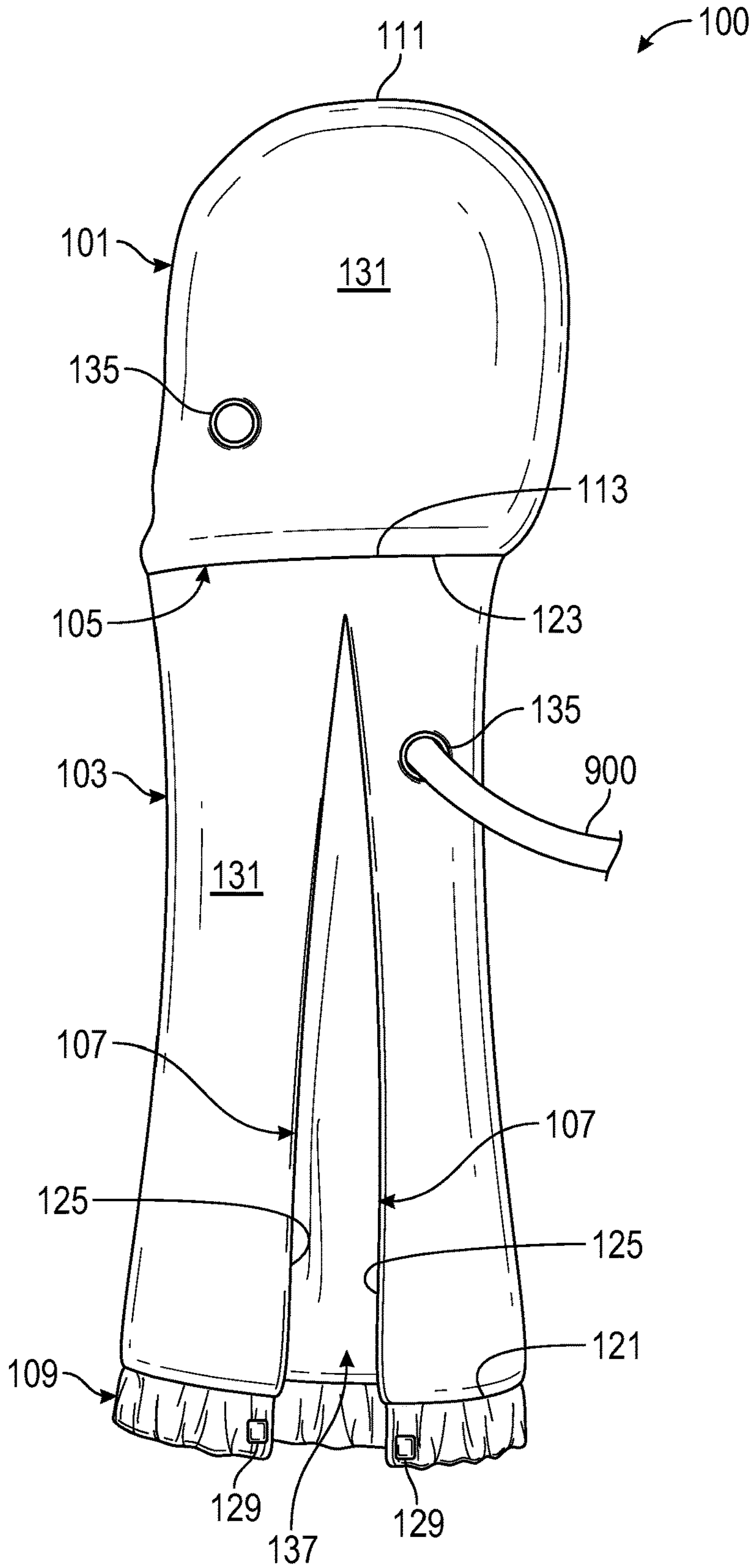

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FIG. 1A

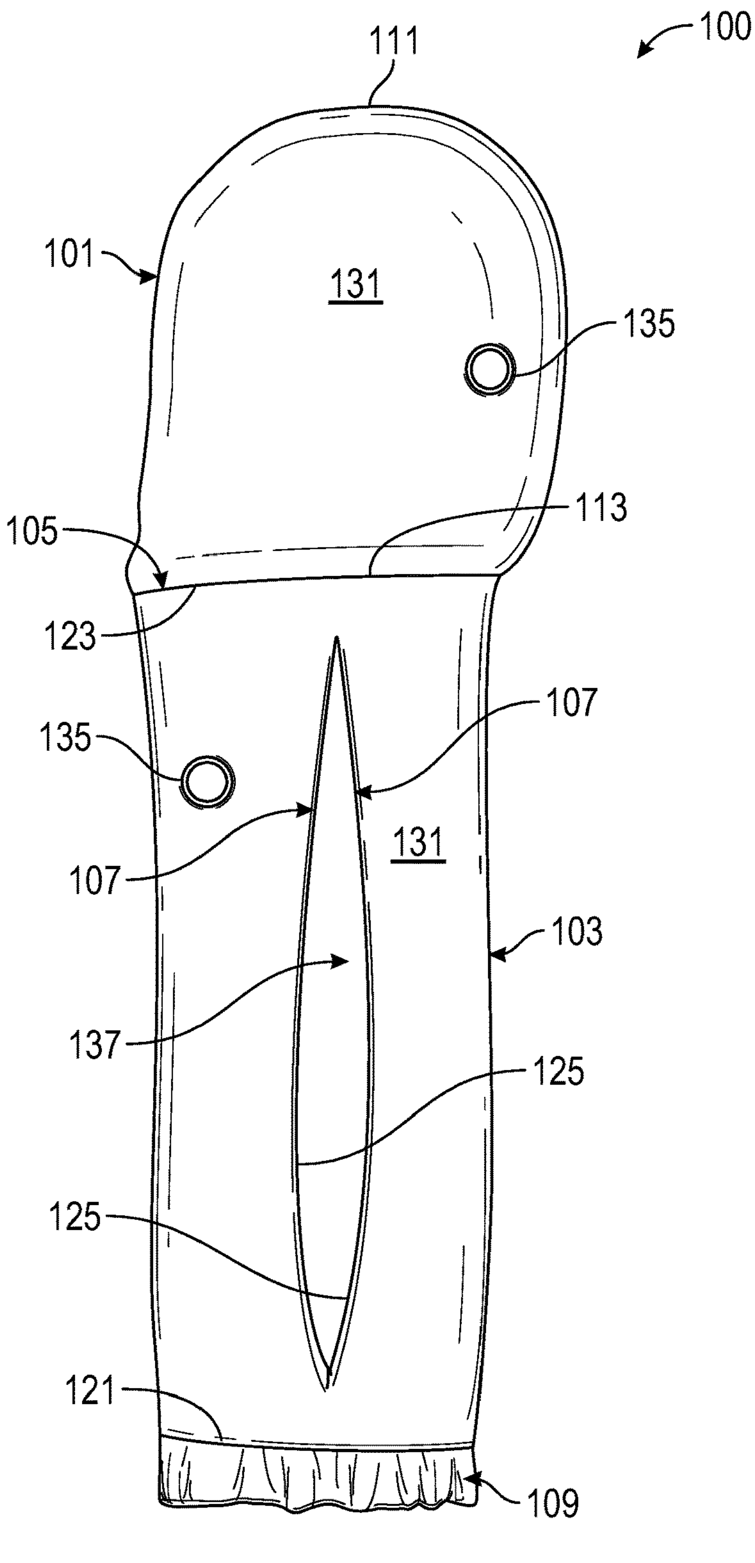
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FIG. 1B

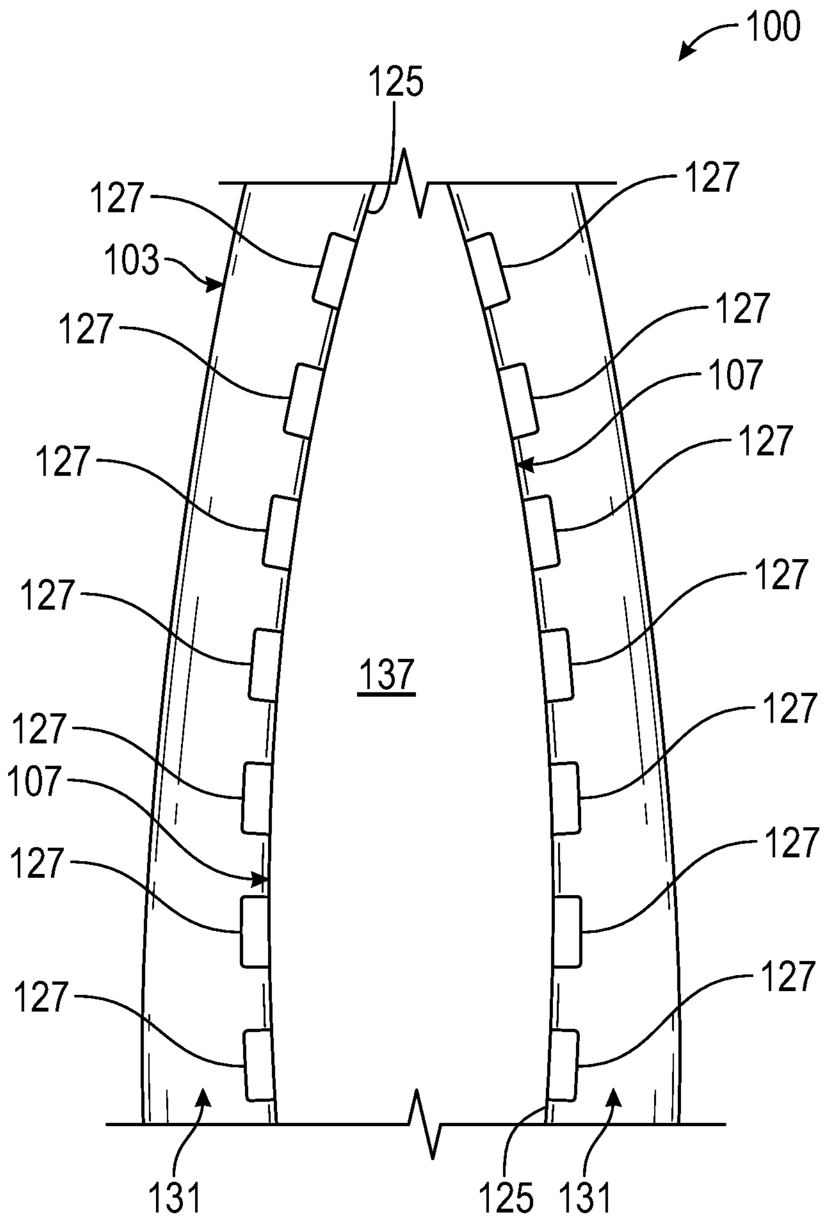

FIG. 1C

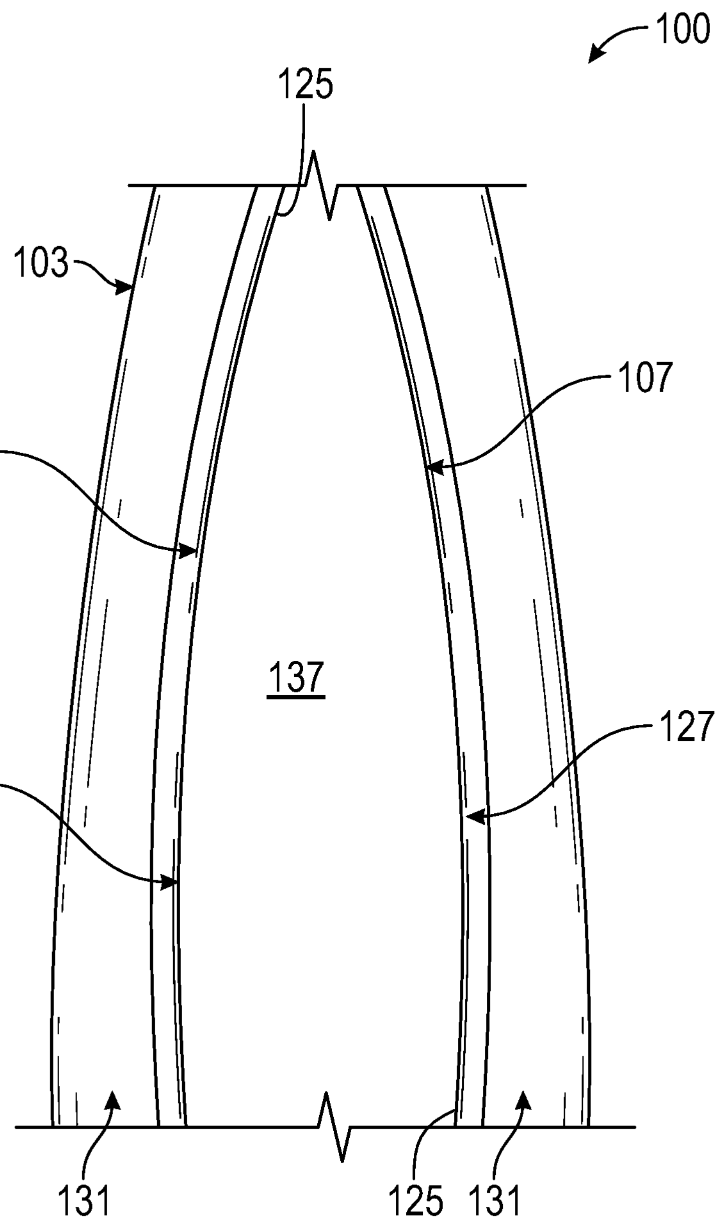

FIG. 1D

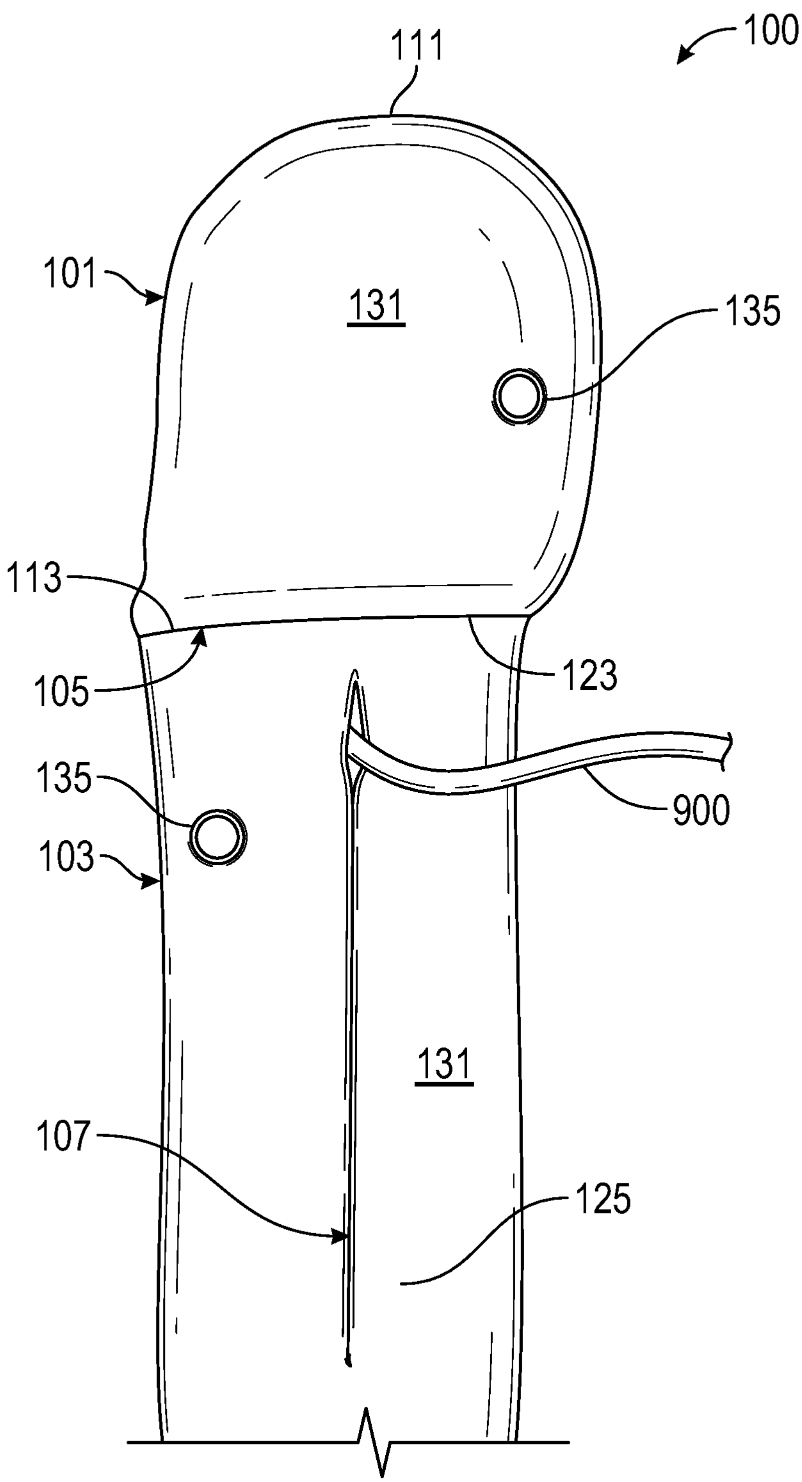

FIG. 1E

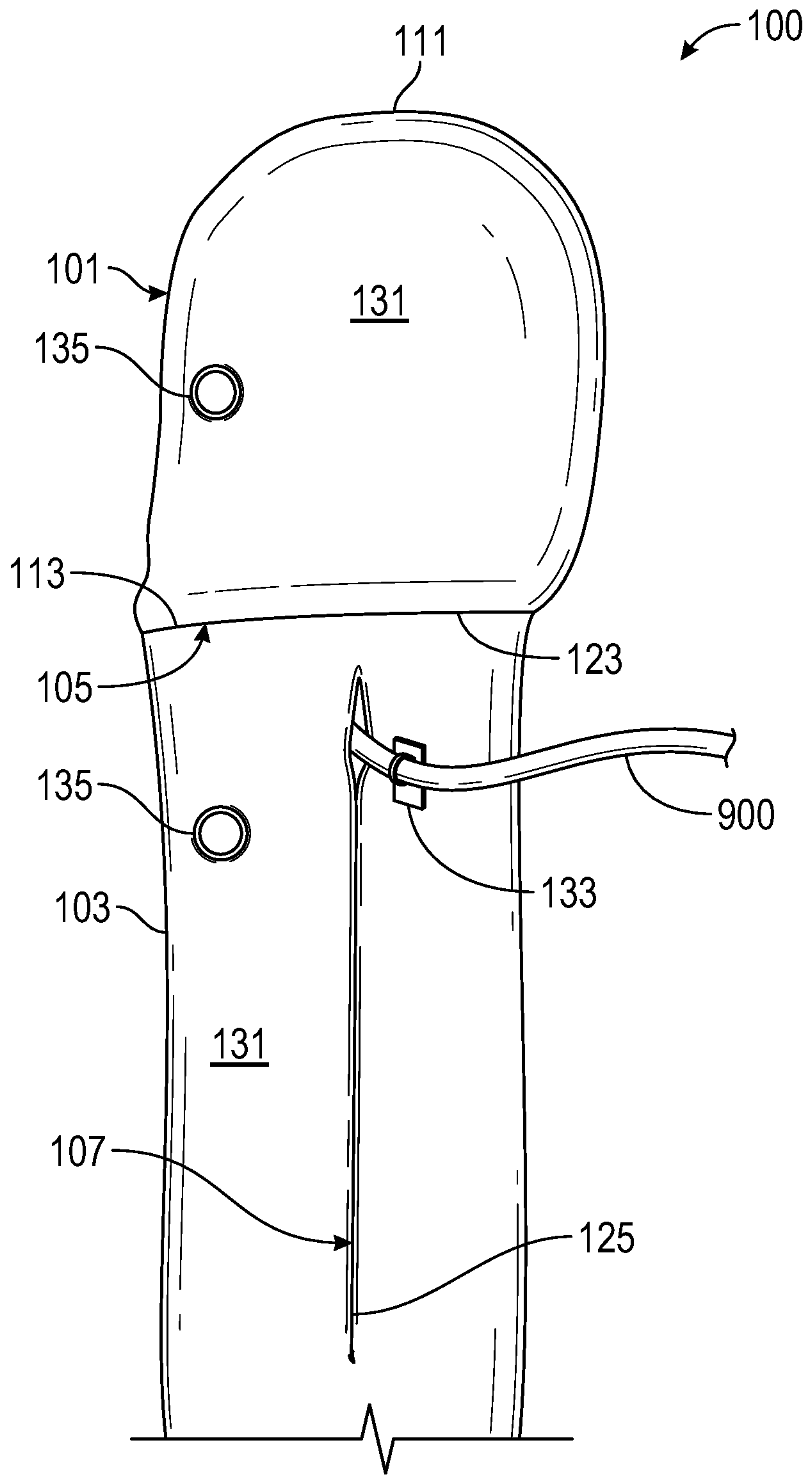

FIG. 1F

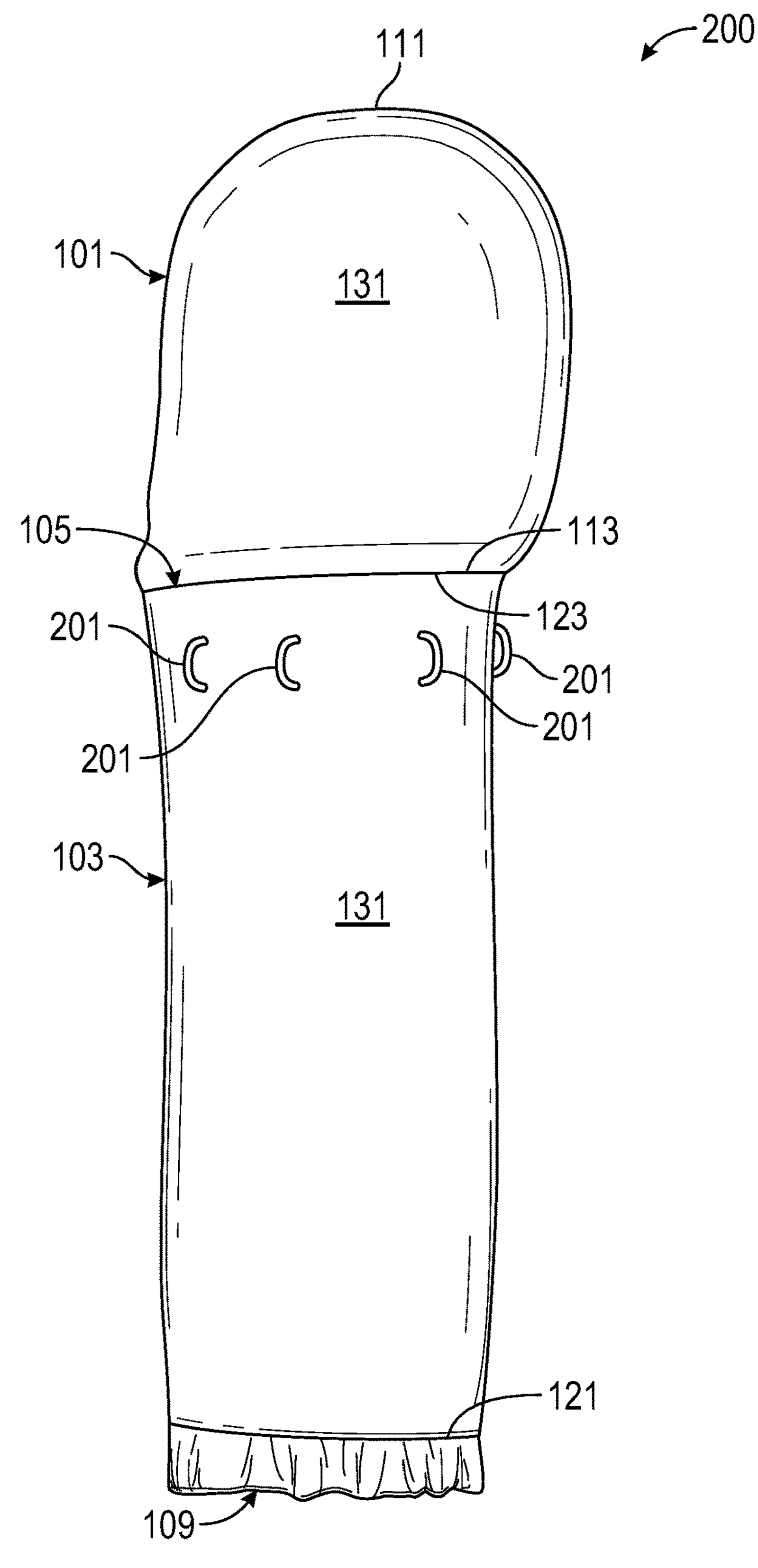

FIG. 2

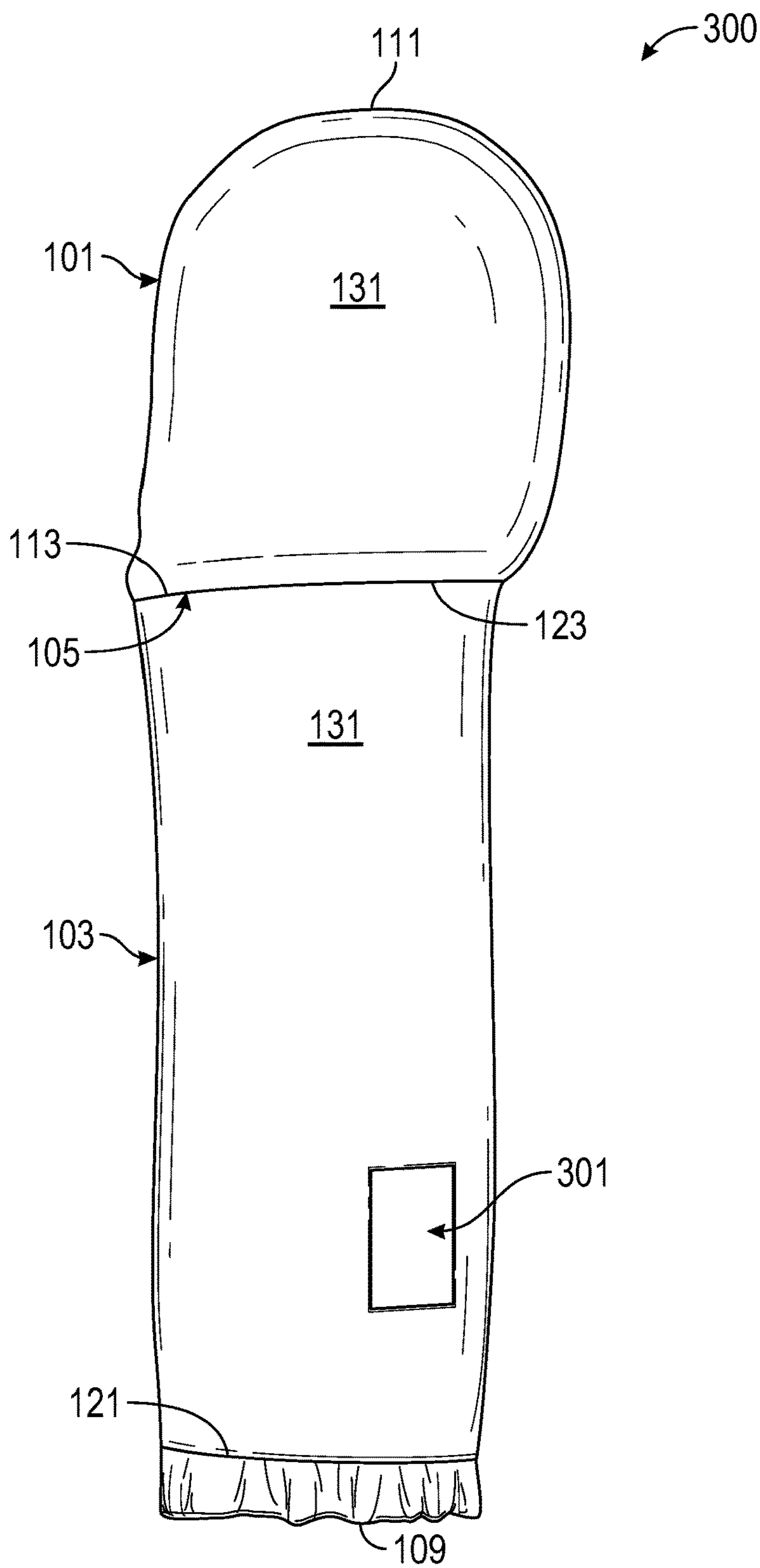

FIG. 3

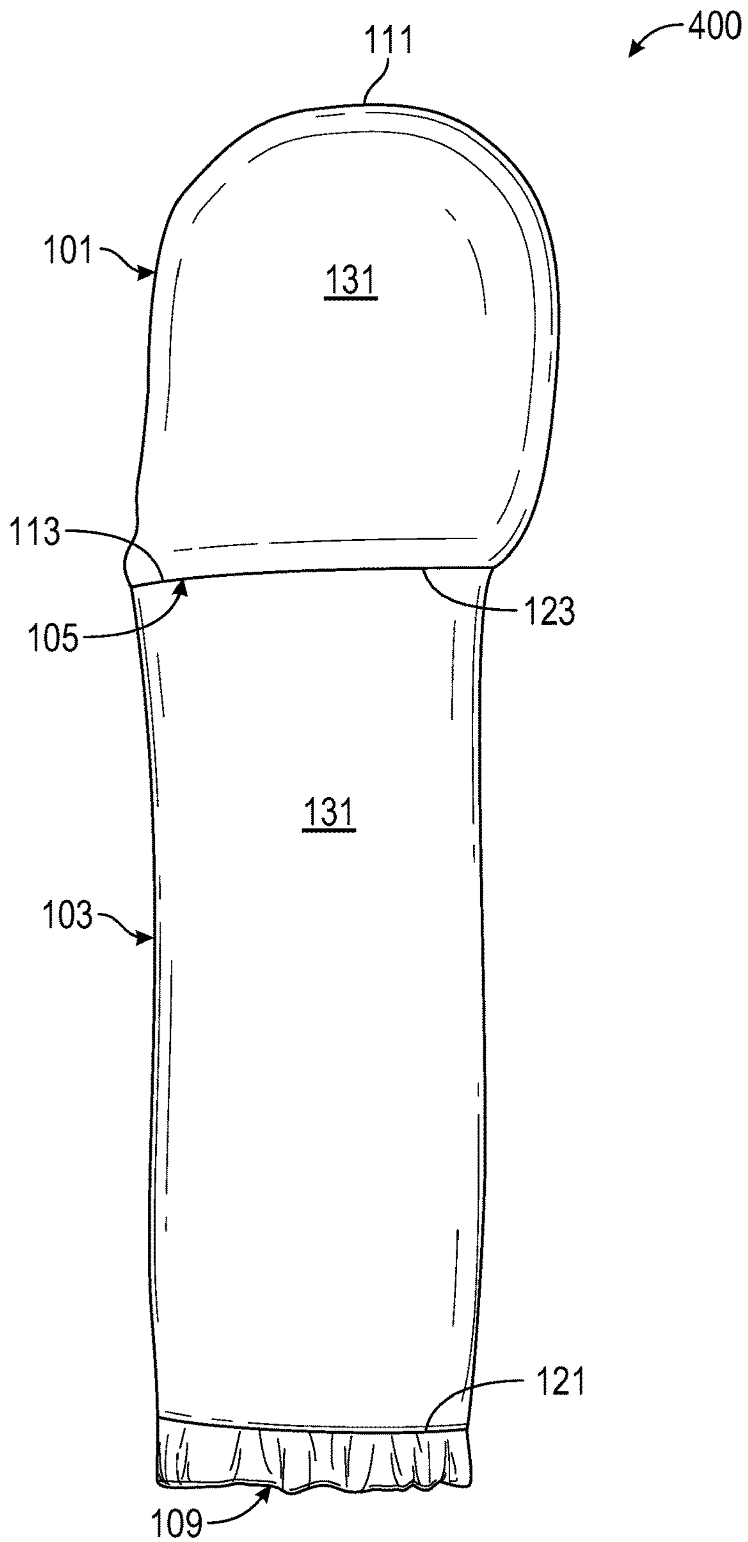

FIG. 4A

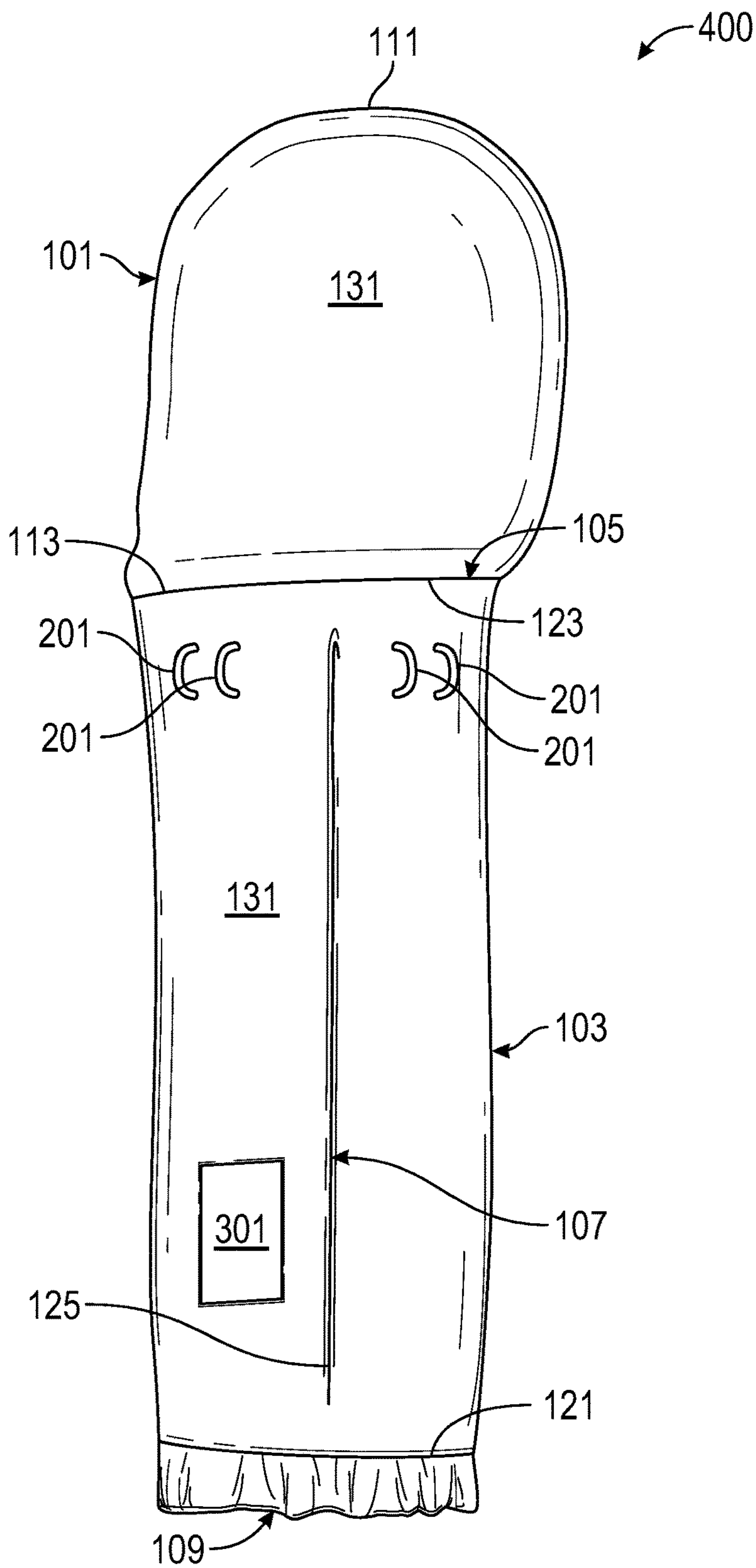
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FIG. 4B

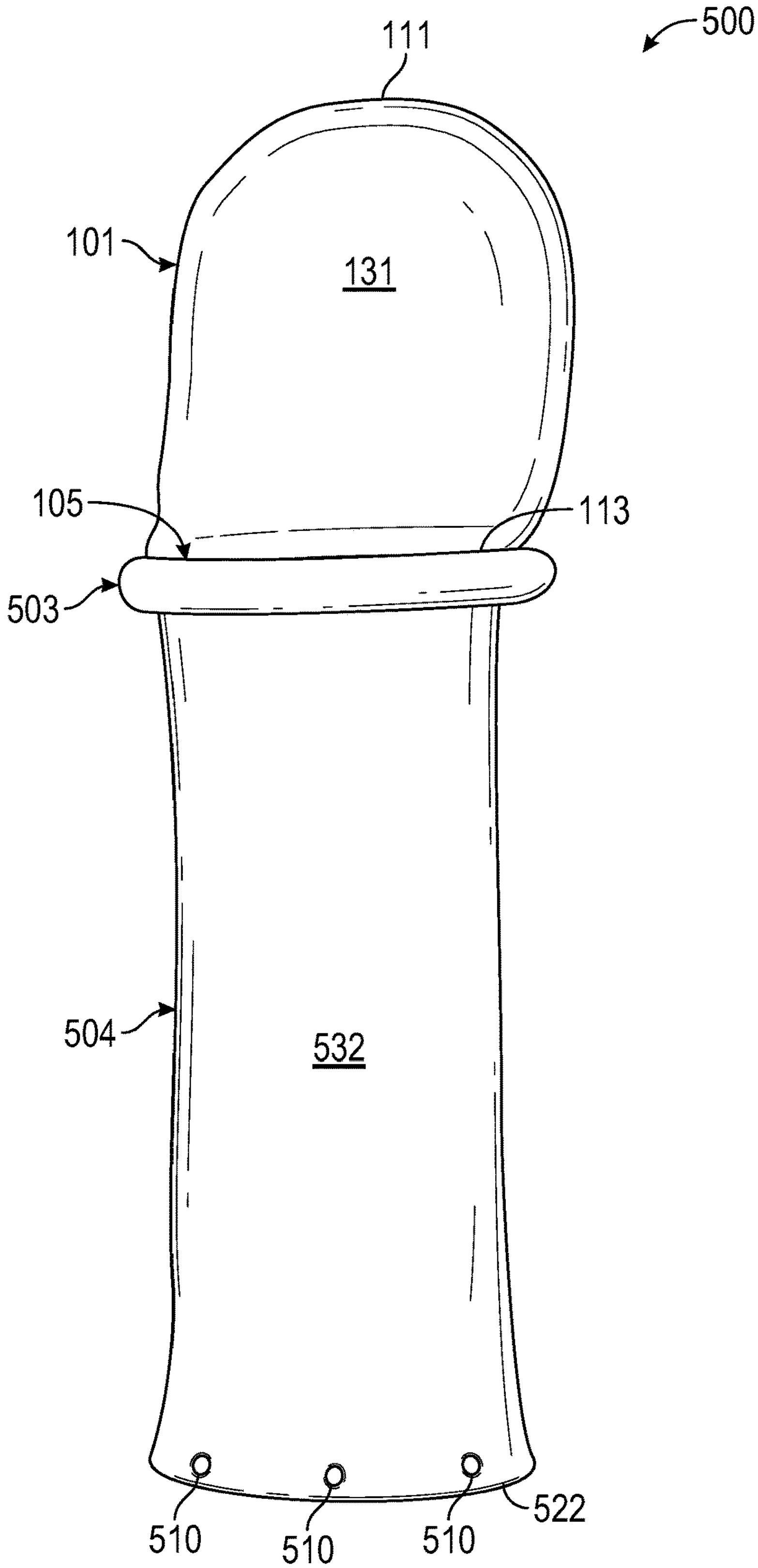


FIG. 5A

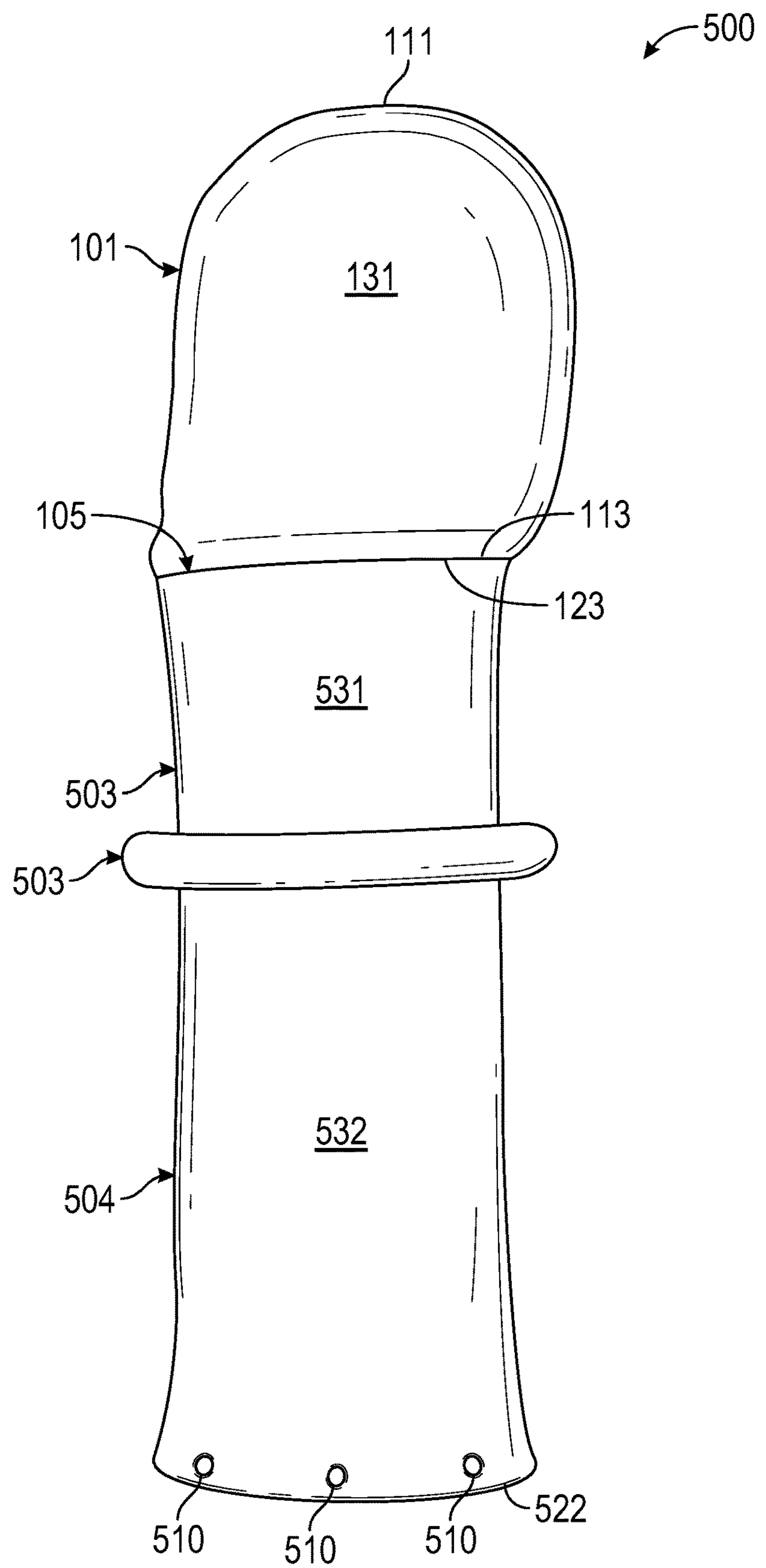


FIG. 5B

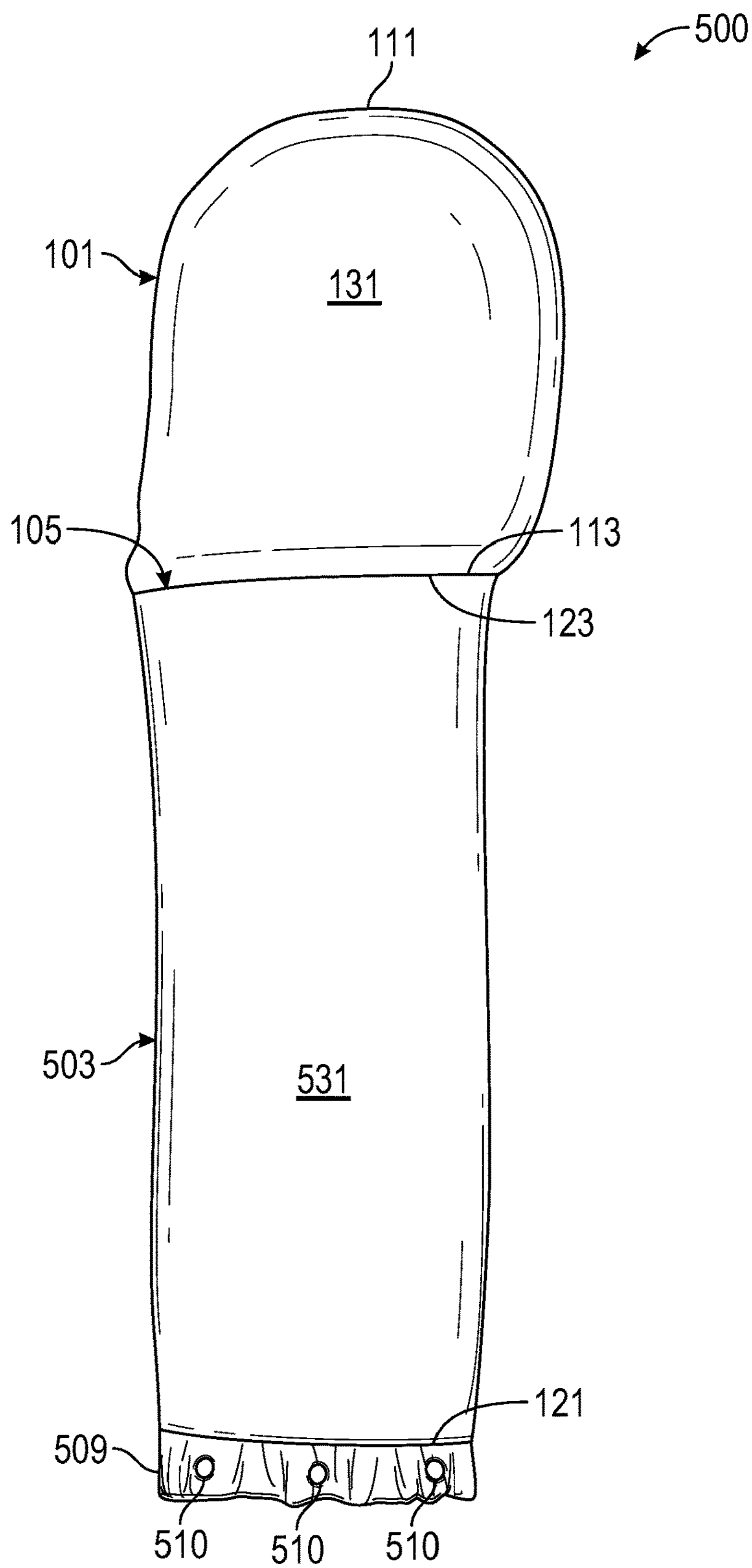
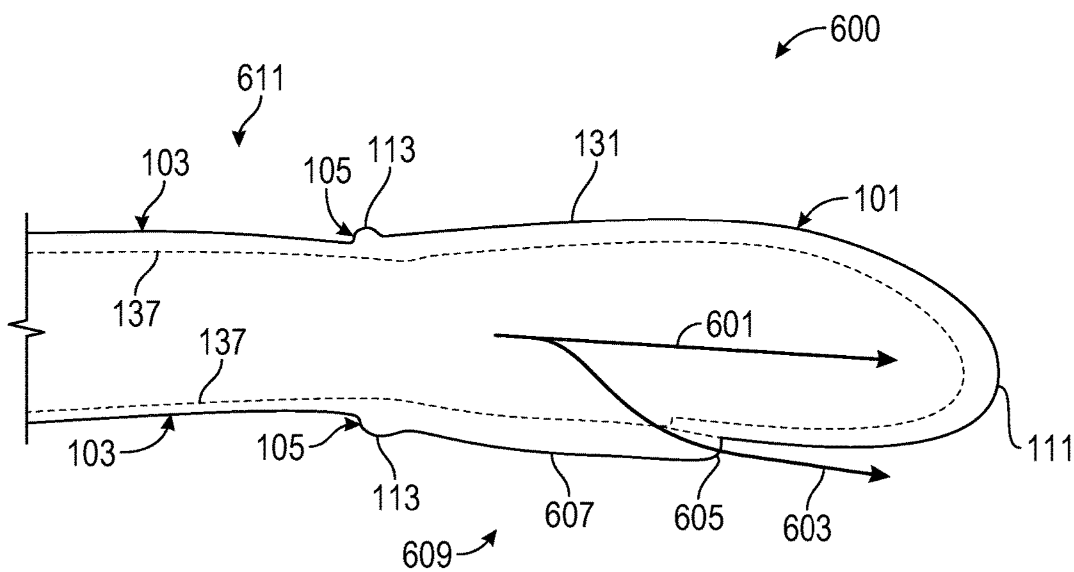


FIG. 5C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609

FIG. 6A

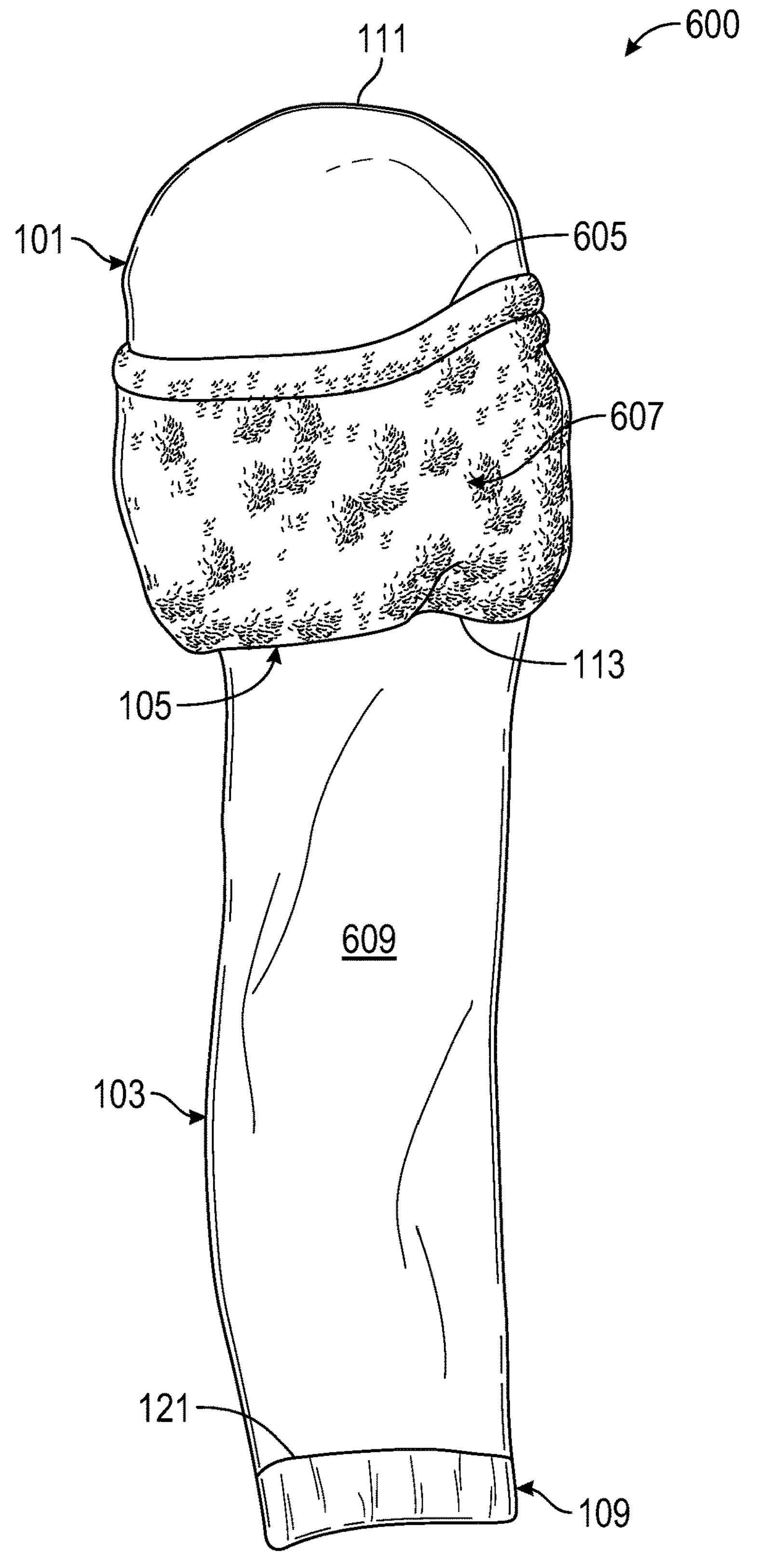

FIG. 6B

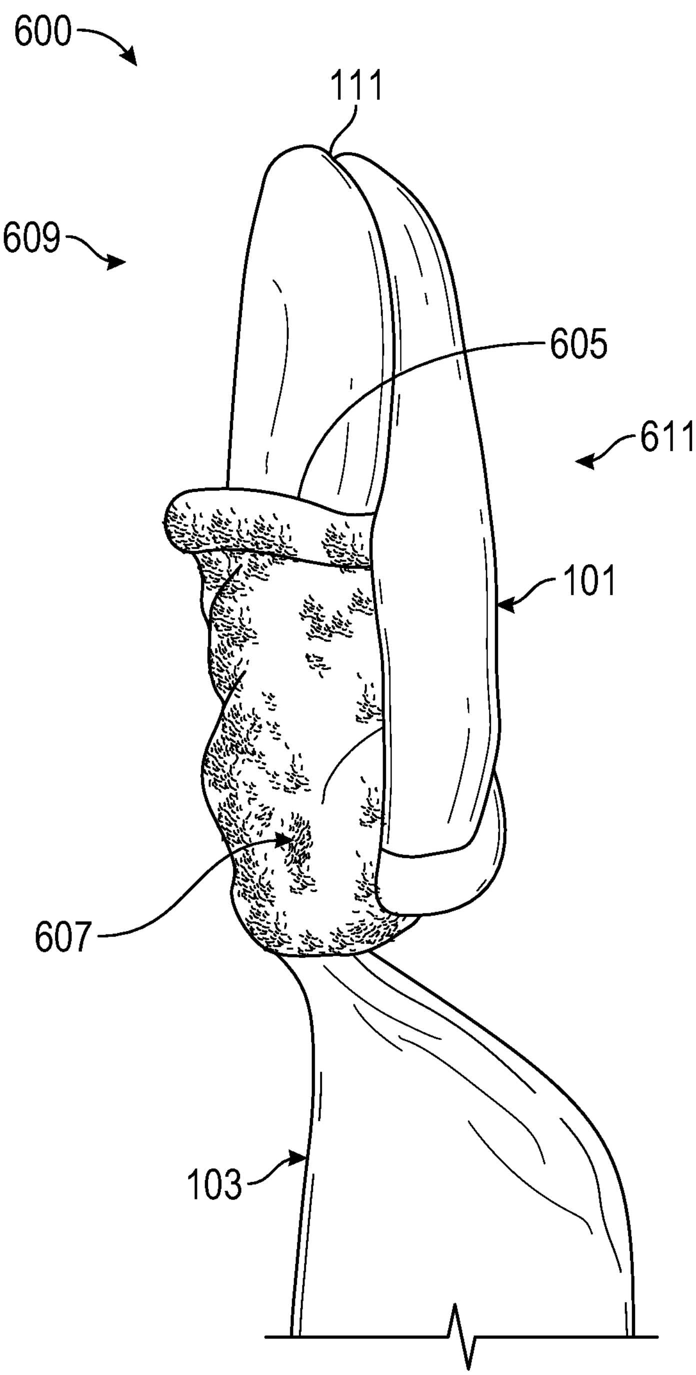

FIG. 6C

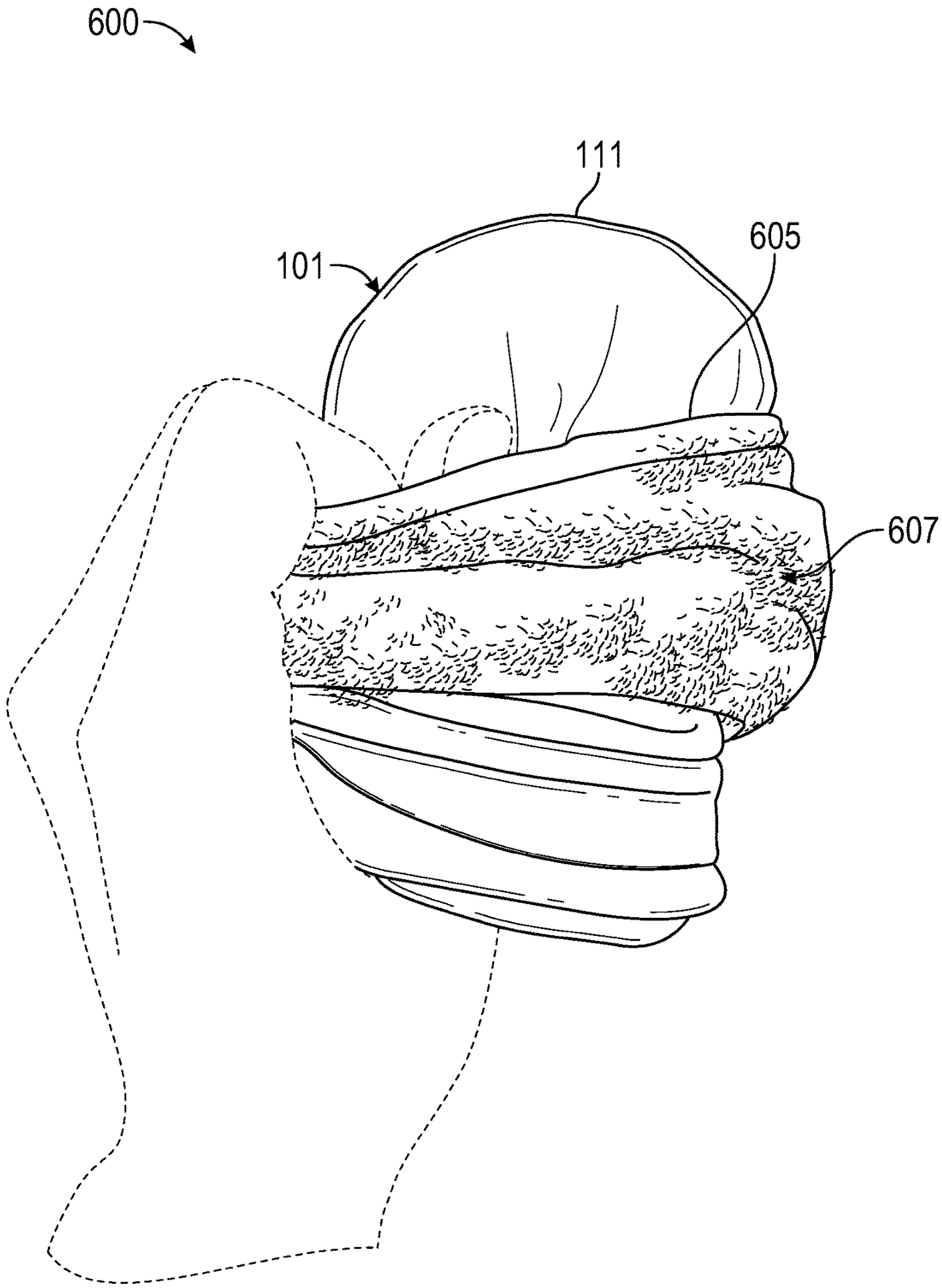

FIG. 6D

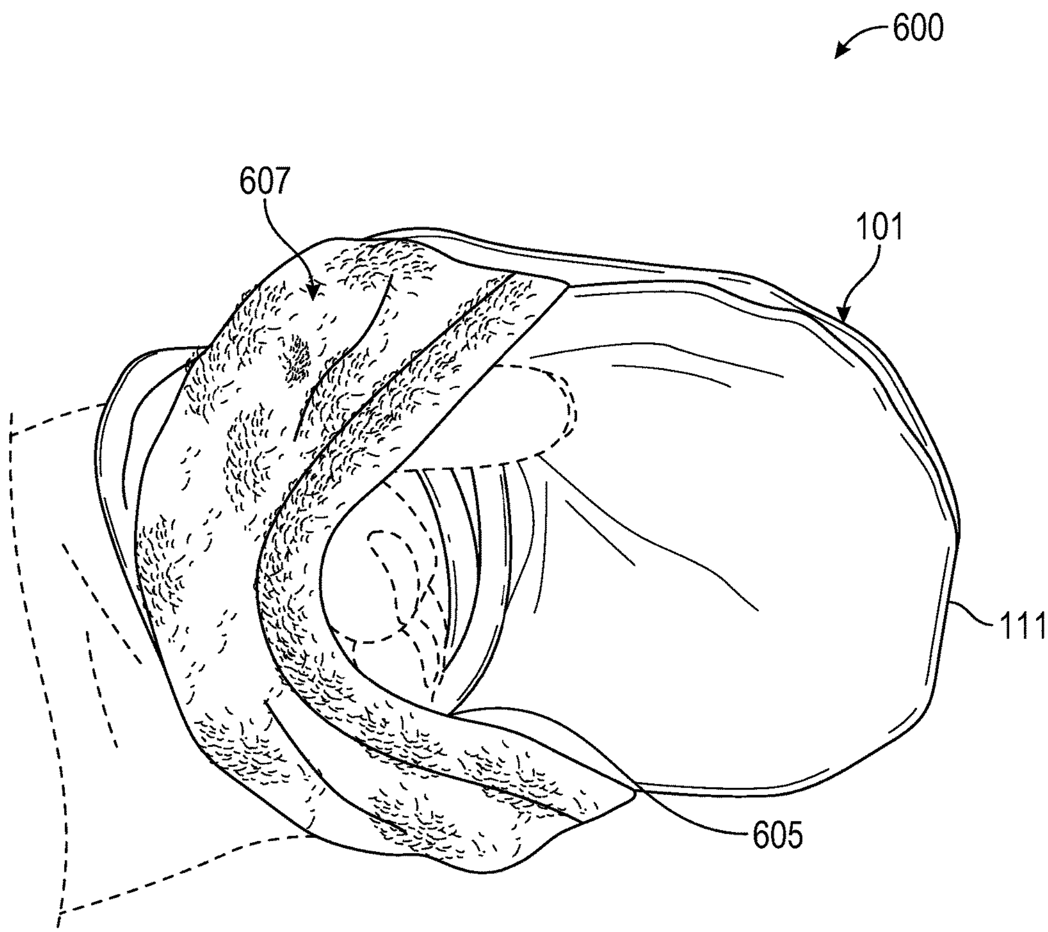

FIG. 6E

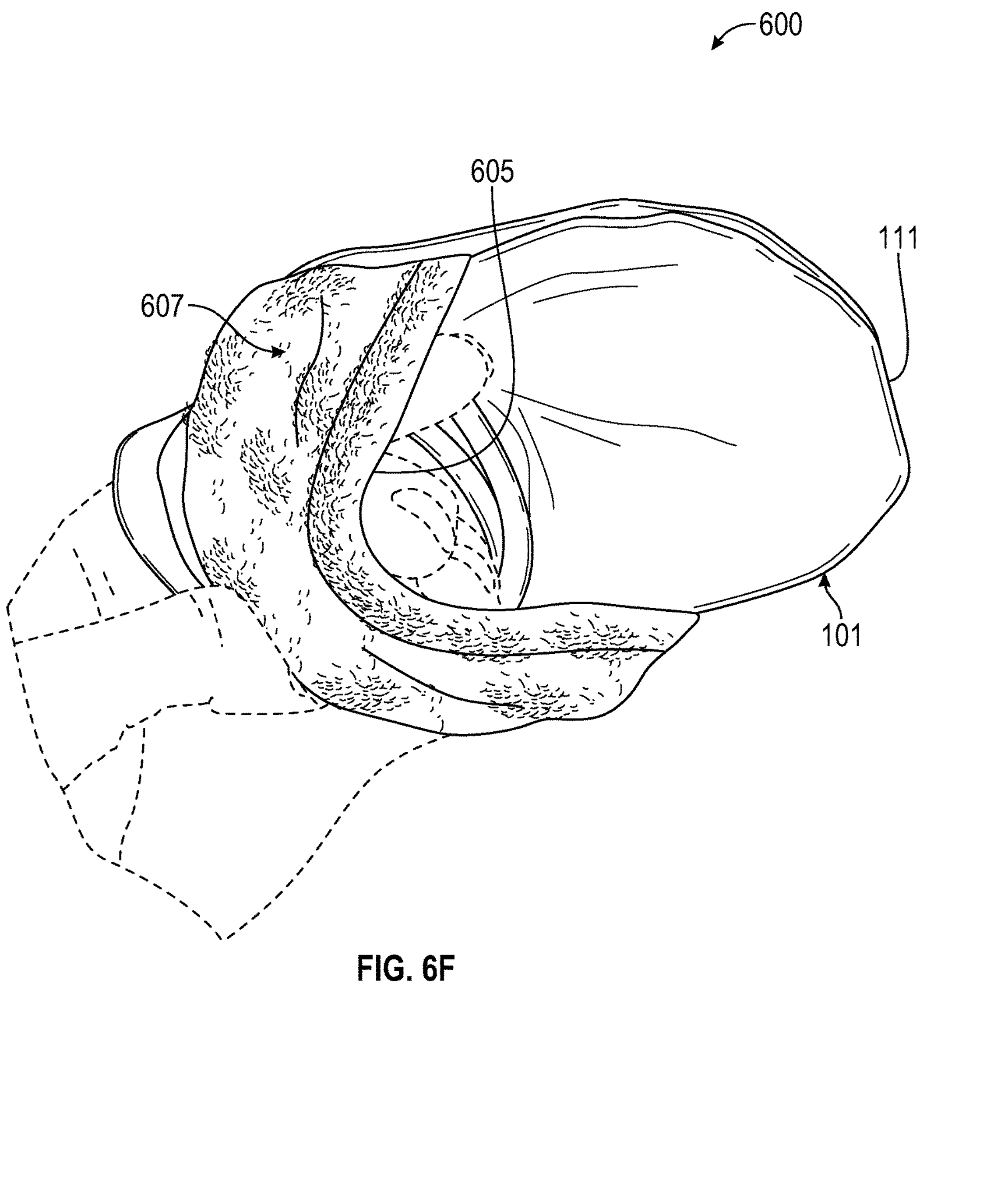

FIG. 6F

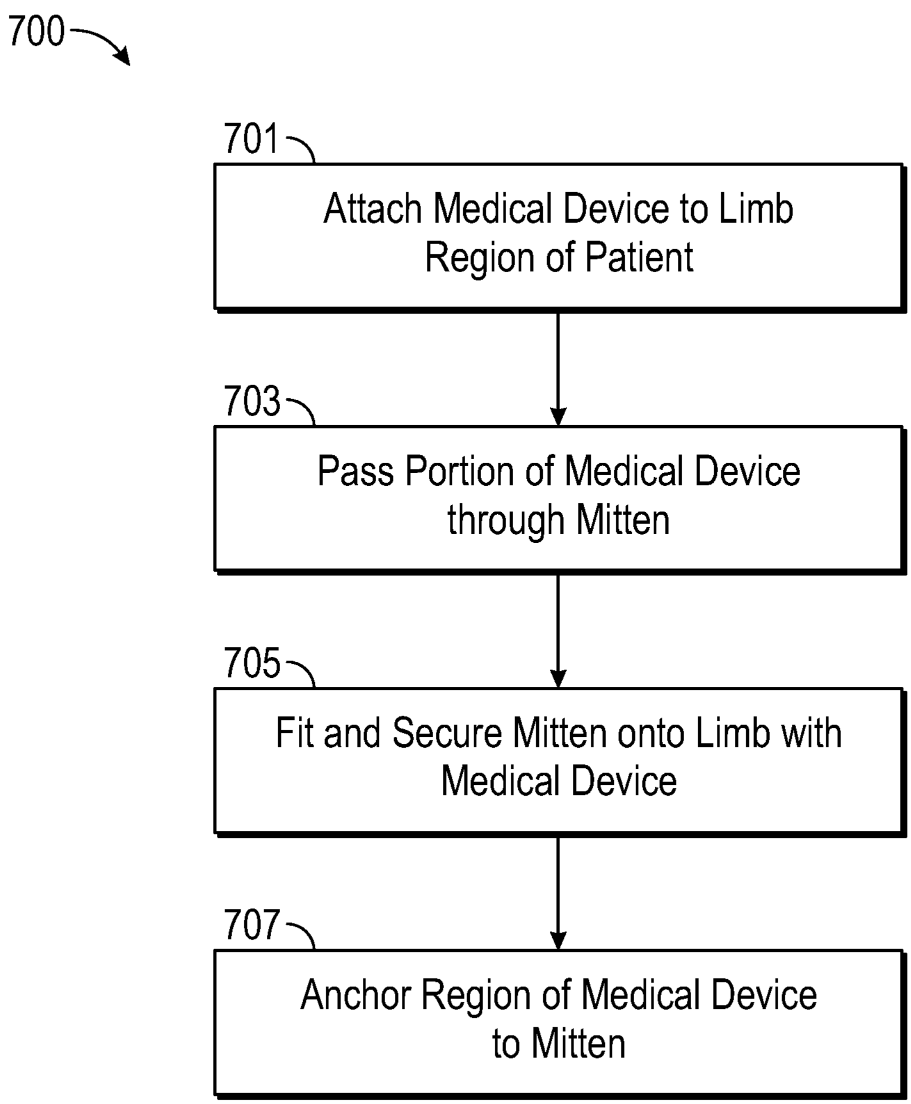
700
701
Attach Medical Device to Limb Region of Patient
703
Pass Portion of Medical Device through Mitten
705
Fit and Secure Mitten onto Limb with Medical Device
707
Anchor Region of Medical Device to Mitten

FIG. 7A

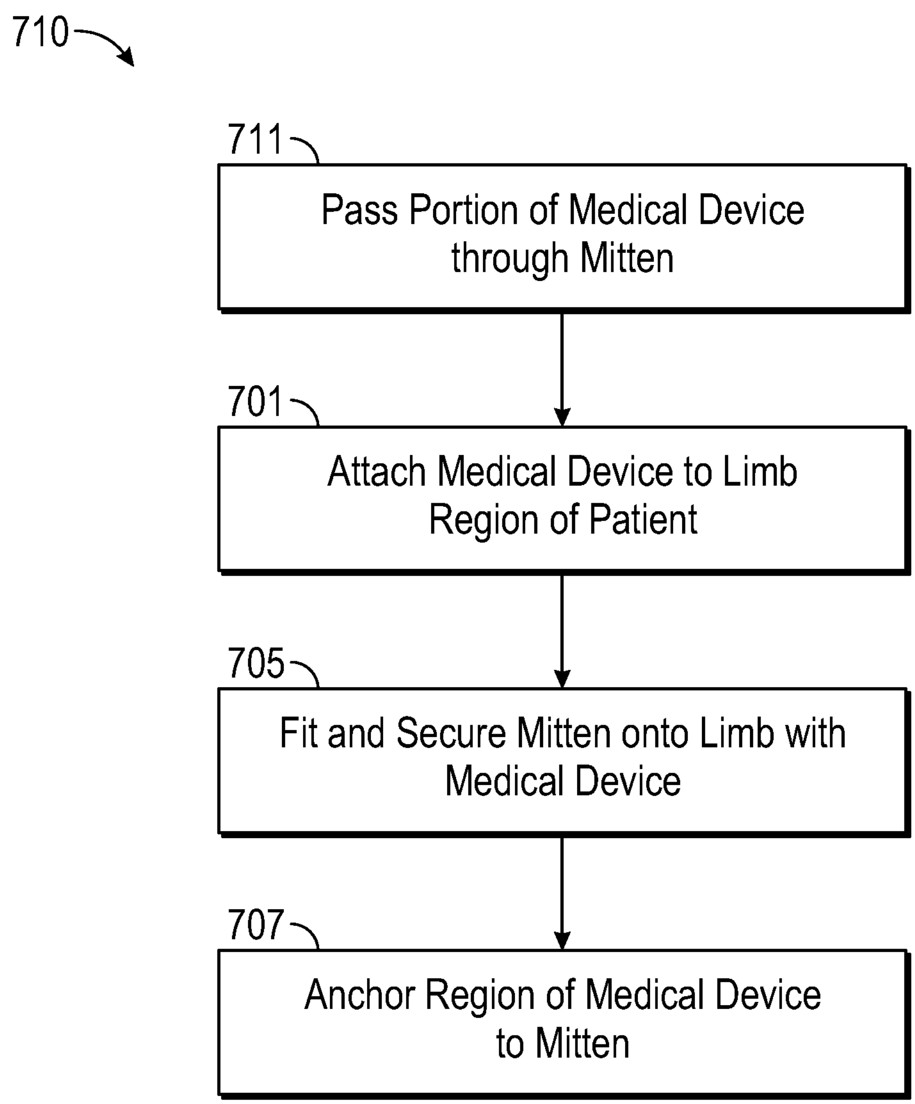
710
711
Pass Portion of Medical Device through Mitten
701
Attach Medical Device to Limb Region of Patient
705
Fit and Secure Mitten onto Limb with Medical Device
707
Anchor Region of Medical Device to Mitten

FIG. 7B

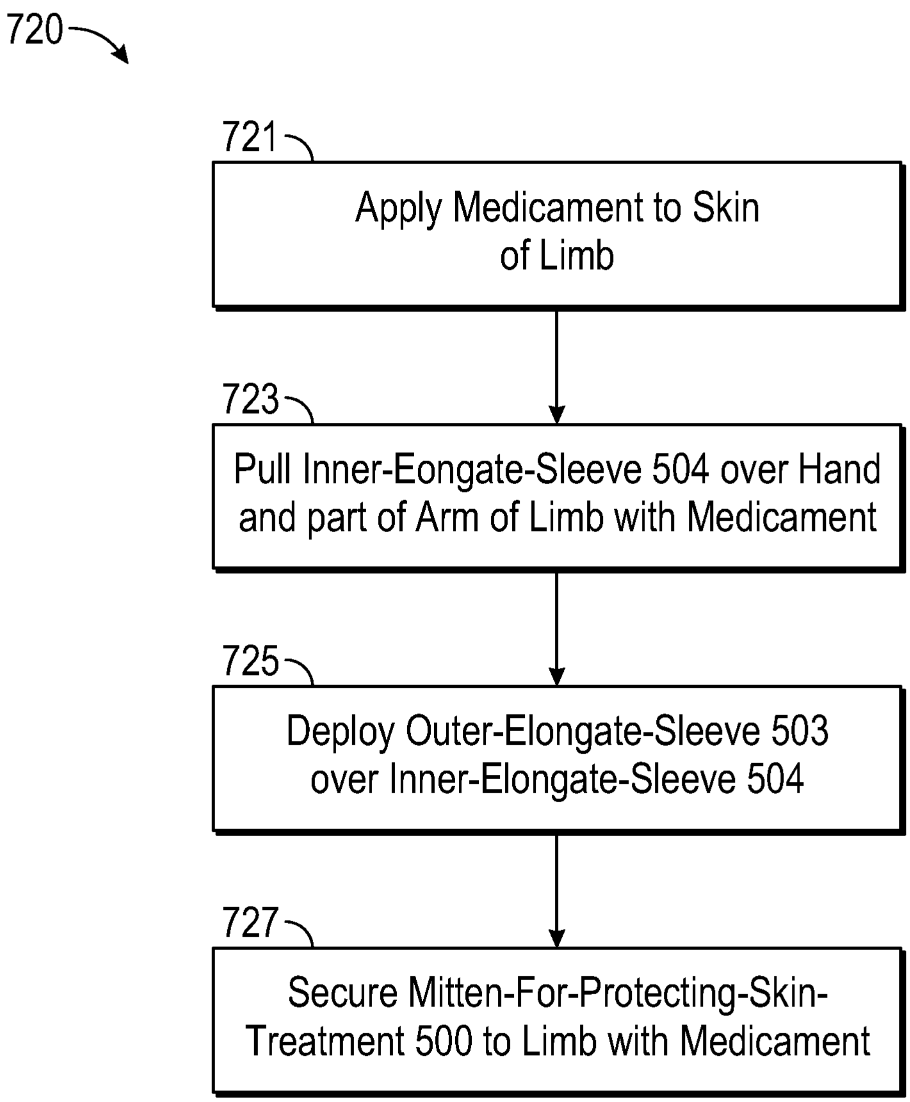
720
721
Apply Medicament to Skin of Limb
723
Pull Inner-Eongate-Sleeve 504 over Hand and part of Arm of Limb with Medicament
725
Deploy Outer-Elongate-Sleeve 503 over Inner-Elongate-Sleeve 504
727
Secure Mitten-For-Protecting-Skin-Treatment 500 to Limb with Medicament

FIG. 7C

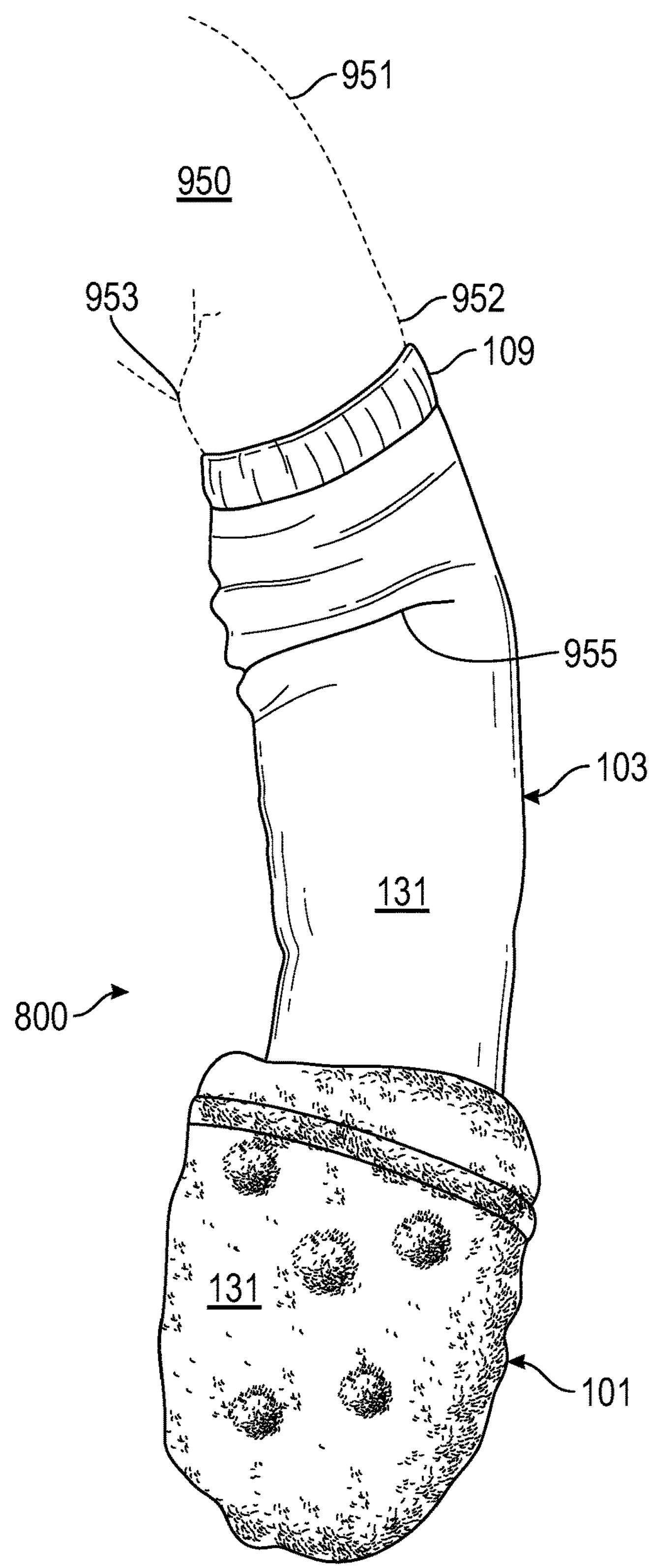

FIG. 8

PATIENT MITTENS

PRIORITY NOTICE

[0001] The present application claims priority under 35 U.S.C. § 119(e) to U.S. Provisional Patent Application Ser. No. 62/456,116 filed on Feb. 8, 2017, the disclosure of which is incorporated herein by reference in its entirety.

TECHNICAL FIELD OF THE INVENTION

[0002] The present invention relates in general to mittens (e.g., hand coverings) attached to arm sleeves (e.g., arm coverings) and more specifically to such mittens for use with patients with certain medical needs.

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BACKGROUND OF THE INVENTION

[0005] Newborn human babies, infants, and prematurely born babies (preemies) often have fingernails of sufficient length to cause scratching injuries to themselves and are typically not yet able to control themselves sufficiently to not scratch themselves and cause injury to themselves. Thus there is a need for protective mittens for this class of people. And the art has responded by providing protective mittens. However, most of those protective mittens suffered from being very susceptible to falling off, because the sleeve portion, if any, was not long enough and the arm grabbing portion of some such mittens was squeezing the arm below the elbow.

[0006] Preemies have additional protective mitten needs above and beyond the need to protect from self-scratching. Because of their premature birth, preemies spend significant amounts of time in incubators and attached to various medical device equipment, such as, but not limited to, vital sign monitoring devices, IVs, feeding tubing, ventilators, and the like. Because of natural movements of the preemie, such medical device equipment routinely becomes dissociated (e.g., disconnected) from the preemie, requiring re-attachment, causing undesirable discomfort and pain in the preemie. Thus, it would be desirable to minimize such medical device equipment from becoming dissociated from the preemie. And an appropriate patient mitten could satisfy this need by making it harder for the preemie to inadvertently dissociate such attached medical device equipment. The appropriate patient mitten could cover and protect the points of attachment to the preemie of such medical device equipment.

[0007] However, preemies also need sufficient access to UV (ultraviolet) light for the production of vitamin D and so covering the arms of the preemie with a sleeve of the patient mitten may create an unexpected additional problem. And so there may be a need for a UV permeable patient mitten, that allows sufficient UV light to reach the preemie, but still functions to minimize dissociation of the various attached medical device equipment, may also still function to protect the preemie from self-inflicted scratches.

[0008] Various skin problems (e.g., patches of dry skin, rashes, eczema, and the like) are also very common with newborn human babies, infants, preemies, and toddlers. Presently, care givers apply various creams, lotions, salves, ointments, and medicaments to the affected skin areas. However, when the affected skin area may be the arms, hands, and/or fingers, treating such areas can be problematic as these areas are prone to having the applied treatment lost to adsorption into clothing or lost due to interactions in the environment. It would be desirable if such affected skin areas, after treatment, could then be covered by an appropriate patient mitten that would prevent the applied treatment being lost to the environment or adsorbed into clothing.

[0009] There is a need in the art for various patient mittens to address the above identified problems, such as to prevent self-inflicted scratching, to minimize dissociation of attached medical device equipment, to permit vitamin D production, and/or to protect treated skin from losing the treatment from the treated skin.

[0010] It is to these ends that the present invention has been developed.

BRIEF SUMMARY OF THE INVENTION

[0011] To minimize the limitations in the prior art, and to minimize other limitations that will be apparent upon reading and understanding the present specification, the present invention describes various embodiments of patient-mittens. Some embodiments of patient-mittens may comprise a hand-cover attached to a hollow elongate-sleeve. The hand-cover may cover the hand and fingers, preventing the patient from scratching themselves. The elongate-sleeve may cover a majority of an arm of the patient. Opposite from the hand-cover, there may be an arm-grabber attached at an end of the elongate-sleeve. This arm-grabber may squeeze the upper arm, above the elbow, to help keep the patient-mitten from coming off. Some embodiments of patient-mittens may include an access-slit on the elongate-sleeve for placing medical tubing (e.g., IVs), vital sign monitoring sensors, and the like in a patient wearing the patient-mitten. The patient-mitten may help to minimize the attached medical tubing and vital sign sensors from becoming dissociated from the patient. Some embodiments of patient-mittens may be UV permeable to encourage vitamin D production in the patient. Some embodiments of patient-mittens may provide a conducive environment for treating skin conditions on the arm, hand, or fingers, that the worn patient-mitten may then cover and protect.

[0012] It is an objective of the present invention to provide a patient mitten to prevent self-inflicted scratching.

[0013] It is another objective of the present invention to provide a patient mitten that may provide warmth and/or comfort to the patient (wearer).

[0014] It is another objective of the present invention to provide a patient mitten that covers and protects various medical device equipment attached to a patient's arm, hand, and/or fingers from becoming inadvertently dissociated.

[0015] It is another objective of the present invention to provide a patient mitten that covers and protects various medical device equipment attached to a patient's arm, hand, and/or fingers from becoming inadvertently dissociated, but while also providing a means for the care giver to access such attached medical device equipment, without having to remove the patient mitten.

[0016] It is another objective of the present invention to provide a patient mitten that may be at least be partially UV permeable, to facilitate vitamin D production in the patient.

[0017] It is another objective of the present invention to provide a patient mitten that may be at least partially liquid impermeable, e.g., water resistant or waterproof.

[0018] It is another objective of the present invention to provide a patient mitten that may be at least be partially liquid impermeable, e.g., water resistant or waterproof; but that is also at least partially air permeable, to provide for "breathing" and/or ventilation.

[0019] It is another objective of the present invention to provide a patient mitten that may be at least partially soft and/or flexible.

[0020] It is yet another objective of the present invention to provide a patient mitten that may protect treated skin beneath the worn patient mitten.

[0021] These and other advantages and features of the present invention are described herein with specificity so as to make the present invention understandable to one of ordinary skill in the art, both with respect to how to practice the present invention and how to make the present invention.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0022] Elements in the figures have not necessarily been drawn to scale in order to enhance their clarity and improve understanding of these various elements and embodiments of the invention. Furthermore, elements that are known to be common and well understood to those in the industry are not depicted in order to provide a clear view of the various embodiments of the invention.

[0023] FIG. **1**A may depict an embodiment of a patient-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0024] FIG. **1**B may depict an embodiment of a patient-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0025] FIG. **1**C may depict an elongate-sleeve portion of a patient-mitten, depicting an access-slit and slit-fastener, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0026] FIG. **1**D may depict an elongate-sleeve portion of a patient-mitten, depicting an access-slit and slit-fastener, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0027] FIG. **1**E may depict a partial view of a patient-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, showing a section of medical tubing emerging from an access-slit in an elongate-sleeve of that patient-mitten.

[0028] FIG. **1**F may depict a partial view of a patient-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, showing a section of medical tubing emerging from an access-slit in an elongate-sleeve of that patient-mitten.

[0029] FIG. **2** may depict an embodiment of a mitten-with-attachment-anchors, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, wherein at least one attachment-anchor may be shown attached to an elongate-sleeve of the mitten-with-attachment-anchors.

[0030] FIG. **3** may depict an embodiment of a mitten-with-pocket, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, wherein at least one pocket may be shown attached to an elongate-sleeve of the mitten-with-pocket.

[0031] FIG. **4**A may depict an embodiment of a UV-permeable-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0032] FIG. **4**B may depict an embodiment of a UV-permeable-mitten, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm.

[0033] FIG. **5**A may depict an embodiment of a mitten-for-protecting-skin-treatment, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; wherein an outer-elongate-sleeve may be shown in a rolled configuration.

[0034] FIG. **5**B may depict the embodiment of the mitten-for-protecting-skin-treatment from FIG. **5**A, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; but wherein the outer-elongate-sleeve may be shown in a partially unrolled (partially deployed) configuration.

[0035] FIG. **5**C may depict the embodiment of the mitten-for-protecting-skin-treatment from FIG. **5**A, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; but wherein the outer-elongate-sleeve may be shown in a completely unrolled (fully deployed) configuration.

[0036] FIG. **6**A may depict a longitudinal cross-section through an embodiment of a mitten-with-finger-opening.

[0037] FIG. **6**B may depict the embodiment of the mitten-with-finger-opening from FIG. **6**A, from a ventral (bottom) view.

[0038] FIG. **6**C may depict the embodiment of the mitten-with-finger-opening from FIG. **6**A, from a partial side view and showing an opening-for-fingers.

[0039] FIG. **6**D may depict the embodiment of the mitten-with-finger-opening from FIG. **6**A, shown scrunched up with a thumb passing through an elongate-sleeve and the opening-for-fingers.

[0040] FIG. **6**E may depict the embodiment of the mitten-with-finger-opening from FIG. **6**A, shown scrunched up with fingers passing through the elongate-sleeve and the opening-for-fingers.

[0041] FIG. **6**F may depict the embodiment of the mitten-with-finger-opening from FIG. **6**A, shown scrunched up with fingers passing through the elongate-sleeve and the opening-for-fingers.

[0042] FIG. **7**A may depict steps in a method of mitigating dissociation of a medical device from a patient.

[0043] FIG. **7**B may depict steps in a method of mitigating dissociation of a medical device from a patient.

[0044] FIG. **7**C may depict steps in a method of protecting treated skin of a limb.

[0045] FIG. **8** may depict a patient-mitten being properly worn over a majority of a limb (e.g., a left arm) of a given patient.

REFERENCE NUMERAL SCHEDULE

[0046] **100** patient-mitten **100**
[0047] **101** hand-covering **101**
[0048] **103** elongate-sleeve **103**
[0049] **105** wrist-union **105**
[0050] **107** access-slit **107**
[0051] **109** arm-grabber **109**
[0052] **111** finger-tip-end **111**
[0053] **113** wrist-end **113**
[0054] **121** proximal-end **121**
[0055] **123** distal-end **123**
[0056] **125** complimentary-edges **125**
[0057] **127** slit-fastener **127**
[0058] **129** break-fasteners **129**
[0059] **131** exterior **131**
[0060] **133** tubing-anchor **133**
[0061] **135** tubing-hole **135**
[0062] **137** interior-surface **137**
[0063] **200** mitten-with-attachment-anchors **200**
[0064] **201** attachment-anchors **201**
[0065] **300** mitten-with-pocket **300**
[0066] **301** pocket **301**
[0067] **400** UV-permeable-mitten **400**
[0068] **500** mitten-for-protecting-skin-treatment **500**
[0069] **503** outer-elongate-sleeve **503**
[0070] **504** inner-elongate-sleeve **504**
[0071] **509** arm-grabber **509**
[0072] **510** fastener-for-arm-grabber **510**
[0073] **522** flare-terminal-end **522**
[0074] **531** exterior-of-outer-elongate-sleeve **531**
[0075] **532** exterior-of-inner-elongate-sleeve **532**
[0076] **600** mitten-with-finger-opening **600**
[0077] **601** fully-covered-configuration **601**
[0078] **603** uncovered-configuration **603**
[0079] **605** opening-for-fingers **605**
[0080] **607** cover-flap **607**
[0081] **609** ventral-side **609**
[0082] **611** dorsal-side **611**
[0083] **700** method of mitigating dissociation of medical device from patient **700**
[0084] **701** step of attaching medical device to limb of patient **701**
[0085] **703** step of passing portion of medical device through mitten **703**
[0086] **705** step of fitting and securing mitten onto limb with medical device **705**
[0087] **707** step of anchoring region of medical device to mitten **707**
[0088] **710** method of mitigating dissociation of medical device from patient **710**
[0089] **711** step of passing portion of medical device through mitten **711**
[0090] **720** method of protecting treated skin of limb **720**
[0091] **721** step of applying medicament to skin of limb **721**
[0092] **723** step of pulling "inner-elongate-sleeve **504**" over limb with medicament **723**
[0093] **725** step of deploying "outer-elongate-sleeve **503**" over "inner-elongate-sleeve **504**" **725**
[0094] **727** step of securing "mitten-for-protecting-skin-treatment **500**" to limb with medicament **727**
[0095] **800** patient-mitten **800**
[0096] **900** medical tubing **900**
[0097] **950** patient **950**
[0098] **951** shoulder **951**
[0099] **952** upper arm **952**
[0100] **953** armpit region **953**
[0101] **955** elbow region **955**

DETAILED DESCRIPTION OF THE INVENTION

[0102] In the following discussion that addresses a number of embodiments and applications of the present invention, reference is made to the accompanying drawings that form a part thereof, where depictions are made, by way of illustration, of specific embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and changes may be made without departing from the scope of the invention.

[0103] FIG. **1**A may depict an embodiment of a patient-mitten **100**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. In some embodiments, patient-mitten **100** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, access-slit **107**, and arm-grabber **109**. In some embodiments, hand-covering **101** may be sized to substantially cover a hand and fingers of the patient wearing patient-mitten **100**. In some embodiments, elongate-sleeve **103** may be sized to substantially cover a majority of an arm of the patient. In some embodiments, elongate-sleeve **103** may be sized to cover at least a forearm and an elbow of a given arm of the patient. In some embodiments, hand-covering **101** may be attached to elongate-sleeve **103** at wrist-union **105**. In some embodiments, access-slit **107** may be located on elongate-sleeve **103**. In some embodiments, access-slit **107** may be for providing access to portions of the arm within elongate-sleeve **103**. When access-slit **107** may be removably closed, elongate-member **103** may substantially cover the majority of that arm, such as, at least the forearm and elbow of that arm. Access to otherwise covered portions of the arm may be for placing, removing, securing, monitoring, and/or managing medical devices removably attached to the patient. Such medical devices in this context may be medical tubing **900** (e.g., IV tubing), luer-locks, ports (for connecting to medical tubing **900** or for connecting to syringes), vital sign monitoring devices (e.g., an oxygen sensor, pulse sensor, and the like) and their electrical power cords/cabling/wires, and/or the like. See e.g., FIG. **1**A, FIG. **1**E and FIG. **1**F for a depiction of medical tubing **900**. Medical tubing **900** shown in the figures could also be the cabling, wiring, and/or electrical/power/communication cords to various medical devices. In some embodiments, arm-grabber **109** may be for squeezing (gripping) against the arm (e.g., upper arm, above the elbow) when the patient-mitten **100** is properly worn by the patient. Arm-grabber **109** may help to keep patient-mitten **100** properly removably attached to the patient. In some embodiments, arm-grabber **109** may be an elongate member, a hollow annular ring, that may substantially circumscribe a portion of the arm squeezing that portion of the arm. In some embodiments, arm-grabber **109** may be attached to elongate-sleeve **103**.

[0104] Discussing FIG. **1**A, in some embodiments, hand-cover **101** may comprise two opposing ends, a finger-tip-end **111** and a wrist-end **113**. When patient-mitten **100** may be being worn properly by the patient, with fingers extended, then finger-tip-end **111** may cover the fingers and be closer to the patient's finger tips than to the patient's wrist of that limb that is wearing the given patient-mitten **100**. Similarly, when patient-mitten **100** may be being worn properly by the patient, with fingers extended, then wrist-end **113** may be closer to the patient's wrist than to the patient's finger tips of that limb that is wearing the given patient-mitten **100**.

[0105] Continuing discussing FIG. **1**A, in some embodiments, wrist-union **105** may be located at wrist-end **113**. In some embodiments, wrist-union **105** may delineate hand-cover **101** from elongate-sleeve **103**. In some embodiments, wrist-union **105** may not be a separate physical structure, but rather may delineate hand-cover **101** from elongate-sleeve **103**. In some embodiments, wrist-union **105** may be a physical structure, e.g., a seam, where hand-cover **101** is attached to elongate-sleeve **103**. In some embodiments, wrist-union **105** may have elastic properties to at least partially squeeze the wrist of the patient, when the patient-mitten **100** is being properly worn.

[0106] Continuing discussing FIG. **1**A, in some embodiments, hand-cover **101** may be one or more of: substantially constructed from a fabric, substantially soft, substantially flexible, and/or the like. Hand-cover **101** may function to keep the hand and the fingers substantially covered by hand-cover **101** warm. Hand-cover **101** may function to prevent fingernails of the covered fingers from scratching other parts of the patient or articles or care givers.

[0107] In some embodiments, the patient may be selected from: a baby, a newborn, an infant, a prematurely born infant (i.e., a preemie), a toddler, and the like. In some embodiments, the patient may be a person at risk of scratching themselves with their own fingernails and regardless of their age. In some embodiments, the patient may be a person who has at least one medical device attached to their arm, hand, and/or fingers and regardless of their age. Such medical devices in this context may be medical tubing **900** (e.g., IV tubing), luer-locks, ports (for connecting to medical tubing **900** or for connecting to syringes), vital sign monitoring devices (e.g., an oxygen sensor, pulse sensor, and the like), and/or the like. In some embodiments, the patient may be a person at risk of trauma to their skin and regardless of their age; e.g., those with thin or thinning skin. In some embodiments, the patient may be person wearing a given patient-mitten **100** in order to keep hands and/or fingers warm. And of course, it is expressly contemplated that in some applications of use, a wearer of a given patient-mitten **100** need not be a patient. The mittens and/or patient-mittens disclosed herein are for use on a limb (e.g., including the fingers, hand, wrist, forearm, and elbow of that limb) of a person, e.g., the patient.

[0108] Continuing discussing FIG. **1**A, in some embodiments, elongate-sleeve **103** may comprise two opposing ends, a proximal-end **121** and a distal-end **123**. In some embodiments, arm-grabber **109** may be attached to proximal-end **121** and distal-end **123** may be located at wrist-union **105**. In some embodiments, when patient-mitten **100** may be properly worn by the patient, proximal-end **121** may be closest to the bicep/tricep of the patient of the arm that is substantially covered by the elongate-sleeve **103**; and distal-end **123** may be closest to wrist-union **105**. In some embodiments, when patient-mitten **100** may be properly worn by the patient, proximal-end **121** may be closest to an armpit of the patient of the arm that is substantially covered by the elongate-sleeve **103**; and distal-end **123** may be closest to wrist-union **105**. In some embodiments, distal-end **123** of elongate-sleeve **103** may be attached to wrist-end **113** of hand-cover **101**. In some embodiments, distal-end **123** of elongate-sleeve **103** may be attached to wrist-end **113** of hand-cover **101** at wrist-union **105**.

[0109] In some embodiments, elongate-sleeve **103** may be one or more of: substantially constructed from a fabric, substantially soft, and/or substantially flexible. In some embodiments, elongate-sleeve **103** may be a hollow elongate member, sized to slip over and cover a majority of the arm of the patient.

[0110] Continuing discussing FIG. **1**A, in some embodiments, access-slit **107** may comprise a pair of removably sealable complimentary-edges **125**. In some embodiments, these complimentary-edges **125** may be removably sealable by a slit-fastener **127** (see e.g., FIG. **1**C and FIG. **1**C). In some embodiments, slit-fastener **127** may be selected from the group consisting of one or more of: a zipper; a press fit (e.g., a Ziplock type of fastener); a snap fit (e.g., plastic snaps); a button; ties; lacing; a plurality of hooks along one complimentary-edge **125** and a complimentary plurality of loops along the other remaining complimentary-edge **125** (i.e., Velcro or Velcro like); and/or the like.

[0111] Continuing discussing FIG. **1**A, in some embodiments, elongate-sleeve **103** may comprise one or more of access-slit **107**. In some embodiments, access-slit **107** may be located on a dorsal side of elongate-sleeve **103**; wherein "dorsal side" is with respect to the patient's arm. In some embodiments, access-slit **107** may be located on a ventral side of the elongate-sleeve **103**; wherein "ventral side" is with respect to the patient's arm. In some embodiments, access-slit **107** may run substantially parallel with a length of elongate-sleeve **103**. In some embodiments, access-slit **107** may run substantially parallel with a length of the patient's forearm, when that given arm may be removably inserted within elongate-sleeve **103**.

[0112] Continuing discussing FIG. **1**A, in some embodiments, arm-grabber **109** may be an elastic member or substantially an elastic member or a member with elastic properties. In some embodiments, arm-grabber **109** may be a hollow annular ring. In some embodiments, arm-grabber **109** may be at least partially constructed from an elastic band, Spandex, or the like fabrics. In some embodiments, during normal use, arm-grabber **109** may squeeze (grip) around an upper portion of the patient's arm, such as, at or above the elbow. In some embodiments, during normal use, arm-grabber **109** may circumscribe and squeeze (grip) around an upper portion of the patient's arm, such as, at or above the elbow. Use of arm-grabber **109** may be important in keeping a given patient-mitten **100** from slipping down on the arm. Use of arm-grabber **109** may be important in preventing a given patient-mitten **100** from falling off of that limb.

[0113] Continuing discussing FIG. **1**A, in some embodiments, in some embodiments, hand-cover **101** may comprise one more tubing-holes **135** sized to pass through medical tubing **900**. In some embodiments, elongate-sleeve **103** may comprise one more tubing-holes **135** sized to pass through medical tubing **900**. In some embodiments, a given patient-mitten **100** may have no such tubing-holes **135**; and just use access-slit **107** for tubing passage.

[0114] In some embodiments, a given patient-mitten **100** may be constructed such that a ratio of a length of the hand-cover **101** (e.g., wrist-end **113** to finger-tip-end **111**) to a length of the elongate-sleeve **103** (e.g., from proximal-end **121** to distal-end **123**) may be within a range of 0.32 to 0.34, including the endpoints of that range. In some embodiments, a given patient-mitten **100** may be constructed such that a ratio of a length of the hand-cover **101** to a length of the elongate-sleeve **103** may be within a range of 0.29 to 0.35, including the endpoints of that range. Such rations may provide for arm-grabber **109** being located along the upper arm past the elbow which may be important for minimizing that given patient-mitten **100** from slipping off of that limb.

[0115] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially ultraviolet (UV) light permeable. In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from UV light permeable fabrics. In some embodiments, a majority of exterior **131** may be substantially UV light permeable. In some embodiments exterior **131** may refer to an exterior surface of hand-cover **101** and/or an exterior surface of elongate-sleeve **103**. In some embodiments, portions of interior-surface **137** may be substantially UV light permeable. In some embodiments interior-surfaces **137** may refer to an interior surface of hand-cover **101** and/or an interior surface of elongate-sleeve **103**. In some embodiments, exterior **131** may be opposing interior-surface **137**. In some embodiments, at least some interior-surfaces **137** may be in removable physical skin contact with skin of the fingers, hand, and/or arm that is wearing that given patient-mitten **100**. Such UV light permeability may be important for when the patient (e.g., a preemie) is in need of producing their own vitamin D; such as, but not limited to, preemies removably housed within incubators. For example, and without limiting the scope of the present invention, such a UV permeable fabric may be Tan Through or CoolTan or TanMeOn brand of fabric or similar type of fabric. For example, and without limiting the scope of the present invention, such a UV permeable fabric may be a mesh fabric or a fabric with relatively large weave or relatively small thread count.

[0116] In some embodiments, it may be elongate-sleeve **103** that may have the substantially ultraviolet (UV) light permeable properties as discussed above and not hand-cover **101**. Rather, in such embodiments, hand-cover **101** may be more thick or more plush as compared against elongate-sleeve **103**. In some embodiments, hand-cover **101** may be at least thick enough or at least plush enough to minimize the wearer being able to scratch themselves when patient-mitten **100** may be worn; while elongate-sleeve **103** may be comparatively thinner (and/or less plush) with the substantially ultraviolet (UV) light permeable properties. In some embodiments, hand-cover **101** may be at least thick enough or at least plush enough to minimize the wearer being able to grab or interact with objects external to patient-mitten **100**; which for example, may be useful in applications with preemies who might otherwise inadvertently grab and remove IV tubing; but wherein elongate-sleeve **103** may be comparatively thinner with the substantially ultraviolet (UV) light permeable properties.

[0117] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially liquid impermeable (e.g., waterproof or water resistant). In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from substantially liquid impermeable fabrics. In some embodiments, a majority of exterior **131** may be substantially liquid impermeable (e.g., waterproof or water resistant); as this may help to keep the arm, hands, and/or fingers dry in wet environments. In some embodiments, portions of interior-surface **137** may be substantially liquid impermeable (e.g., waterproof or water resistant); as this may help to confine skin treatments to the treated skin. For example, and without limiting the scope of the present invention, such a fabric or material of construction for hand-cover **101**, elongate-sleeve **103**, exterior **131**, and/or interior-surface **137** may be: a GoreTex fabric or Gore-Tex like fabric; a Conduit fabric from Mountain Hardwear; a NeoShell fabric from Polartec; a AQ2/Aquafoil fabric from Berghaus; an Omni-Dry fabric; and/or the like. Some such fabrics may be air permeable (i.e., air breathable). Some such waterproof breathable fabrics may comprise at least two layers, a first layer often made of nylon or polyester or the like, and sometimes referred to as the "face fabric"; and a second layer, a laminated membrane or coating, usually made of ePTFE (expanded Polytetrafluoroethylene, also known as Teflon) or PU (Polyurethane) or the like.

[0118] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially air permeable (i.e., air breathable). In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from substantially air permeable (i.e., air breathable) fabrics. For example, and without limiting the scope of the present invention, such a fabric may be a Gore-Tex fabric or Gore-Tex like fabric.

[0119] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from substantially anti-microbial fabrics. In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise interior-surfaces **137** and/or exteriors **131** that may be substantially anti-microbial. In some embodiments exterior **131** may refer to an exterior surface of hand-cover **101** and/or an exterior surface of elongate-sleeve **103**. See e.g., FIG. **1**A. In some embodiments interior-surfaces **137** may refer to an interior surface of hand-cover **101** and/or an interior surface of elongate-sleeve **103**. See e.g., FIG. **1**A.

[0120] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** comprise one or more pockets **301** located on exterior **131**. See e.g., FIG. **3** and FIG. **4**B.

[0121] In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise one or more attachment-anchors **201** located on exteriors **131**. See e.g., FIG. **2** and FIG. **4**B. In some embodiments, attachment-anchors **201** may be partial loop structures or hook structures. In some embodiments, attachment-anchors **201** may provide location (s) on patient-mitten **100** where various articles may be attached to patient-mitten **100**. In some embodiments, attachment-anchors **201** may be relatively soft and substantially constructed from an elastomeric material of construction, such as, but not limited to, silicones, rubbers, and/or the like. This may help to avoid injury to the patient. For example, and without limiting the scope of the present invention, such articles that may be attached to various attachment-anchors **201** may be: rings or colorful items for eye and brain stimulation for young children; blinkable lights; teething objects; pacifiers; noise makers; rattles; charms and/or letters for personalization; toys; leashes for attachment to such articles; medical-tubing **900**, and/or the like.

[0122] Note the above discussion thus far of patient-mitten **100** depicted in FIG. **1**A may also apply to patient-mittens **100** embodiments shown in FIG. **1**B, FIG. **1**C, FIG. **1**D, FIG. **1**E, and FIG. **1**F.

[0123] Continuing discussing FIG. **1**A, in some embodiments, access-slit **107**, when open, may insert an openable break (gap) in arm-grabber **109**. In some embodiments, access-slit **107** may run across arm-grabber **109** causing an openable break (gap) in the arm-grabber **109** when access-slot **107** may be open. In some embodiments, the openable break (gap) in arm-grabber **109** may be removably closable by a pair of break-fasteners **129** located at each end of the openable break. In some embodiments, the pair of break-fasteners **129** may be selected from the group consisting of one or more of: a press fit; a snap fit (e.g., plastic snaps); a button; ties; a draw string; a plurality of hooks along at one end of the openable break and a complimentary plurality of loops along the other remaining end of the openable break (i.e., Velcro or Velcro like); and/or the like.

[0124] FIG. **1**B may depict another embodiment of patient-mitten **100**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. A difference between patient-mitten **100** shown in FIG. **1**A versus patient-mitten **100** shown in FIG. **1**B, may be in a size and/or location of access-slit **107**. For example, and without limiting the scope of the present invention, in FIG. **1**A, access-slit **107** may run into and through a portion of arm-grabber **109** causing the openable break (gap) shown between break-fasteners **129** in FIG. **1**A; whereas, in FIG. **1**B, access-slit **107** may not touch arm-grabber **109**.

[0125] Discussing FIG. **1**B, in some embodiments, access-slit **107** may have a length that is less than a length of elongate-sleeve **103**. In some embodiments, access-slit **107** may not run into (i.e., extend into) arm-grabber **109**. In some embodiments, access-slit **107** may not touch arm-grabber **109**. In some embodiments, access-slit **107** may not interrupt arm-grabber **109**.

[0126] FIG. **1**C may depict an elongate-sleeve **103** portion of patient-mitten **100**, depicting part of access-slit **107** and depicting part of slit-fastener **127**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. In some embodiments, slit-fastener **127** may run intermittently at predetermined spacing along each of complimentary-edges **125**.

[0127] FIG. **1**D may depict elongate-sleeve **103** portion of patient-mitten **100**, depicting a part of access-slit **107** and depicting a part of another slit-fastener **127**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. In some embodiments, slit-fastener **127** may run substantially along each of complimentary-edges **125**.

[0128] Recall, in some embodiments, slit-fastener **127** may be selected from the group consisting of one or more of: a zipper; a press fit (e.g., a Ziplock type of fastener); a snap fit (e.g., plastic snaps); a button; ties; lacing; a plurality of hooks along one complimentary-edge **125** and a complimentary plurality of loops along the other remaining complimentary-edge **125** (i.e., Velcro or Velcro like); and/or the like.

[0129] FIG. **1**E may depict a partial view of patient-mitten **100**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, showing a section of medical tubing **900** emerging from access-slit **107** in elongate-sleeve **103** of that patient-mitten **100**. Thus, FIG. **1**E may show a function of access-slit **107**. As noted, access-slit **107** may provide access to otherwise covered portions of the arm for placing, removing, securing, monitoring, and/or managing medical devices removably attached to the patient's arm, hand, and/or fingers. Such medical devices in this context may be: medical tubing **900** (e.g., IV tubing); luer-locks; ports (for connecting to medical tubing **900** or for connecting to syringes); vital sign monitoring devices (e.g., an oxygen sensor, pulse sensor, and the like) and/or their cords, cables, wires; and/or the like.

[0130] FIG. **1**F may depict a partial view of patient-mitten **100**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, showing a section of medical tubing **900** emerging from access-slit **107** in elongate-sleeve **103** of that patient-mitten **100**. In some embodiments, elongate-sleeve **103** may comprise at least one tubing-anchor **133**. In some embodiments, at least one tubing-anchor **133** may be located on exterior **131** of elongate-sleeve **103**. In some embodiments, at least one tubing-anchor **133** may be located on exterior **131** of hand-cover **101**. In some embodiments, at least one tubing-anchor **133** may be removably attachable to a portion of tubing (e.g., medical tubing **900**, such as, but not limited to IV tubing). In some embodiments, when the portion of the tubing may be removably attached to tubing-anchor **133**, the tubing may be less likely to become dissociated from patient-mitten **100**. That is, use of tubing-anchor **133** to anchor a section of tubing to elongate-sleeve **103**, may help to minimize the patient inadvertently pulling the tubing out from its connection to the patient. In some embodiments, structurally, tubing-anchor **133** may be a hook structure and/or a loop structure, sized to removably hold a section of the tubing. In some embodiments, tubing-anchor **133** may be a type of attachment-anchor **201** (see e.g., FIG. **2**).

[0131] In some embodiments, tubing-anchors **133** may be relatively soft and substantially constructed from an elastomeric material of construction, such as, but not limited to, silicones, rubbers, and/or the like. This may help to avoid injury to the patient.

[0132] Patient-mitten **100** partially shown in FIG. **1**F may differ from patient-mitten **100** partially shown in FIG. **1**E, in that in FIG. **1**F, patient-mitten **100** may comprise one or more tubing-anchors **133**; whereas, the patient-mitten **100** shown in FIG. **1**E may not include any tubing-anchors **133**.

[0133] In some embodiments, tubing-anchors **133** may be sized to removably capture a section of wires, cables, and/or cords from a medical device attached to the patient's arm, hand, and/or fingers, such as wires, cables, and/or cords from a pulse monitoring sensor or wires, cables, and/or cords from an oxygen level monitoring sensor.

[0134] FIG. **2** may depict an embodiment of a mitten-with-attachment-anchors **200**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, wherein at least one attachment-anchor **201** may be shown attached to elongate-sleeve **103** of mitten-with-attachment-anchors **200**. In some embodiments, mitten-with-attachment-anchors **200** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, and arm-grabber **109** as these structures were discussed above. Some embodiments of mitten-with-attachment-anchors **200** may not include access-slit **107**. Some embodiments of mitten-with-attachment-anchors **200** may also comprise access-slit **107** located on elongate-sleeve **103**.

[0135] Discussing FIG. **2**, in some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise one or more attachment-anchors **201** located on exteriors **131**. See also, FIG. **4**B. In some embodiments, attachment-anchors **201** may be partial loop structures or hook structures. In some embodiments, attachment-anchors **201** may provide a location(s) on mitten-with-attachment-anchors **200** where various articles may be attached to mitten-with-attachment-anchors **200**. In some embodiments, attachment-anchors **201**

may be relatively soft and substantially constructed from an elastomeric material of construction, such as, but not limited to, silicones, rubbers, and/or the like. This may help to avoid injury to the patient.

[0136] FIG. **3** may depict an embodiment of a mitten-with-pocket **300**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm, wherein at least one pocket **301** may be shown attached to elongate-sleeve **103** of mitten-with-pocket **300**. In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise one or more pockets **301** located on exteriors **131**. See also, FIG. **4**B. Such pockets **301** may be for removable storage of various articles. In some embodiments, pocket **301** may be one or more of: substantially constructed from a fabric, substantially soft, and/or substantially flexible.

[0137] In some embodiments, mitten-with-pocket **300** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, and arm-grabber **109** as these structures were discussed above. Some embodiments of mitten-with-pocket **300** may not include access-slit **107**. Some embodiments of mitten-with-pocket **300** may also comprise access-slit **107** located on elongate-sleeve **103**.

[0138] FIG. **4**A may depict an embodiment of a UV-permeable-mitten **400**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. In some embodiments, UV-permeable-mitten **400** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, and arm-grabber **109** as these structures were discussed above. Some embodiments of UV-permeable-mitten **400** may not include access-slit **107**. Some embodiments of UV-permeable-mitten **400** may also comprise access-slit **107** located on elongate-sleeve **103**.

[0139] Discussing FIG. **4**A, in some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially ultraviolet (UV) light permeable. In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from ultraviolet (UV) light permeable fabrics. This may be important for when the patient is in need of producing their own vitamin D; such as, but not limited to, preemies removably housed within incubators. For example, and without limiting the scope of the present invention, such a fabric may be a mesh fabric or a fabric with relatively large weave or relatively small thread count.

[0140] FIG. **4**B may depict another embodiment of a UV-permeable-mitten **400**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm. In some embodiments, UV-permeable-mitten **400** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, and arm-grabber **109**. In some embodiments, UV-permeable-mitten **400** may also comprise one or more of: access-slit **107**, tubing-hole **135**, attachment-anchor **201**, pocket **301** as these structures were discussed above.

[0141] Discussing FIG. **4**B, in some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise one or more attachment-anchors **201** located on exteriors **131**. See also, FIG. **2**. In some embodiments, attachment-anchors **201** may be partial loop structures or hook structures. In some embodiments, attachment-anchors **201** may provide location(s) on UV-permeable-mitten **400** where various articles may be attached to UV-permeable-mitten **400**. In some embodiments, attachment-anchors **201** may be relatively soft and substantially constructed from an elastomeric material of construction, such as, but not limited to, silicones, rubbers, and/or the like. This may help to avoid injury to the patient.

[0142] Continuing discussing FIG. **4**B, in some embodiments, hand-cover **101** and/or elongate-sleeve **103** may comprise one or more pockets **301** located on exteriors **131**. See also, FIG. **3**.

[0143] Continuing discussing FIG. **4**B, in some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially ultraviolet (UV) light permeable. In some embodiments, hand-cover **101** and/or elongate-sleeve **103** may be substantially constructed from ultraviolet (UV) light permeable fabrics. This may be important for when the patient is in need of producing their own vitamin D; such as, but not limited to, preemies removably housed within incubators. For example, and without limiting the scope of the present invention, such a fabric may be a mesh fabric or a fabric with relatively large weave or relatively small thread count.

[0144] FIG. **5**A may depict an embodiment of a mitten-for-protecting-skin-treatment **500**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; wherein an outer-elongate-sleeve **503** may be shown in a rolled configuration. FIG. **5**B may depict mitten-for-protecting-skin-treatment **500**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; but wherein outer-elongate-sleeve **503** may be shown in a partially unrolled (partially deployed) configuration. FIG. **5**C may depict mitten-for-protecting-skin-treatment **500**, shown from a top (dorsal) or from a bottom (ventral) view, with respect to a patient's arm; but wherein outer-elongate-sleeve **503** may be shown in a completely unrolled (fully deployed) configuration. Thus, FIG. **5**B may depict a transitional configuration between the configurations depicted in FIG. **5**A and as depicted in FIG. **5**C.

[0145] In some embodiments, mitten-for-protecting-skin-treatment **500** may comprise: hand-covering **101**, outer-elongate-sleeve **503**, inner-elongate-sleeve **504**, wrist-union **105**, and arm-grabber **509**. See e.g., FIG. **5**A, FIG. **5**B, and/or FIG. **5**C. Hand-covering **101**, wrist-union **105**, finger-tip-end **111**, wrist-end **113**, proximal-end **121**, distal-end **123**, and exterior **131** shown in FIG. **5**A, FIG. **5**B, or FIG. **5**C may be structures and/or regions as discussed above, except as noted here in this discussion of FIG. **5**A, FIG. **5**B, and FIG. **5**C. In some embodiments, hand-covering **101** may be attached to outer-elongate-sleeve **503** and to inner-elongate-sleeve **504** at wrist-union **105**. In some embodiments, wrist-union **105** may be located at wrist-end **113**. In some embodiments, wrist-union **105** may delineate hand-cover **101** from outer-elongate-sleeve **503** and/or from inner-elongate-sleeve **504**. In some embodiments, wrist-union **105** may not be a separate physical structure, but rather may delineate hand-cover **101** from outer-elongate-sleeve **503** and/or from inner-elongate-sleeve **504**. In some embodiments, wrist-union **105** may be a physical structure, e.g., a seam, where hand-cover **101** is attached to outer-elongate-sleeve **503** and attached to inner-elongate-sleeve **504**. In some embodiments, proximal-end **121** and opposing distal-end **123** may be with respect to outer-elongate-sleeve **503**. In some embodiments, outer-elongate-sleeve **503** may comprise two opposing ends, proximal-end **121** and distal-end **123**. In some embodiments, arm-grabber **509** may be attached to proximal-end **121** and distal-end **123** may be located at wrist-union **105**. In FIG. **5**A, FIG. **5**B, and FIG. **5**C exterior **131** may be limited to the exterior of hand-covering **101**.

[0146] In some embodiments of mitten-for-protecting-skin-treatment **500**, elongate-sleeve **103** may be replaced with two layers of elongate sleeves, that of outer-elongate-sleeve **503** and of inner-elongate-sleeve **504**. Or alternatively, in some embodiments, elongate-sleeve **103** may be two layers, that of outer-elongate-sleeve **503** and of inner-elongate-sleeve **504**. See e.g., FIG. **5**A, FIG. **5**B, and FIG. **5**C. In some embodiments, together outer-elongate-sleeve **503** and of inner-elongate-sleeve **504** may serve a same purpose or a same function as that of elongate-sleeve **103**; such as, to cover a majority of the arm wearing the given mitten-for-protecting-skin-treatment **500**. Based upon a shared longitudinal axis, outer-elongate-sleeve **503** and of inner-elongate-sleeve **504** may be substantially concentric with respect to each other. When mitten-for-protecting-skin-treatment **500** may be being worn by the patient and outer-elongate-sleeve **503** may be completely deployed (unrolled), interior portions of inner-elongate-sleeve **504** (not shown) may be in physical contact with arm skin of the patient, with exterior-of-outer-elongate-sleeve **531** externally visible.

[0147] As noted by the name of "mitten-for-protecting-skin-treatment **500**," mitten-for-protecting-skin-treatment **500** may be a type of patient mitten specifically for protecting the treated skin of the arm, hand, and/or fingers. Mitten-for-protecting-skin-treatment **500** may accomplish this function by interior surfaces of inner-elongate-sleeve **504** that may be in physical contact with skin of the arm, being designed not to absorb nor wick away creams, lotions, salves, ointments, and/or medicaments that may have been applied to the skin of the fingers, hand, and/or arm. Additionally, inner-elongate-sleeve **504** may protect such treated skin from coming into physical contact with environmental articles, which might otherwise remove portions of such creams, lotions, salves, ointments, and/or medicaments from the treated skin (e.g., from brushing against such environmental articles). Additionally, inner-elongate-sleeve **504** may create a controlled, protected, and contained region around the treated skin, which for example, may minimize treated skin from drying out or the applied creams, lotions, salves, ointments, and/or medicaments from evaporating.

[0148] In some embodiments, inner-elongate-sleeve **504** may be substantially liquid impermeable (e.g., waterproof or water resistant). In some embodiments, inner-elongate-sleeve **504** may be substantially constructed from substantially liquid impermeable fabrics. In some embodiments, a majority of interior surface of inner-elongate-sleeve **504** may be substantially liquid impermeable (e.g., waterproof or water resistant); as this may help to confine skin treatments to the treated skin; and/or as this may help to keep the arm, hands, and/or fingers dry in wet environments. For example, and without limiting the scope of the present invention, such a fabric or material of construction for inner-elongate-sleeve **504** may be: a Gore-Tex fabric or Gore-Tex like fabric; a Conduit fabric from Mountain Hardwear; a NeoShell fabric from Polartec; a AQ2/Aquafoil fabric from Berghaus; an Omni-Dry fabric; and/or the like. Some such fabrics may be air permeable (i.e., air breathable); but, substantially liquid impermeable (e.g., waterproof or water resistant). Some such waterproof breathable fabrics (e.g., inner-elongate-sleeve **504**) may comprise at least two layers, a first layer often made of nylon or polyester or the like, and sometimes referred to as the "face fabric"; and a second layer, a laminated membrane or coating, usually made of ePTFE (expanded Polytetrafluoroethylene, also known as Teflon) or PU (Polyurethane) or the like.

[0149] In some embodiments, inner-elongate-sleeve **504** may be substantially air permeable (i.e., air breathable). In some embodiments, inner-elongate-sleeve **504** may be substantially constructed from substantially air permeable (i.e., air breathable) fabrics. For example, and without limiting the scope of the present invention, such a fabric may be a Gore-Tex fabric or Gore-Tex like fabric.

[0150] In some embodiments, inner-elongate-sleeve **504** may be substantially constructed from substantially anti-microbial fabrics and/or from fabrics treated with anti-microbial properties.

[0151] In some embodiments, due to substantially liquid impermeable qualities of inner-elongate-sleeve **504**, inner-elongate-sleeve **504** may be more rigid (e.g., less flexible and/or more stiff) than outer-elongate-sleeve **503**. Because of this, in some embodiments, one terminal end of inner-elongate-sleeve **504** may flare out (i.e., may be wider), to provide for easier fitting of inner-elongate-sleeve **504** over the patient's arm. See e.g., FIG. **5**A and FIG. **5**B. That is, at flare-terminal-end **522**, a diameter of inner-elongate-sleeve **504** may be greater than a diameter of inner-elongate-sleeve **504** at other locations of inner-elongate-sleeve **504**. In some embodiments, flare-terminal-end **522** may be a terminal end of inner-elongate-sleeve **504** that is closest to an armpit (or shoulder or bicep/tricep) of the patient when mitten-for-protecting-skin-treatment **500** may be properly worn on that given arm of that armpit. In some embodiments, flare-terminal-end **522** may be disposed opposite from wrist-union **105**. See e.g., FIG. **5**A and FIG. **5**B.

[0152] In some embodiments, inner-elongate-sleeve **504** may flare at flare-terminal-end **522** to fit over (e.g., accommodate) various wraps and/or dressings that might have been applied to the patient's skin of the limb. For example, and without limiting the scope of the present invention, treating dry skin regions and/or eczema regions, a wet and/or mediated wrap or dressing may be applied to the dry skin region and/or eczema region. And the flare at flare-terminal-end **522** of inner-elongate-sleeve **504** may help inner-elongate-sleeve **504** fit over such wraps and/or dressings. See e.g., FIG. **5**A and FIG. **5**B.

[0153] In some embodiments, flare-terminal-end **522** may comprise fastener-for-arm-grabber **510**. In some embodiments, arm-grabber **509** (shown in FIG. **5**C) may comprise fastener-for-arm-grabber **510**. In some embodiments, the fastener-for-arm-grabber **510** of arm-grabber **509** may removably attach to the fastener-for-arm-grabber **510** of flare-terminal-end **522**; that is, these respective fastener-for-arm-grabber **510** may be complimentary to each other. See e.g., FIG. **5**A, FIG. **5**B, and FIG. **5**C.

[0154] In some embodiments, fastener-for-arm-grabber **510** may be selected from the group consisting of one or more of: a press fit; a snap fit (e.g., plastic snaps); a button; ties; a draw string; a plurality of hooks along at one end of the openable break and a complimentary plurality of loops along the other remaining end of the openable break (i.e., Velcro or Velcro like); and/or the like.

[0155] In some embodiments, in operation, once inner-elongate-sleeve **504** may be deployed substantially over the given arm (and potentially over treated skin), then outer-elongate-sleeve **503** may be unrolled from the wrist region to towards the armpit region over both portions of that arm as well as over portions of inner-elongate-sleeve **504**; with portions of inner-elongate-sleeve **504** disposed between outer-elongate-sleeve **503** and the skin of that now covered arm; and then the fastener-for-arm-grabber **510** of arm-grabber **509** may removably attach to the fastener-for-arm-grabber **510** of flare-terminal-end **522**, past the elbow (proximate to the bicep/tricep). In some embodiments, outer-elongate-sleeve **503** may be softer and/more flexible as compared against inner-elongate-sleeve **504**. This dual layer configuration (e.g., of outer-elongate-sleeve **503** and of inner-elongate-sleeve **504**) may be desirable because inner-elongate-sleeve **504** may be more stiff and/or more rigid as compared against outer-elongate-sleeve **503**.

[0156] In some embodiments, arm-grabber **509** may function substantially similar to embodiments of arm-grabber **109**. In some embodiments, arm-grabber **509** may comprise substantially similar structures to embodiments of arm-grabber **109**. In some embodiments, arm-grabber **509** may be for squeezing (gripping) against the arm when mitten-for-protecting-skin-treatment **500** is properly worn by the patient. Arm-grabber **509** may help to keep mitten-for-protecting-skin-treatment **500** properly removably attached to the patient. In some embodiments, arm-grabber **509** may be an elongate member, a hollow annular ring, that may substantially circumscribe a portion of the arm squeezing that portion of the arm. In some embodiments, arm-grabber **509** may be attached to outer-elongate-sleeve **503**. See e.g., FIG. **5**C. In some embodiments, arm-grabber **509** may be attached to proximal-end **121** and distal-end **123** may be located at wrist-union **105**. In some embodiments, arm-grabber **509** may be an elastic member or substantially an elastic member or a member with elastic properties. In some embodiments, arm-grabber **509** may be a hollow annular ring. In some embodiments, arm-grabber **509** may be at least partially constructed from an elastic band, Spandex, or the like fabrics. Use of arm-grabber **509** may be important in keeping a given mitten-for-protecting-skin-treatment **500** from slipping down on the arm. Use of arm-grabber **509** may be important in preventing a given mitten-for-protecting-skin-treatment **500** from falling off of that limb. See e.g., FIG. **5**C.

[0157] FIG. **6**A through FIG. **6**F may depict a mitten-with-finger-opening **600**; wherein fingers of the wearer (the patient) may be entirely covered by mitten-with-finger-opening **600** or wherein at least some portions of those fingers may be uncovered, but while mitten-with-finger-opening **600** remains otherwise worn. FIG. **6**A may depict a longitudinal cross-section through an embodiment of mitten-with-finger-opening **600**. FIG. **6**B may depict the embodiment of mitten-with-finger-opening **600**, from a ventral (bottom) view, i.e., ventral-side **609**. FIG. **6**C may depict the embodiment of mitten-with-finger-opening **600**, from a partial side view and showing an opening-for-fingers **605**. FIG. **6**D may depict the embodiment of mitten-with-finger-opening **600**, shown scrunched up with a thumb passing through an elongate-sleeve **103** and the opening-for-fingers **605**. FIG. **6**E may depict the embodiment of mitten-with-finger-opening **600**, shown scrunched up with fingers passing through the elongate-sleeve **103** and the opening-for-fingers **605**. FIG. **6**F may depict the embodiment of mitten-with-finger-opening **600**, shown scrunched up with fingers passing through the elongate-sleeve **103** and the opening-for-fingers **605**.

[0158] As shown in FIG. **6**A, the fingers of the wearer (the patient) may be entirely covered by mitten-with-finger-opening **600**, wherein this is represented by an arrow **601** in FIG. **6**A. Arrow **601** represents fully-covered-configuration **601**; i.e., wherein the fingers may be entirely covered by hand-cover **101**. Similarly, in FIG. **6**A, arrow **603** represents uncovered-configuration **603** where at least portions of the wearer's fingers may extend beyond opening-for-fingers **605**. Regardless if the finger-tips are following the configuration of arrow **601** (completely covered fingers) or that of arrow **603** (uncovered finger-tips), the palm region of the hand may be still be retained within hand-cover **101**.

[0159] In some embodiments, mitten-with-finger-opening **600** may comprise: hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, and arm-grabber **109**. See e.g., FIG. **6**A and FIG. **6**B. Hand-covering **101**, elongate-sleeve **103**, wrist-union **105**, arm-grabber **109**, finger-tip-end **111**, wrist-end **113**, proximal-end **121**, distal-end **123**, exterior **131**, interior-surface **137** shown in FIG. **6**A or FIG. **6**B may be structures and/or regions as discussed above, except as noted here in this discussion of FIG. **6**A through FIG. **6**F. In some embodiments, mitten-with-finger-opening **600** may comprise dorsal-side **611** and opposing to dorsal-side **611** a ventral-side **609**. When mitten-with-finger-opening **600** may be properly worn, dorsal-side **611** may be closer to a top (dorsal side) of the wearer's arm that is wearing mitten-with-finger-opening **600**; whereas, ventral-side **609** may be closer to a bottom (ventral side) of the wearer's arm that is wearing mitten-with-finger-opening **600**. In some embodiments, hand-covering **101** may comprise opening-for-fingers **605** and cover-flap **607**. In some embodiments, cover-flap **607** and opening-for-fingers **605** may be located on ventral-side **609** of hand-covering **101**. In some embodiments, cover-flap **607** may be a flap of material (e.g., a flap of fabric material) that covers a portion of ventral-side **609** of hand-covering **101**. In some embodiments, cover-flap **607** may cover what otherwise would be a hole to interior-surface **137** of hand-covering **101**. In some embodiments, at one end of cover-flap **607**, closest to finger-tip-end **111**, may be opening-for-fingers **605**. In some embodiments, around an outside perimeter of cover-flap **607**, cover-flap **607** may be attached to exterior **131** of dorsal-side **609** of hand-covering **101**, except along opening-for-fingers **605**. In some embodiments, opening-for-fingers **605** may be an opening to interior-surface **137** of hand-covering **101**. Using these structures, the wearer (e.g., the patient) may have their fingers totally (completely covered) as indicated by fully-covered-configuration **601** or at least partially uncovered, as indicated by uncovered-configuration **603**. See e.g., FIG. **6**A through FIG. **6**F.

[0160] Note, it is expressly contemplated and included that embodiments of the present invention may comprise features and/or structures of the various mittens disclosed in a combination fashion. That is, the structures and/or features of mittens **100**, **200**, **300**, **400**, **500**, and/or **600** may be mixed and/or combined. That is, in some embodiments, any of the disclosed mittens (e.g., **100**, **200**, **300**, **400**, **500**, and/or **600**) may comprise one or more of: access-slit **107**; tubing-hole **135**; tubing-anchor **133**; attachment-anchor **201**; pocket **301**; outer-elongate-sleeve **503** and inner-elongate-sleeve **504**; and/or hand-covering **101** with opening-for-fingers **605** and cover-flap **607**.

[0161] Also note, while mittens **100**, **200**, **300**, **400**, **500**, and/or **600** may be used for patients in medical settings and/or environments, it is also expressly contemplated that such mittens may be used by non-patient wearers of such mittens. It is also expressly contemplated that such mittens may be worn by wearers of any age.

[0162] FIG. **7**A may depict steps in a method of mitigating dissociation of a medical device from a patient. The method shown in FIG. **7**A may be method **700**. In some embodiments, method **700** may comprise the steps of: step **701**, step **703**, step **705**, and step **707**. In some embodiments, step **701** may be a step of attaching a medical device to a limb region (e.g., finger(s), hand, and/or arm) of a patient. Such medical devices may be as noted above. In some embodiments, step **703** may be a step of passing a portion (e.g., medical-tubing **900**, wiring, cabling, cords, etc.) of the medical device through a mitten. In some embodiments, the region of the mitten that is receiving the portion of the medical device may be the access-slit **107**, e.g., as shown in FIGS. **1**E and **1***n* FIG. **1**F. In some embodiments, step **705** may be a step of fitting and securing the mitten onto the limb with the medical device; such as, by pulling hand-cover **101** over the hand, elongate-sleeve **103** over the forearm and elbow, and having arm-grabber **109** squeeze the upper arm. In some embodiments, step **707** may be a step of anchoring a region of the medical device to the mitten. The anchoring noted in step **707** may be via tubing-anchor **133** shown in FIG. **1**F; attachment-anchors **201** shown in FIG. **2** and FIG. **4**B; and/or via tape, rubber band, an elastic strip, string, rope, cordage, and the like.

[0163] In some embodiments, the mitten noted in method **700** may be patient-mitten **100**, mitten-with-attachment-anchors **200**, mitten-with-pocket **300**, UV-permeable-mitten **400**, mitten-for-protecting-skin-treatment **500**, or mitten-with-finger-opening **600**.

[0164] FIG. **7**B may depict steps in a method of mitigating dissociation of a medical device from a patient. The method shown in FIG. **7**B may be method **710**. In some embodiments, method **710** may comprise the steps of: step **711**, step **701**, step **705**, and step **707**. In some embodiments, step **711** may be a step of passing a portion of the medical device through a mitten. In some embodiments, the region of the mitten that is receiving the portion of the medical device may be a tubing-hole **135**, e.g., as shown in FIG. **1**A. In some embodiments, step **701**, step **705**, and step **707** of method **710**, may be as described above under method **700**; but these steps may have a different order in method **710**, as shown in FIG. **7**B.

[0165] In some embodiments, the mitten noted in method **710** may be patient-mitten **100**, mitten-with-attachment-anchors **200**, mitten-with-pocket **300**, UV-permeable-mitten **400**, mitten-for-protecting-skin-treatment **500**, or mitten-with-finger-opening **600**.

[0166] FIG. **7**C may depict steps in a method of protecting treated skin of a limb. The method shown in FIG. **7**C may be method **720**. In some embodiments, method **720** may comprise the steps of: step **721**, step **723**, step **725**, and step **727**. In some embodiments, step **721** may be a step of applying medicament to skin of a limb; such as skin of the finger, fingers, hand, and/or portions of the arm. In some embodiments, step **723** may be a step of pulling "inner-elongate-sleeve **504**" over the limb with medicament. Upon completion of step **723**, the mitten may look like the mitten shown in FIG. **5**A or FIG. **5**B, i.e., with inner-elongate-sleeve **504** deployed/extended over the forearm and elbow. In some embodiments, step **725** may be a step of deploying "outer-elongate-sleeve **503**" (e.g., unrolling outer-elongate-sleeve **503**) over "inner-elongate-sleeve **504**." Upon completion of step **725**, the mitten may look like the mitten shown in FIG. **5**C.

[0167] In some embodiments, step **727** may be a step of securing "mitten-for-protecting-skin-treatment **500**" to the limb with the medicament. In some embodiments, step **727** may involve securing the complimentary fastener-for-arm-grabber **510** of outer-elongate-sleeve **503** to the fastener-for-arm-grabber **510** of inner-elongate-sleeve **504**. In some embodiments, step **727** may involve arm-grabber **509** squeezing (gripping) the upper arm of the limb with the medicament.

[0168] FIG. **8** may depict a patient-mitten **800** being properly worn over a majority of a limb (e.g., a left arm) of a given patient **950**. FIG. **8** may show how the arm-grabber **109** of the given patient-mitten **800** may squeeze an upper arm **952** of the patient **950**, when the patient-mitten is being properly worn. Shoulder **951** and armpit region **953** of the patient **950** are also shown in FIG. **8** as reference points; as well as elbow region **955**. Note when patient-mitten **800** may be properly worn, elbow region **955** may be below arm-grabber **109** that is squeezing upper arm **952**.

[0169] Note the patient-mitten **800** shown in FIG. **8**, may be patient-mitten **100**, mitten-with-attachment-anchors **200**, mitten-with-pocket **300**, UV-permeable-mitten **400**, mitten-for-protecting-skin-treatment **500**, mitten-with-finger-opening **600**, and/or combinations thereof. For example, and without limiting the scope of the present invention, in some embodiments, patient-mitten **800** may comprise: hand-covering **101**, elongate-sleeve **103**, and arm-grabber **109** as discussed above for patient-mitten **100**.

[0170] As noted above, various aspects of the discussed mittens and patient-mittens may have soft and/or flexible portions. For example, and without limiting the scope of the present invention, substantial portions of the following structures may be substantially constructed from fabrics: hand-covering **101**, elongate-sleeve **103**, exterior **131**, interior surface **137**, pocket **301**, outer-elongate-sleeve **503**, inner-elongate-sleeve **504**, cover-flap **607**, and the like. And such fabrics may be soft and/or flexible, as one of ordinary skill in the textiles arts would understand softness and flexibility. For example, and without limiting the scope of the present invention, such fabrics may be natural (e.g., cotton and/or silk) and/or synthetic (e.g., polyester, nylon, acrylic, acetate, Rayon, Viscose, Spandex, and/or the like).

[0171] In some embodiments use of fabric noted herein in and on various mittens and/or patient-mittens may be natural fabrics and/or synthetic fabrics. Such natural fabrics may be one or more of: cotton, silk, linen, hemp, wool, leather, and/or the like. Such synthetic fabrics may be one or more of: polyester, nylon, acrylic, acetate, Rayon, Viscose, Spandex, and/or the like. And as noted above, such fabrics may also be UV permeable fabrics, liquid impermeable fabrics and/or air breathable fabrics.

[0172] Additionally, note mittens utilizing air breathable embodiments of the various elongate-sleeves (terminating in an arm-grabber), may be utilized in activities that might produce sweat, but where it may be desirable for one to cover portions of their arm, hand, and/or fingers during such activity; such as, but not limited to, runners, athletes, and/or the like. At either end of such a mitten, may be attachment hardware (e.g., a clip) for removable attachment of the given mitten to an article, such as, but not limited to a belt. Similarly, such mittens utilizing air breathable embodiments of the various elongate-sleeves (terminating in an arm-grabber), may be utilized in hot or warm environmental conditions.

[0173] Note with respect to the materials of construction, it is not desired nor intended to thereby unnecessarily limit the present invention by reason of such disclosure.

[0174] Various types of mittens, patient-mittens, and methods of use that utilize such mittens have been disclosed and described. The foregoing description of the various exemplary embodiments of the invention has been presented for the purposes of illustration and disclosure. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Many modifications and variations are possible in light of the above teaching without departing from the spirit of the invention.

[0175] While the invention has been described in connection with what is presently considered to be the most practical and preferred embodiments, it is to be understood that the invention is not to be limited to the disclosed embodiments, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.

What is claimed is:

1. A mitten for use on a hand and an arm of a human, wherein the mitten comprises:

a hand-cover that covers the hand and at least removably covers fingers of the hand when the hand-cover is being worn on the hand; wherein the hand-cover protects the human from self-inflicted nail scratches;

an elongate-sleeve that is hollow, wherein a majority of the arm is removably located within the elongate-sleeve, wherein the elongate-sleeve is attached to the hand-cover;

an arm-grabber, that removably grips around a circumference of an upper portion of the arm, wherein the arm-grabber is attached to a proximal-end of the elongate-sleeve, disposed opposite from the hand-cover.

2. The mitten according to claim **1**, wherein the mitten further comprises a wrist-union, wherein the wrist-union is located where the elongate-sleeve attaches to the hand-cover.

3. The mitten according to claim **1**, wherein the elongate-sleeve comprises at least one access-slit; wherein the at least one access-slit is a length-wise opening in the elongate-sleeve.

4. The mitten according to claim **3**, wherein the length-wise opening runs in a direction that is substantially parallel with a longitude of the elongate-sleeve.

5. The mitten according to claim **3**, wherein the at least one access-slit is removably closeable via one or more slit-fasteners that run along complimentary edges of the at least one access-slit.

6. The mitten according to claim **3**, wherein the at least one access-slit has a removably closeable break at one end of the at least one access-slit; wherein this removably closeable break is closed via a brake-fastener; wherein the one end is at the proximal-end of the elongate-sleeve.

7. The mitten according to claim **3**, wherein the at least one access-slit is sized to permit passage of portions of one or more medical devices.

8. The mitten according to claim **7**, wherein the portions of the one or more medical devices are one or more of: a region of medical-tubing, a region of cable, a region of wiring, a region of cord.

9. The mitten according to claim **1**, wherein the mitten further comprises one or more tubing-holes; wherein the one or more tubing-holes are located on an exterior of the mitten; wherein the one or more tubing-holes are through holes from an exterior of the mitten to an interior of the mitten; wherein the one or more tubing-holes are sized for passage of one or more of: a portion of medical tubing, a portion of medical device cabling, a portion of medical device wiring, or a portion of medical tubing cord.

10. The mitten according to claim **1**, wherein the mitten further comprises one or more attachment-anchors; wherein the one or more attachment-anchors are located on an exterior of the mitten; wherein the one or more attachment-anchors are for removable attachment of at least one article to the mitten.

11. The mitten according to claim **10**, wherein the one or more attachment-anchors are loop or hook structures.

12. The mitten according to claim **10**, wherein the one or more attachment-anchors are one or more tubing-anchors, for securing a section of medical-tubing, wiring, cabling, or cordage to the mitten, such that the section translates with the mitten minimizing dissociation of a medical device from the mitten.

13. The mitten according to claim **1**, wherein portions of the elongate-sleeve are at least substantially ultra violet (UV) light permeable to promote production of vitamin D when the mitten is being worn.

14. The mitten according to claim **1**, wherein interior portions of the elongate-sleeve are at least substantially liquid impermeable to minimize the elongate-sleeve from absorbing medicaments applied to skin within the elongate-sleeve.

15. The mitten according to claim **1**, wherein interior portions of the hand-cover are at least substantially liquid impermeable to minimize the hand-cover from absorbing medicaments applied to skin within the hand-cover.

16. The mitten according to claim **1**, wherein the mitten further comprises one or more pockets; wherein the one or more pockets are located on an exterior of the mitten; wherein the one or more pockets are for removable storage of at least one article.

17. The mitten according to claim **1**, wherein the elongate-sleeve is doubled layered, comprising an inner-elongate-sleeve and an outer-elongate-sleeve; wherein with respect to a longitude of both the inner-elongate-sleeve and the outer-elongate-sleeve, the inner-elongate-sleeve and the outer-elongate-sleeve are concentric with respect to each other; wherein when the mitten is worn over the hand and the arm, the inner-elongate-sleeve is closer to skin of the arm compared to the outer-elongate-sleeve.

18. The mitten according to claim **17**, wherein interior portions of the inner-elongate-sleeve are at least substantially liquid impermeable to minimize the inner-elongate-sleeve from absorbing medicaments applied to the skin within the inner-elongate-sleeve.

19. The mitten according to claim **1**, wherein on a ventral side of the hand-cover is a hole that is at least partially covered by a cover-flap; wherein the hole and the cover-flap form an opening-for-fingers; wherein the hole and opening-for-fingers allow finger-tips of the hand to be removably extended out beyond the opening-for-fingers and outside of the hand-cover, while a palm region of the hand is still retained within the hand-cover.

20. The mitten according to claim **1**, wherein a ratio of a length of the hand-cover to a length of the elongate-sleeve is 0.29 to 0.35, including endpoints of this range.

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