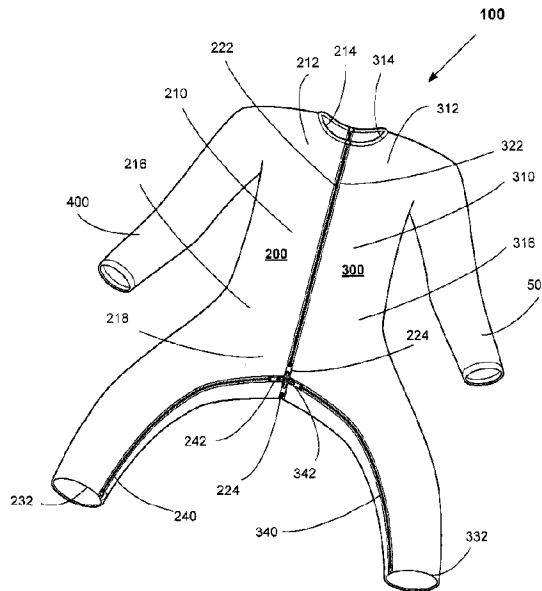




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(57) **Abrégé/Abstract:**

A zippered garment includes an abdominal body portion having a front zipper and a rear zipper extending from a neck portion to a crotch portion of the body portion. The garment has tubular legs each having a zipper along the length thereof. All four zipper have a closure member which is at the crotch portion when the garment is closed. Advantageously, mentally ill garment wearers cannot open the garment since they are used to opening zippers which close at the top. Accordingly, such patients would not be able to access their lower abdominal or crotch region. Conversely, long-term care workers can open the garment to replace an incontinence product for example. The garment may be used with adults or children alike, and may be made in one piece or multiple pieces that mate together.

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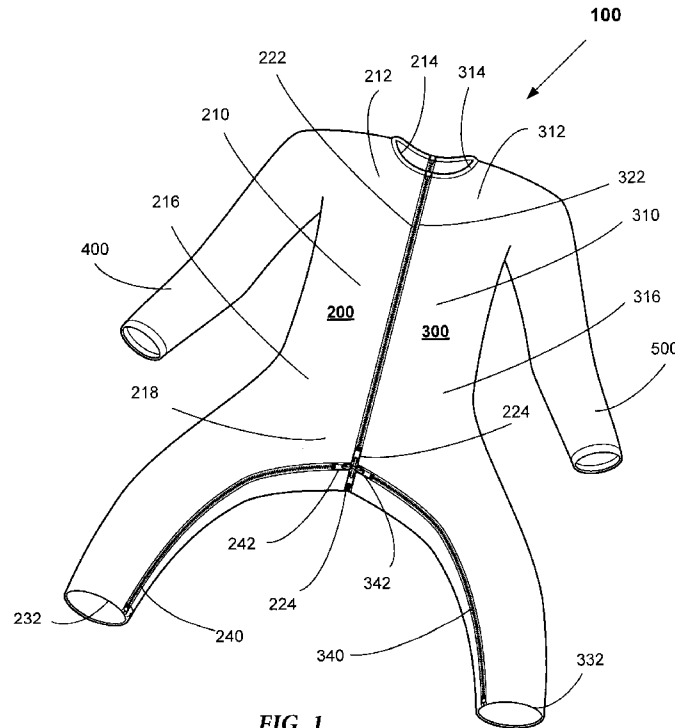


FIG. 1

(57) Abstract: A zippered garment includes an abdominal body portion having a front zipper and a rear zipper extending from a neck portion to a crotch portion of the body portion. The garment has tubular legs each having a zipper along the length thereof. All four zipper have a closure member which is at the crotch portion when the garment is closed. Advantageously, mentally ill garment wearers cannot open the garment since they are used to opening zippers which close at the top. Accordingly, such patients would not be able to access their lower abdominal or crotch region. Conversely, long-term care workers can open the garment to replace an incontinence product for example. The garment may be used with adults or children alike, and may be made in one piece or multiple pieces that mate together.



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**ZIPPERED GARMENT PROVIDING SELECTIVE**  
**ACCESS**

**Field of the Invention**

[0001] The present invention relates generally to garments, and more specifically to a  
5 zippered garment providing selective access.

**Background of the Invention**

[0002] In long-term care (LTC) centers, full-service retirement facilities, hospitals, and  
private homes etc. there are a large number of individuals of all ages with challenges of  
many descriptions, including behavioral or cognitive challenges such as dementia. Such  
10 residents usually use incontinent products (i.e. diapers), or need assistance from health care  
workers to use the restroom. Residents with behavioral conditions sometimes reach under  
their garments to remove their incontinent products and/or expose their crotch region. Once  
successful at removing, or at least opening, their incontinent product, or at exposing their  
crotch region otherwise, such residents may void all over themselves, on their bed, or on the  
15 floor. The result is discomfort for the patient, increased frustration for those including  
health care workers who have to clean the mess, as well as the impact on the patients  
themselves who have to deal with the staff frustration and/or disrupted sleep. Additionally,  
there are often infection control challenges, increased costs related to additional laundry, and  
the eventual premature replacement of soiled and smelly mattresses because of repeated  
20 voids thereon.

[0003] A number of garments have been suggested that restrict access to a wearer's  
crotch, and make it difficult for a patient or a resident of a facility presenting with behaviors  
to take off the garment. For example, garments having a single zipper at the back thereof, or  
having covering flaps over zippers have been proposed. Unfortunately, such garments make  
25 it difficult for a healthcare worker to change an incontinent product quickly and with  
minimal disruption for someone who may be resistant to care, or to assist a user in voiding  
in a restroom without taking off the entire garment. As a result, changing an incontinent

product has become a major burden on healthcare workers, and both uncomfortable and belabored for the wearer. For example, elderly patients may have dementia, arthritis, muscle contractures, or mobility issues. Accordingly, for those patients, moving their limbs extensively to take off a garment would be very difficult, and would make them  
5 uncomfortable or even in great pain.

[0004] It is, therefore, desirable to provide a garment that overcomes at least some of the above problems.

### **Summary of the Invention**

[0005] In one aspect of the present invention there is provided a zippered garment,  
10 comprising an abdominal body portion and two tubular leg portions. The abdominal body portion is sized and shaped for encompassing the torso of a wearer. The abdominal body portion includes an upper portion, a lower portion, and front and rear zippers. The upper portion: is sized and shaped for encompassing the wearer's upper torso, has a neck opening for receiving the wearer's neck therethrough, and has formed therein arm apertures for  
15 receiving the arms of the wearer therethrough. The lower portion: is sized and shaped for encompassing the wearer's pelvic region, and includes a crotch portion. The front zipper and rear zipper each: extends from below the neck opening to the crotch portion, has a closure member slidable therealong, is in a closed mode when the closure member is at the crotch portion, and is in an open mode when the closure member is away from the crotch  
20 portion. The two tubular leg portions are connected to the lower portion of the abdominal body portion. Each tubular leg portion is sized for receiving and encompassing at least a top portion of the wearer's leg proximate to the wearer's torso. Each tubular leg portion has a zipper extending along a length thereof and has a closure member slidable therealong. Each of the two tubular leg portions is in a closed leg mode when the closure member thereof is at  
25 the crotch portion of the lower portion, and is in an open leg mode when the closure member thereof is away from the crotch portion of the lower portion.

[0006] In one embodiment, the garment is in a fully closed mode when the front and rear zippers are in the closed mode thereof and the tubular leg portion zippers are in the closed leg mode thereof.

5 [0007] In one embodiment, the closure members of each of the front zipper, the rear zipper and the leg zippers all meet at the crotch portion when the garment is in the fully closed mode.

[0008] In one embodiment, the tubular leg portions each has a lower end and the tubular leg portions are in a fully open leg mode when the closure members of the leg zippers are near the lower ends.

10 [0009] In one embodiment, the garment is in a fully open mode when the tubular leg portions are in the fully open leg mode, and when the front zipper and rear zipper are each near the neck opening.

15 [0010] In one embodiment, the garment is in a partly open mode when the closure members of the front and rear zippers are away from both the crotch portion and the neck opening, and the closure members of the leg zippers are away from both the crotch portion and the lower ends.

[0011] In one embodiment, the lower portion has two apertures for letting the wearer's legs therethrough, and the right and leg tubular portions are connected to the lower portion at the apertures for receiving the wearer's legs.

20 [0012] In one embodiment, the tubular leg portions are connected to the lower portion by sewing.

[0013] In one embodiment, the tubular leg portions are integrally formed with the body portion at the lower portion thereof.

[0014] In one embodiment, the garment comprises a flap extendable over the closure members of the front zipper, the rear zipper and the leg zippers for impeding access to the closure members when the garment is in the fully closed mode.

[0015] In one embodiment, the flap is diagonally extendable over the closure members.

5 [0016] In one embodiment, the flap has a first end permanently connected to a first location on the abdominal body portion and a second end which is releasably attachable to a second location on the abdominal body portion.

[0017] In one embodiment, the flap is releasably attachable to the second location by one of: a loop and hook fastener, a snap fastener, and a button.

10 [0018] In one embodiment, the tubular leg portions each includes a cuff at the lower end thereof, such that when the leg zipper closure members are in the open leg mode, the tubular leg portions are still partly held together at the lower end by the cuff.

[0019] In one embodiment, both the front zipper and the rear zipper extend from the neck portion to the crotch portion such that the garment can be separated into a right side  
15 garment piece and a left side garment piece.

[0020] In one embodiment, the front zipper extends from the neck portion to the crotch portion whereas the rear zipper extends from below the neck portion to the crotch portion such that the abdominal body portion remains connected below the rear neck region in the fully open garment mode.

20 [0021] In one embodiment, the rear zipper extends from the neck portion to the crotch portion whereas the front zipper extends from below the neck portion to the crotch portion such that the abdominal body part remains connected below the front neck region in the fully open garment mode.

[0022] In one embodiment, the garment further comprises a pair of sleeve portions connected to the arm apertures for encompassing at least a portion of the wearer's arms proximate to the torso.

5 [0023] In one embodiment, the sleeve portions have a length such that they fully encompass the arms of the wearer down to the wrists.

[0024] In one embodiment, the tubular leg portions have a length such that they fully encompass the legs of the wearer down to the ankles.

[0025] In another aspect there is provided a zippered garment, to be used by a wearer, the garment comprising: a right garment piece and a left garment piece.

10 [0026] The right garment piece has a right abdominal portion, a right tubular leg portion, and a right zipper fastener.

[0027] The right abdominal portion includes: an upper right portion forming a right neck half-opening at a top end thereof, a lower right portion having a right crotch portion, a left-facing straight edge extending from the right neck half-opening downwardly to the right side crotch portion on both a front and a rear side thereof, and a right portion of a zipper fastener attached along the left-facing straight edge thereof on both the front and rear sides.

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[0028] The right tubular leg portion extends downwardly from the lower right portion for receiving and encompassing the wearer's right leg, and has a left-facing longitudinal slit extending downwardly along a length thereof from the right crotch portion in the direction of a lower end thereof.

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[0029] The right zipper fastener is disposed along the left-facing longitudinal slit, and includes a closure member sliding therealong for defining a closed right leg position when the sliding closure member is at the right crotch portion and an open right leg position when the sliding closure member is slid towards the lower end of the right tubular leg portion.

[0030] The left garment piece has a left abdominal portion, a left tubular leg portion, and a left zipper fastener.

[0031] The left abdominal portion includes: an upper left portion forming a left neck half-opening at a top end thereof, a lower left portion having a left crotch portion, a right-facing straight edge extending from the neck half-opening downwardly to the left side crotch portion on both a front and a rear side thereof, and a left portion of a zipper fastener attached along the right-facing straight edge thereof on both the front and rear sides.

[0032] The left tubular leg portion extends downwardly from the lower left portion for receiving and encompassing the wearer's left leg, and has a right-facing longitudinal slit extending downwardly along a length thereof from the left crotch portion in the direction of a lower end thereof.

[0033] The left zipper fastener: is disposed along the right longitudinal slit, and includes a closure member sliding therealong for defining a closed left leg position when the closure member is at the left crotch portion and an open left leg position when the sliding closure member is slid towards the lower end of the left tubular leg portion.

[0034] The right and left portions of the zipper fasteners of the left and right abdominal sections cooperate to fasten the right garment piece and left garment piece together, at both the front and rear sides of the left and right abdominal portions, to form a closed garment; and a front and a rear zipper closure members, at the front and rear of the fastened right and left abdominal portions, is each slidable between a closed garment position in which the front and rear zipper closure members are at a crotch position of the garment, and an open position in which the front and rear zipper closure members are slid away from the crotch position of the garment.

[0035] In one embodiment, the garment is in a partly open mode when the front and rear zipper closure members are away from both the crotch position and the right and left neck half-portions, and when the left and right zipper fastener closure members are away

from both the left and right crotch portions, respectively, and the left and right zipper fastener closure members are away from the lower ends of the left and right tubular leg portions, respectively.

5 [0036] In one embodiment, the garment comprises a flap extendable over the closure members of the front zipper, the rear zipper and the leg zippers for impeding access to the closure members when the garment is in the closed garment position.

[0037] In one embodiment, the flap is diagonally extendable over the closure members of the front zipper, rear zipper, right zipper and left zipper for impeding access to the closure members when the garment is in the fully closed mode.

10 [0038] In one embodiment, the flap has a first end permanently connected to a first location on one of: the right garment piece and the left garment piece; and a second end which is releasably attachable to a second location on the other one of: the right garment piece and the left garment piece.

15 [0039] In one embodiment, the flap is releasably attachable to the second location by one of: a loop and hook fastener, a snap fastener, and a button.

[0040] In one embodiment, the tubular leg portions each includes a cuff at the lower end thereof, such that when the leg zipper closure members are in the open leg mode, the tubular leg portions are still partly held together at the lower end by the cuff.

20 [0041] In one embodiment, the garment further comprises a pair of sleeve portions connected to the arm apertures for encompassing at least a portion of the wearer's arms proximate to the torso.

[0042] In one embodiment, the sleeve portions have a length such that they fully encompass the arms of the wearer down to the wrists.

25 [0043] In one embodiment, the tubular leg portions have a length such that they fully encompass the legs of the wearer down to the ankles.

[0044] Advantageously, having a zippered garment where the zippers close in an unconventional manner, at the crotch portion instead of at the top, prevents people with mental illness from figuring out how to operate the zippers, opening the garment, and gaining access to their lower abdominal region.

## 5 **Brief description of the drawings**

[0045] **FIG. 1** is a perspective view taken from the front of a zippered garment, in a fully closed mode, in accordance with an embodiment of the present invention;

[0046] **FIG. 2** is a perspective view taken from the front of the garment of **FIG. 1** in a partly open mode;

10 [0047] **FIG. 3** is a perspective view taken from the front of the garment of **FIG. 1** in a fully open and detached mode;

[0048] **FIG. 4** is a front elevation view of the garment of **FIG. 1**, in the fully closed mode, shown with an adult wearer;

15 [0049] **FIG. 5** is a front elevation view of the garment of **FIG. 1**, in the fully closed mode, shown with a child wearer;

[0050] **FIG. 6** is a top plan view of the garment of **FIG. 1** in the fully closed mode;

[0051] **FIG. 7** is a bottom plan view of the garment of **FIG. 1** in the fully closed mode;

[0052] **FIG. 8** is a right side elevation view of the garment of **FIG. 1**;

[0053] **FIG. 9** is a left side elevation view of the garment of **FIG. 1**;

20 [0054] **FIG. 10** is a front elevation view of the garment of **FIG. 1** in the fully closed mode;

[0055] **FIG. 11** is a rear elevation view of the garment of **FIG. 1** in the fully closed mode;

25 [0056] **FIG. 12** is a perspective view taken from the front of variant of the garment of **FIG. 1** but featuring cuffs portions at a bottom end of tubular leg portions thereof, in fully closed mode, in accordance with another embodiment of the present invention;

[0057] **FIG. 13** is a perspective view taken from the front of a zippered garment, in fully closed mode, in accordance with yet another embodiment of the present invention;

[0058] FIG. 14 is a rear elevation view of the garment of FIG. 13;

[0059] FIG. 15 is a perspective view taken from the front of a variant of the garment of FIG. 1, featuring a flap, in accordance with yet another embodiment of the present invention;

5 [0060] FIG. 16 is the garment of the embodiment of FIG. 15 wherein the flap is in fully closed mode;

[0061] FIG. 17 is a front elevation view of a variant of the garment of FIG. 1, having short sleeve portions, shown in fully closed mode;

10 [0062] FIG. 18 is a rear elevation view of the garment of FIG. 17 in the fully closed mode;

[0063] FIG. 19 is a front elevation view of a variant of the garment of FIG. 1, having short sleeve portions and short tubular leg portions, shown in fully closed mode; and

[0064] FIG. 20 is a rear elevation view of the garment of FIG. 19 in the fully closed mode.

## 15 Detailed Description of the Embodiment

[0065] Embodiments of the present invention will now be presented by way of example only and not limitation, with reference to the attached figures.

[0066] First with reference to FIGS. 13-14, there is provided a zippered garment 1000 comprising an abdominal body portion 1010, and tubular leg portions 230 and 330. Abdominal body portion 1010 is sized and shaped to encompass the torso of a wearer. The abdominal body portion 1010 includes an upper portion 1012, a lower portion 1016, arm apertures, a front zipper 1022, and a rear zipper 1122. The upper portion 1012 of abdominal body portion 1010 is sized and shaped for encompassing the upper torso of the wearer, includes a neck opening 1014 for receiving the wearer's neck therethrough, and has formed therein two arm apertures for receiving the arms of wearer therethrough. In one embodiment, a pair of sleeve portions, such as right sleeve 400 and left sleeve 500 may be connected to the arm apertures for receiving and encompassing at least a portion of the wearer's arms proximate to the torso. The lower portion 1016 of abdominal body 1010

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portion is sized and shaped for encompassing the pelvic region of the wearer, and includes a crotch portion **1018**. A front zipper **1022** and a rear zipper **1122** each extends from below the neck opening **1014** to the crotch portion **1018**. Front zipper **1022** has a closure member **1024**, while rear zipper **1122** has a closure member **1124**. Each of front zipper **1022** and rear zipper **1122** is in a closed mode when the corresponding closure member is at the crotch portion **1018** as seen in **FIG. 13**. Conversely, the front zipper **1022** and rear zipper **1122** are in an open mode when the corresponding closure member is away from the crotch portion. One or both of the zippers **1022** and **1122** may be in a fully open mode in which case the zipper closure members **1024** and **1124**, respectively, are at a top position near neck opening **1014**. Alternatively, the zippers **1022** and **1122** are in a partly open mode in which case the zipper closure members **1024** and **1124** are away from both the crotch portion **1018** and the neck portion **1014**.

[0067] Right tubular leg portion **230** and left tubular leg portion **330** are connected to the lower portion **1016** of abdominal body portion **1010**, and each is sized for receiving and encompassing at least a top portion of the wearer's legs proximate to the wearer's torso. In one embodiment (not shown), the lower portion **1016** has leg apertures for letting a wearer's legs therethrough, and the right and left tubular leg portions are connected to the lower portion **1016** at the apertures for receiving the wearer's legs. In another embodiment, shown in **FIGS. 13** and **14**, right tubular leg portion **230** and left tubular leg portion **330** are both integrally formed with the abdominal body portion **1010**. Each of the tubular legs **230** and **330** has a zipper extending along the length thereof and having a closure member slidable along the zipper. For example, right tubular leg portion **230** has a zipper **240** with a zipper closure member **242** slidable therealong. Similarly, left tubular leg portion **330** has a zipper **340** with a zipper closure member **342** slidable therealong. The tubular leg zipper **240** or **340** is in a fully closed mode when its respective closure member **242** or **342**, respectively, is at the crotch portion **1018** of the lower body portion **1016**. The tubular leg zipper **240** or **340** is in an open mode when its respective closure member **242** or **342**, respectively, is away from the crotch portion of the lower portion. The open mode may be a fully open leg mode or a partly open leg mode. The tubular leg zipper **240** or **340** is in a fully open mode

when its respective closure member **242** or **342**, respectively, is at lower end **232** or **332**, respectively. The tubular leg zippers **240** or **340** is each in partly open mode when its respective closure member **242** or **342** is away from both the crotch portion **1018** and the lower end **232** or **332**, respectively.

5 **[0068]** The zippered garment **1000** is in a fully closed mode when all four zippers **1022**, **1122**, **240** and **340** are closed, which is the case when zipper closure members **1024**, **1124**, **242**, and **342** are at the crotch region as shown in **FIG. 13**. The garment **1000** is in a partly open mode when zipper closure members **1024**, **1124**, **242**, and **342** are away from the crotch region, but the front and rear zipper closure members **1024** and **1124** are also away  
10 from the neck portion **1014**, and the leg zipper closure members **242** and **342** are also away from both the crotch portion **1018** and the lower ends **232** and **332**. The garment **1000** is in a fully open position when the front and rear zipper closure members are at the neck region **1014**, and the leg zipper closure members **242** and **342** are at the lower ends **232** and **332**, respectively.

15 **[0069]** In another embodiment, featured in **FIGS. 1-11**, a zippered garment **100** is provided. Garment **100** is comprised of a right garment piece **200**, and a left garment piece **300**. Right garment piece **200** has a right abdominal portion **210** including an upper right portion **212** forming a right neck half-opening **214** at a top end thereof for receiving a portion of a wearer's neck. Right abdominal portion **210** also includes a lower right portion  
20 **216** having a right crotch portion **218**, and a left-facing edge **220** extending from the right neck half-opening **214** to the right crotch portion **218** on both a front and a rear side of the right abdominal portion **210**.

**[0070]** A right portion of a zipper fastener **222** is attached along the left-facing edge **220** of the right abdominal body portion **210** on both the front and rear sides thereof.

25 **[0071]** A right tubular leg portion **230** sized for receiving and encompassing at least a top portion of a wearer's leg proximal to the torso, is extending downwardly from the lower right abdominal portion **216**. The right tubular leg portion **230** has a left-facing longitudinal

slit extending downwardly along a length thereof from the right side crotch portion **218** in the direction of a lower end **232** of the right tubular leg portion **230**.

**[0072]** A right zipper fastener **240**, including a sliding closure member **242** is disposed along the left-facing longitudinal slit of the right tubular leg portion **230**, for defining a closed right leg mode and an open right leg mode. When the sliding closure member **242** of the right leg zipper fastener **240** is at the right crotch portion **218**, the right tubular leg portion **230** is in a closed right leg mode. Conversely, when the sliding closure member **242** of the right leg zipper fastener **240** is slid towards the lower end **232** of the right tubular leg portion **230**, the right tubular leg portion **230** is in an open right leg mode. Additionally when the sliding closure member **242** of the right leg zipper **240** is away from both the lower end **232** and from the right crotch portion **218**, the right tubular leg portion is in a partly open right leg mode.

**[0073]** The left garment piece **300** has a similar, but opposite, structure as that of the right garment piece **200**. Left garment piece **300** has a left abdominal portion **310** including an upper left portion **312** forming a left neck half-opening **314** at a top end thereof for receiving a portion of the wearer's neck. Left abdominal portion **310** also includes a lower left portion **316** having a left crotch portion **318**, and a right-facing edge **320** extending from the left neck half-opening **314** to the left crotch portion **318** on both the front and the rear sides of the left abdominal portion **310**. A left portion of a zipper fastener **322** is attached along the right-facing edge **320** of the left abdominal portion **310** on both the front and rear sides thereof.

**[0074]** A left tubular leg portion **330** sized for receiving and encompassing at least a top portion of a wearer's leg proximal to the torso, is extending downwardly from the lower left abdominal portion **316**. The left tubular leg portion **330** has a right-facing longitudinal slit extending downwardly along a length thereof from the left side crotch portion **318** in the direction of a lower end **332** of the left tubular leg portion **330**.

**[0075]** A left zipper fastener **340**, including a sliding closure member **342** is disposed along the right-facing longitudinal slit, of the left tubular leg portion **330**, for defining a closed left leg mode, and an open left leg mode. When the sliding closure member **342** of the left leg zipper fastener **340** is slid away from the left side crotch portion **318** towards the lower end **332** of the left tubular leg portion **330**, the left tubular leg portion **330** is in an open left leg mode. When the closure member **342** is at the lower end **332**, the left tubular leg **330** is in a fully open mode. Additionally, when the sliding closure member **342** of the left leg zipper **340** is away from both the lower end **332** and from the left side crotch portion **318**, the left tubular left portion is in a partly open left leg mode.

**[0076]** The right garment piece **200** and left garment piece **300** mate together to form garment **100**. The right zipper fastener portion **222** and the left zipper fastener portion **322** cooperate to fasten the right garment piece **200** and left garment piece **300** together, at both the front and rear sides of the right abdominal portion **210** and the left abdominal portion **310**, to form a closed garment. A front and a rear zipper closure members **224**, at the front and rear of the fastened right and left abdominal sections, is each slidable between a closed garment position in which the front and rear zipper closure members **224** is each at a crotch position of the garment (as shown in **FIG. 1**), and an open position in which the front and rear zipper closure members **224** are slid away from the crotch position of the garment. The open position may be a partly open position, in which the closure members **224** are only partly away from the crotch portions **218** and **318**, but still far from the neck opening formed by neck half-openings **214** and **314**. The partly open position of the garment is shown in **FIG. 2**. The partly open position may be useful for changing an incontinent product, such as a diaper as well as facilitating toileting in the bathroom or on a commode, etc. The open position may also be a fully open position in which the closure members **224** have both been moved all the way up to the neck half-openings **214** and **314** and the right garment piece **210** and the left garment piece **310** have been separated from one another. The fully open position is shown in **FIG. 3**. The fully open position may be used to change the garment, or to change an incontinent product of larger dimensions.

[0077] A variant of the embodiment of **FIGS. 1-11**, is shown in **FIG. 12**. In this variant, the right and left tubular leg portions (**230, 330**) may each feature a cuff portion (**260, 360**), at a respective lower end (**232, 332**) thereof. Accordingly, the zipper sliding members **242** and **342** may be slid upwardly to close the zippers without the need to first wrap the tubular leg portions **230** and **330** around the wearer's legs. Instead, the wearer's feet need to be inserted into the cuff portions (**260, 360**). In yet another embodiment (not shown), for a cold environment, the tubular leg portions (**230,330**) may have built-in sock portions at the lower ends (**232, 332**) thereof for receiving and warming a wearer's feet. In yet another embodiment (not shown), the sleeve portions (**400,500**) may feature built-in gloves or mittens at distal ends thereof for keeping the wearer's hand warm and/or for protecting the wearer from harming his or herself. In a further embodiment (not shown), the garment may feature a hood portion or covering the wearer's head.

[0078] In yet another embodiment (not shown), the garment may be similar to garment **1000** at the back, but similar to garment **100** at the front. That is the garment may be formed in one piece as garment **1000** is, but with the front zipper **1022** extending all the way up to the neck opening **1014**. In this case, the abdominal portion **1010** fully opens at the front as shown in **FIG. 3**, but remains connected at the back at upper portion **1100** as shown in **FIG. 14**. A wearer may wear such garment by closing the rear zipper then putting on the garment, and finally closing the front zipper. Conversely, the garment may be connected at the front as shown in **FIG. 13**, but having a back zipper fully extending to the neck opening as shown in **FIG. 11**. In this case, a wearer may close up the front zipper and slip the garment on in the same manner as a hospital gown is worn, and then the rear zipper may be closed.

[0079] In yet another embodiment, shown in **FIGS. 15** and **16**, a flap **500** may be added to the garment to make it harder for a wearer to open the garment to access their crotch. The flap **500** may extend from a rear portion of the right abdominal crotch section **218** to a front portion of the left abdominal crotch section **318**. The flap **500** may be sewn to the garment at one end **510** thereof, and may have a fastener **505** on the opposite end. In one

embodiment, shown in **FIGS. 15** and **16**, the flap may be sewn, at end **510** to the rear portion of a right crotch portion **218**, and may use a fastener **505** on the front portion of the left crotch portion **318**. In another embodiment (not shown), the flap may be sewn to the front of an abdominal crotch portion, and fastened to a diagonally opposing rear abdominal crotch portion. The flap **500** thus extends diagonally over the point where all four zipper closure members **224**, **242** and **342** meet when in the closed position, thus concealing the closure members **224**, **242**, and **342**. Advantageously, concealing the closure members of the zippers makes it more challenging for the wearer to open the garment and gain access to their incontinent product and/or genital organs. The fastener used to secure the flap to the garment, may be a button, a snap, a hook and loop fastener, or any other appropriate fastener. For example, in **FIG. 15**, **505** is the hook part of a hook and loop fastener, while **515** is the loop part. In yet another embodiment (not shown) two flaps may be used for added security, and to further make crotch access more challenging for patients who may eventually figure out how to operate the zippers. In this case, the two flaps are both diagonally positioned on the garment to form an “X” arrangement.

[0080] While the flap **500** was shown in conjunction with the garment **100**, it is equally applicable to the garment **1000** as well.

[0081] In one embodiment, the garment **100** may also feature sleeves **400** and **500**. Alternatively, in another embodiment (not shown) the garment may just feature armholes in the upper abdominal sections **212** and **312**, for receiving a wearer’s arms.

[0082] With reference to **FIGS. 1-15**, sleeve portions **400** and **500** are shown as long sleeves. However, in another embodiment, shown in **FIGS. 17** and **18**, the sleeve portions **400** and **500** are partial sleeves encompassing only a portion of the wearer’s arms proximate to their torso. In yet another embodiment, shown in **FIGS. 19** and **20**, sleeve portions **400** and **500** are similar to the sleeve portions of **FIGS. 19** and **20** feature tubular leg portions **230** and **330**, which are short and thus encompass only a top portion of the wearer’s leg proximate to the torso. Such garments with short sleeves and/or legs may be suitable for warm days.

[0083] In one embodiment (not shown), in the closed position, the four zipper sliding closing member **224**, **242** and **342** may be positioned at a rear part of the crotch of garment **100**. In this case, the lower abdominal sections **216** and **316** are longer at the front and shorter at the rear. Similarly, the leg zippers **240** and **340** are located in the rear portion of the tubular leg portions **230** and **330**. Accordingly, the four zipper sliding closing members **224**, **242**, and **342** are located a few inches above the crotch region on the rear side of the garment **100**, thus making it even more challenging for patients with intellectual disorders for example to reach for and open the zippers to gain access to their private parts.

[0084] In yet another embodiment, a fastener may connect the four zipper closure members at the crotch thereby making it difficult for user to unzip the zippers. For example, the closure members may all have apertures and a locking ring may be used to lock all closure members together. This configuration may be used with or without the flap **500**.

[0085] A patient is typically assisted when putting the garment on. In one embodiment, the right garment piece **200**, and the left garment piece **300** are initially joined together before the patient wears the garment. For example, the right garment piece **200** and the left garment piece **300** may be joined at the rear side using two half zipper fasteners **222** and **322**, and rear zipper closure member **224**. In another example, the right garment piece **200** and the left garment piece **300** may be initially joined at the front side using two half zipper fasteners **222** and **322**, and front zipper closure member **224**. In yet another example, the right **200** and left garment **300** pieces are joined as the patient is wearing them. In one embodiment, the patient puts on the garment first by inserting the right arm into right sleeve **400**. The right abdominal portion **210** is then fitted around the right side of the wearer's abdomen, and the right tubular leg portion **230** is wrapped around the wearer's right leg. At this point the sliding closing member **242** may be slid up zipper **240**, up to, or proximal to, the crotch end **218**, to secure the tubular leg portion **230** around the wearer's leg. The same steps may be repeated for the left side. For example, the left arm is inserted into left sleeve **500**, the left abdominal portion **310** is fitted around the left side of the wearer's abdomen, and the left tubular leg portion **330** is wrapped around the wearer's right leg. At this point,

the sliding closing member **342** may be slid up zipper **340**, up to, or proximal to, the crotch end **318**, to secure the tubular leg portion **330** around the wearer's left leg. Next, the right zipper fastener portion **222**, and the left zipper fastener portion **322** are mated together and the sliding closing member **224** is slid down from the neck region (**214, 314**) down towards the crotch region (**218, 318**), at the front side, at the rear side, or at both sides to fully close the garment. The fully closed position of the garment is shown, for example, in **FIG. 1**. All four zipper sliding closing members **224, 242, and 342** are at the crotch region, in the closed position.

**[0086]** Advantageously, the above-described garments **100** and **1000** are each provide selective access in that they permit access to a wearer's crotch by select people such as health care workers, but denies access by the wearer who may be a behavioral patient, for example. A behavioral patient who is used to opening a zipper by sliding down the zipper's closing member to open their garment and reach for their private parts would not be able to open the garment. This is owing to the fact that the front and rear zippers described close towards the crotch and therefore the zipper closing member is at the crotch when the garment is in fully closed mode. A lifetime of muscle memory is familiar with undoing zippers on garments from the top down. With decreased neuroplasticity as related to dementia and other behaviors, this maneuver is contrary to a lifetime of learning and reinforcement. Specifically, such patient would expect the zipper closing members for the abdominal section to be at the neck region or even around the navel. And if there they would attempt to pull it down thinking that would cause the garment to open, the patient would not expect the closing member to be at the crotch, and that it would open by being slid in the upwards direction.

**[0087]** A healthcare worker attempting to change an incontinent product, may do so by partially opening the garment enough to access fastening members of the incontinent product and slip it out. This is done by sliding the sliding closing members **224** (front and rear), **242** and **342** away from the crotch. This is depicted in **FIG. 2**. The extent to which the closing members are moved away from the crotch region depends on the incontinent

product used. The same action may also be taken when assisting patients in voiding themselves at the restroom. Advantageously, the four-zipper arrangement presented herein, and the closing arrangement, wherein in the closed position the zipper sliding locking members are at the crotch region, both provide for a zippered garment allowing selective  
5 access to the wearer's crotch or lower abdominal region. The garment cannot be opened by patients with mental illnesses/challenges who cannot learn a new way of operating zippers that close in the reverse direction to the direction of conventional zippers, or cannot maneuver a fastener connecting the zippers or the flap system. The garment can also be easily opened, as needed, to access the crotch region, or the entire lower abdominal region,  
10 with ease, or can be simply unzipped from bottom to top at the front or back for easy garment changes.

**[0088]** While the examples provided were designed with mainly elderly patients or residents of LTC facilities in mind, the invention is equally applicable all individuals of all ages. For example, infants or children may use the garment, as shown in **FIG. 5**.  
15 Alternatively, the garment may be used by adults as shown in **FIG. 4**.

**[0089]** The above-described embodiments are intended to be examples of the present invention and alterations and modifications may be effected thereto, by those of skill in the art, without departing from the scope of the invention, which is defined solely by the claims appended hereto.  
20

## WHAT IS CLAIMED IS

1. A zippered garment, comprising:

an abdominal body portion sized and shaped for encompassing the torso of a wearer,  
the abdominal body portion including:

5 an upper portion:

sized and shaped for encompassing the wearer's upper torso,  
having a neck opening for receiving the wearer's neck therethrough, and  
having formed therein arm apertures for receiving the arms of the wearer  
therethrough;

10 a lower portion:

sized and shaped for encompassing the wearer's pelvic region, and  
including a crotch portion;

a front zipper and a rear zipper each:

15 extending from below the neck opening to the crotch portion,  
having an abdominal closure member slidable therealong,  
being in a closed mode when the abdominal closure member is at the  
crotch portion, and  
being in an open mode when the abdominal closure member is away from  
the crotch portion; and

20 two tubular leg portions:

connected to the lower portion of the abdominal body portion,  
each sized for receiving and encompassing at least a top portion of the wearer's  
leg proximate to the wearer's torso,

each having a leg zipper extending along a length thereof and having a leg closure member slidable therealong,

each being in a closed leg mode when the leg closure member thereof is at the crotch portion of the lower portion enclosing a respective leg of the wearer, and

5 each being in an open leg mode when the leg closure member thereof is away from the crotch portion of the lower portion.

2. The zippered garment of claim 1, wherein the garment is in a fully closed mode when the front and rear zippers are in the closed mode thereof and the tubular leg portion zippers are in the closed leg mode thereof.
- 10 3. The zippered garment of claim 2, wherein the abdominal closure members of each of the front zipper, the rear zipper and the leg closure members of the leg zippers all meet at the crotch portion when the garment is in the fully closed mode.
4. The zippered garment of claim 1, wherein the tubular leg portions each have a lower end, and wherein the tubular leg portions are in a fully open leg mode when the leg  
15 closure members of the leg zippers are near the lower ends.
5. The zippered garment of claim 4, wherein the garment is in fully open mode when the tubular leg portions are in the fully open leg mode, and when the front zipper and rear zipper are each near the neck opening.
6. The zippered garment of claim 4, wherein the garment is in partly open mode when  
20 the abdominal closure members of the front and rear zippers are away from both the crotch portion and the neck opening, and wherein the leg closure members of the leg zippers are away from both the crotch portion and the lower ends.
7. The zippered garment of claim 1, wherein the lower portion has two apertures for letting the wearer's legs therethrough, and wherein the right and left tubular portions  
25 are connected to the lower portion at the apertures for receiving the wearer's legs.

8. The zippered garment of claim 7, wherein the tubular leg portions are connected to the lower portion by sewing.
9. The zippered garment of claim 1, wherein the tubular leg portions are integrally formed with the body portion at the lower portion thereof.
- 5 10. The zippered garment of claim 2, further comprising a flap extendable over the abdominal closure members of the front zipper, the rear zipper and the leg closure members of the leg zippers for impeding access to the abdominal and leg closure members when the garment is in the fully closed mode.
11. The zippered garment of claim 10, wherein the flap is diagonally extendable over at  
10 least one of the abdominal or leg closure members.
12. The zippered garment of claim 10, wherein the flap has a first end permanently connected to a first location on the abdominal body portion, and a second end which is releasably attachable to a second location on the abdominal body portion.
13. The zippered garment of claim 12, wherein the flap is releasably attachable to the  
15 second location by one of: a loop and hook fastener, a snap fastener, and a button.
14. The zippered garment of claim 4, wherein the tubular leg portions each includes a cuff at the lower end thereof, such that when the leg closure members are in the open leg mode, the tubular leg portions are still partly held together at the lower end by the cuff.
- 20 15. The zippered garment of claim 1, wherein both the front zipper and the rear zipper extends from the neck portion to the crotch portion such that the garment can be separated into a right side garment piece and a left side garment piece.
16. The zippered garment of claim 1, wherein the front zipper extends from the neck portion to the crotch portion whereas the rear zipper extends from below the neck

portion to the crotch portion such that the abdominal body portion remains connected at rear below the neck opening in the fully open garment mode.

17. The zippered garment of claim 1, wherein the rear zipper extends from the neck portion to the crotch portion whereas the front zipper extends from below the neck  
5 portion to the crotch portion such that the abdominal body part remains connected at front below the neck opening in the fully open garment mode.
18. The zippered garment of claim 1, further comprising a pair of sleeve portions connected to the arm apertures for encompassing at least a portion of the wearer's arms proximate to the torso.
- 10 19. The zippered garment of claim 18, wherein the sleeve portions have a length such that they fully encompass the arms of the wearer down to the wrists.
20. The zippered garment of claim 1, wherein the tubular leg portions have a length such that they fully encompass the legs of the wearer down to the ankles.
21. A zippered garment, to be used by a wearer, the garment comprising:  
15 a right garment piece having:  
a right abdominal portion including:  
an upper right portion forming a right neck half-opening at a top end thereof,  
a lower right portion having a right crotch portion,  
20 a left-facing straight edge extending from the right neck half-opening downwardly to the right side crotch portion on both a front and a rear side thereof, and  
a right portion of a zipper fastener attached along the left-facing straight edge thereof on both the front and rear sides;

a right tubular leg portion:

extending downwardly from the lower right portion for receiving and encompassing the wearer's right leg, and

5

having a left-facing longitudinal slit extending downwardly along a length thereof from the right crotch portion in the direction of a lower end thereof; and

a right zipper fastener:

disposed along the left-facing longitudinal slit, and

10

including a right leg closure member sliding therealong for defining a closed right leg position when the sliding right leg closure member is at the right crotch portion and an open right leg position when the sliding right leg closure member is slid towards the lower end of the right tubular leg portion; and

a left garment piece having:

15

a left abdominal portion including:

an upper left portion forming a left neck half-opening at a top end thereof,

a lower left portion having a left crotch portion,

20

a right-facing straight edge extending from the neck half-opening downwardly to the left side crotch portion on both a front and a rear side thereof, and

a left portion of a zipper fastener attached along the right-facing straight edge thereof on both the front and rear sides;

a left tubular leg portion:

25

extending downwardly from the lower left portion for receiving and encompassing the wearer's left leg, and

having a right-facing longitudinal slit extending downwardly along a length thereof from the left crotch portion in the direction of a lower end thereof; and

a left zipper fastener:

5 disposed along the right longitudinal slit, and  
including a left leg closure member sliding therealong for defining a closed left leg position when the left leg closure member is at the left crotch portion and an open left leg position when the sliding left leg closure member is slid towards the lower end of the left tubular leg  
10 portion;

wherein the right and left portions of the zipper fasteners of the left and right abdominal sections cooperate to fasten the right garment piece and left garment piece together, at both the front and rear sides of the left and right abdominal portions, to form a closed garment; and

15 wherein a front and a rear zipper abdominal closure members, at the front and rear of the fastened right and left abdominal portions, are each slidable between a closed garment position in which the front and rear zipper abdominal closure members are at a crotch position of the garment, and an open position in which the front and rear zipper abdominal closure members are slid away from the crotch position of the garment.

20 22. The zippered garment of claim 21, wherein the garment is in a partly open mode when the front and rear zipper abdominal closure members are away from both the crotch position and the right and left neck half-portions, and when the left and right zipper fastener leg closure members are away from both the left and right crotch portions, respectively, and the left and right zipper fastener leg closure members are  
25 away from the lower ends of the left and right tubular leg portions, respectively.

23. The zippered garment of claim 21, further comprising a flap extendable over the closure members of the front zipper, the rear zipper and the leg zippers for impeding access to the closure members when the garment is in the closed garment position.
24. The zippered garment of claim 23, wherein the flap is diagonally extendable over the closure members of the front zipper, rear zipper, right zipper fastener and left zipper fastener for impeding access to the closure members when the garment is in the fully closed mode.
25. The zippered garment of claim 23, wherein the flap has a first end permanently connected to a first location on one of: the right garment piece and the left garment piece; and a second end, which is releasably attachable to a second location on the other one of: the right garment piece and the left garment piece.
26. The zippered garment of claim 25, wherein the flap is releasably attachable to the second location by one of: a loop and hook fastener, a snap fastener, and a button.
27. The zippered garment of claim 21, wherein the tubular leg portions each include a cuff at the lower end thereof, such that when the leg zipper closure members are in the open leg mode, the tubular leg portions are still partly held together at the lower end by the cuff.
28. The zippered garment of claim 21, further comprising a pair of sleeve portions connected to the arm apertures for encompassing at least a portion of the wearer's arms proximate to the torso.
29. The zippered garment of claim 28, wherein the sleeve portions have a length such that they fully encompass the arms of the wearer down to the wrists.
30. The zippered garment of claim 21, wherein the tubular leg portions have a length such that they fully encompass the legs of the wearer down to the ankles.

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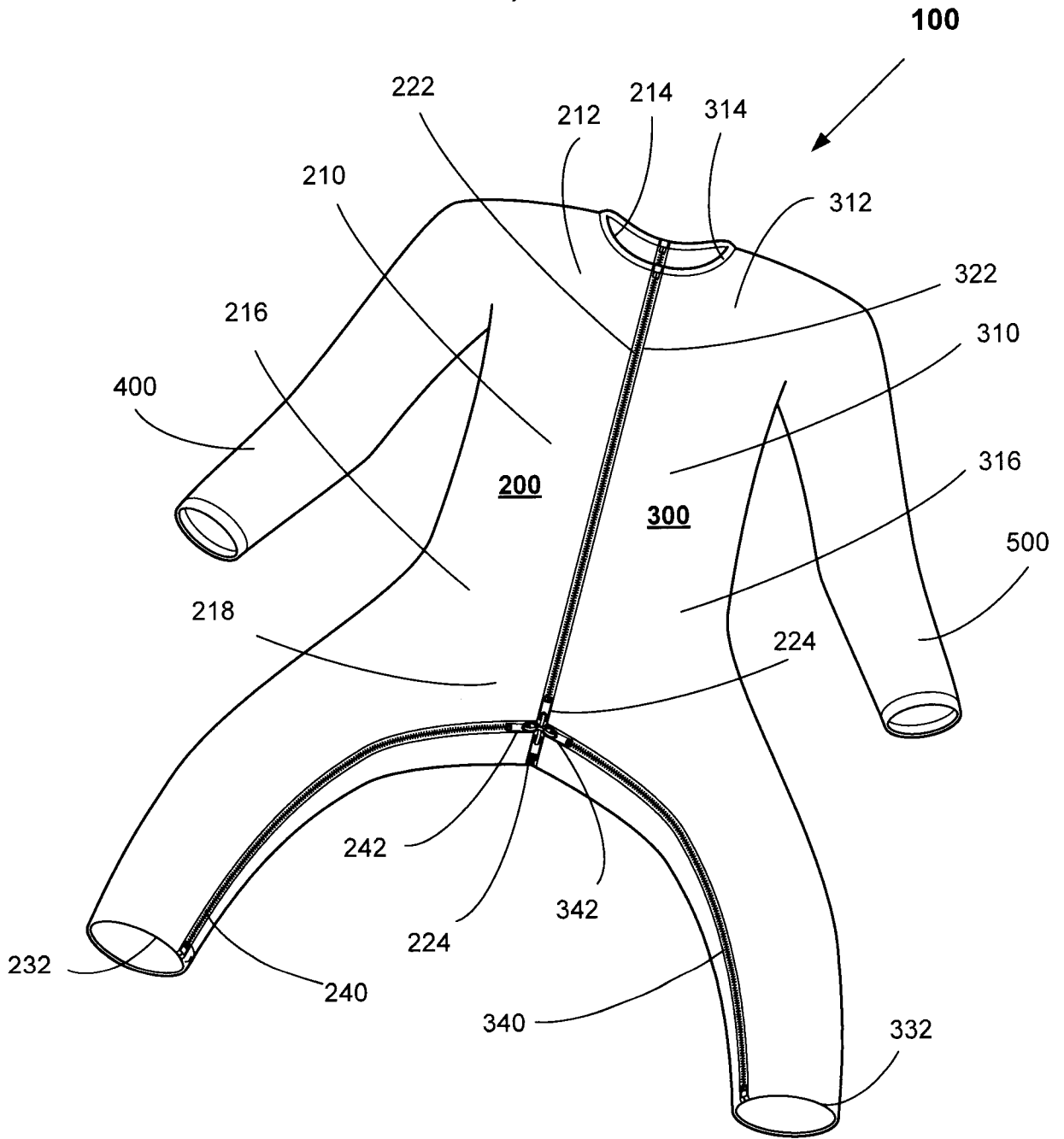


FIG. 1

2/15

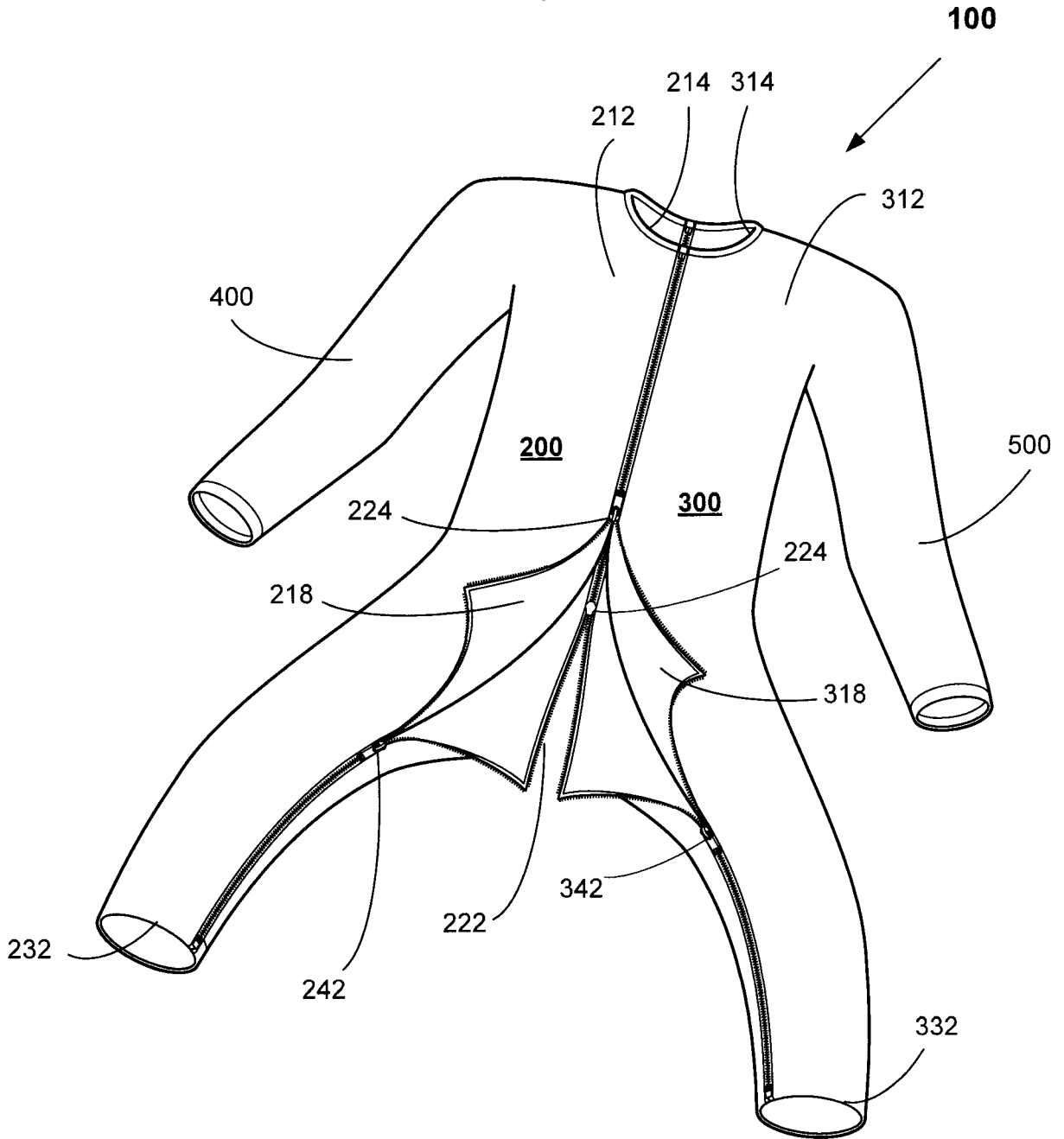


FIG. 2

3/15

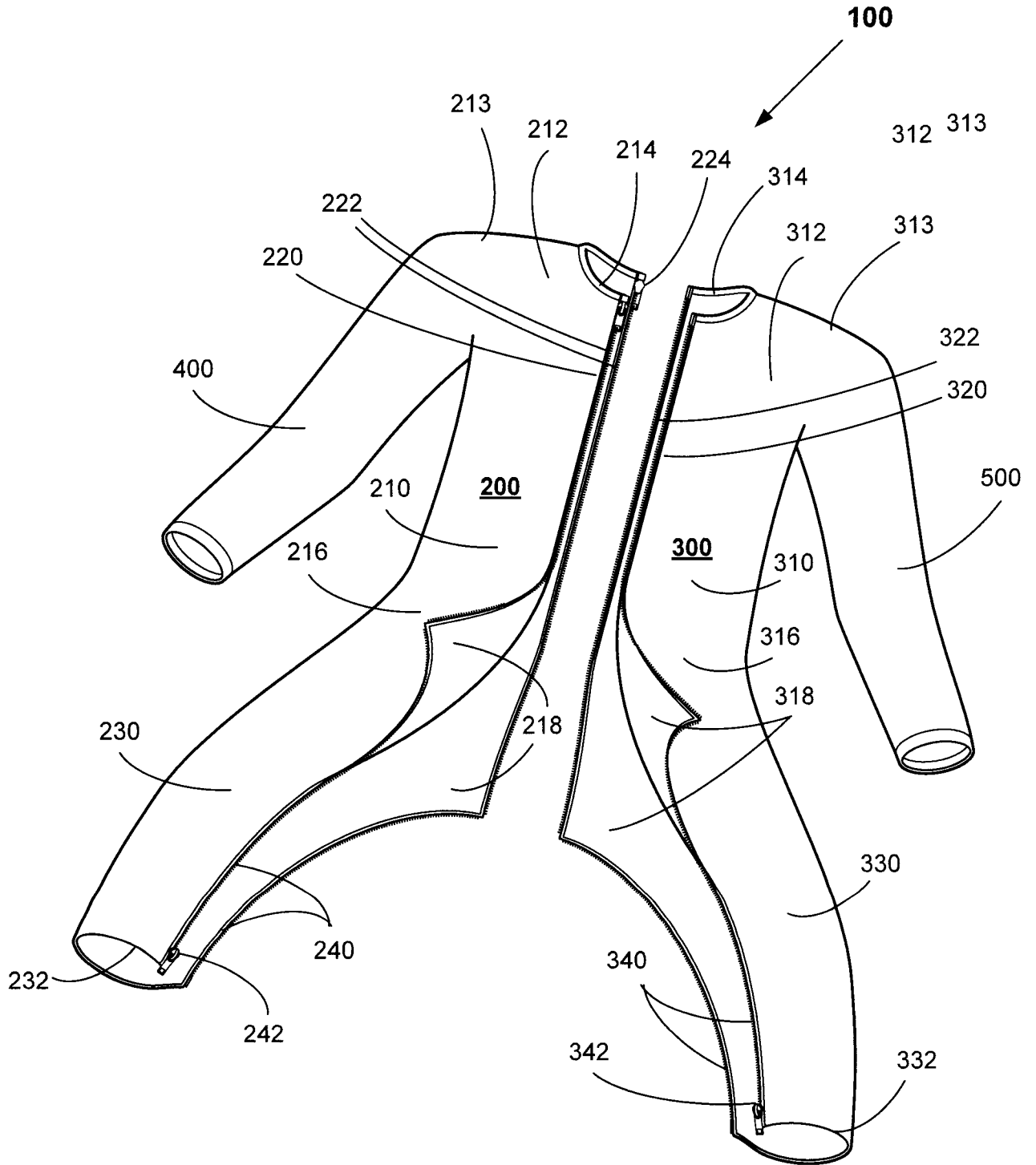


FIG. 3

4/15

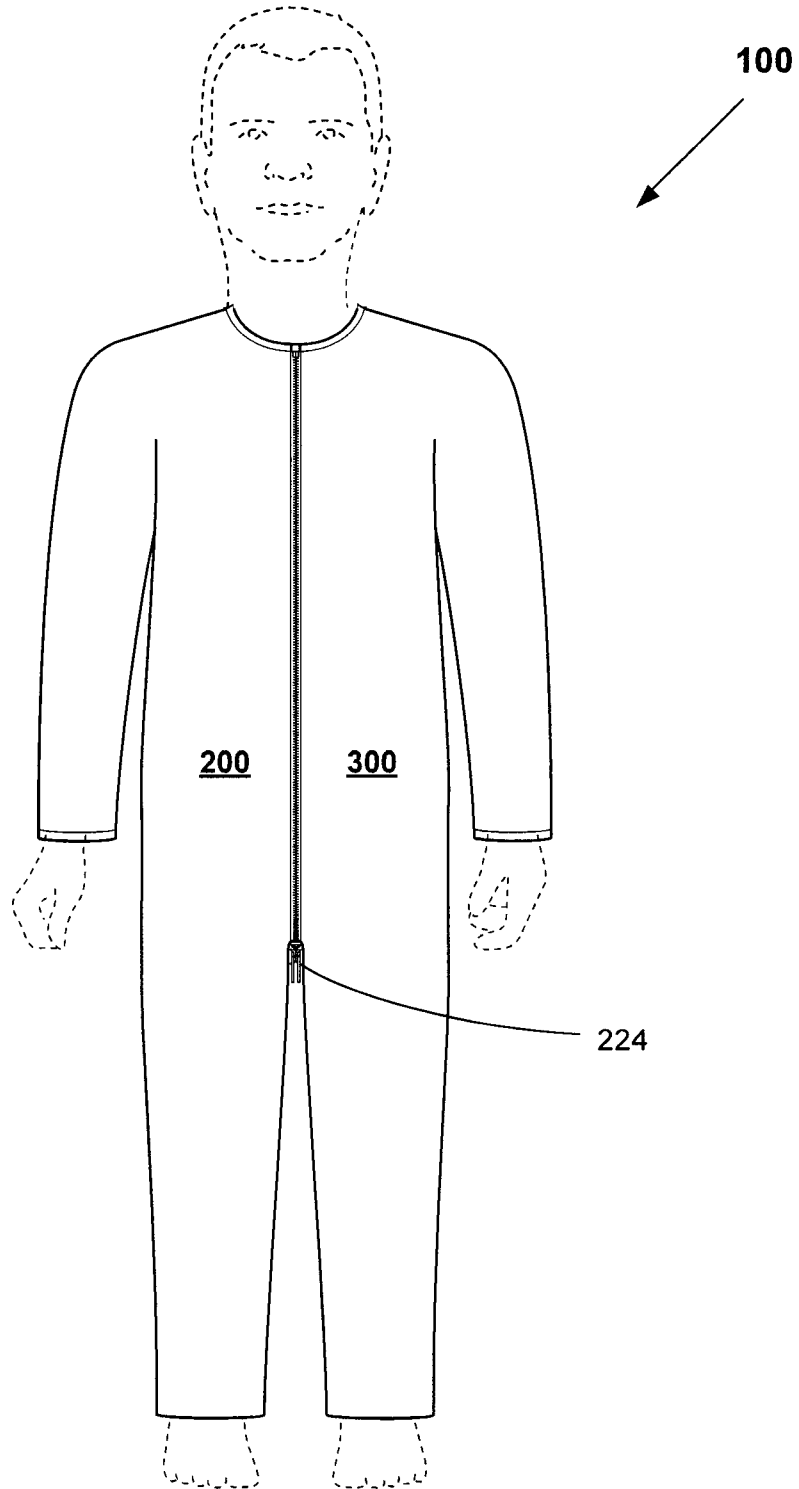


FIG. 4

5/15

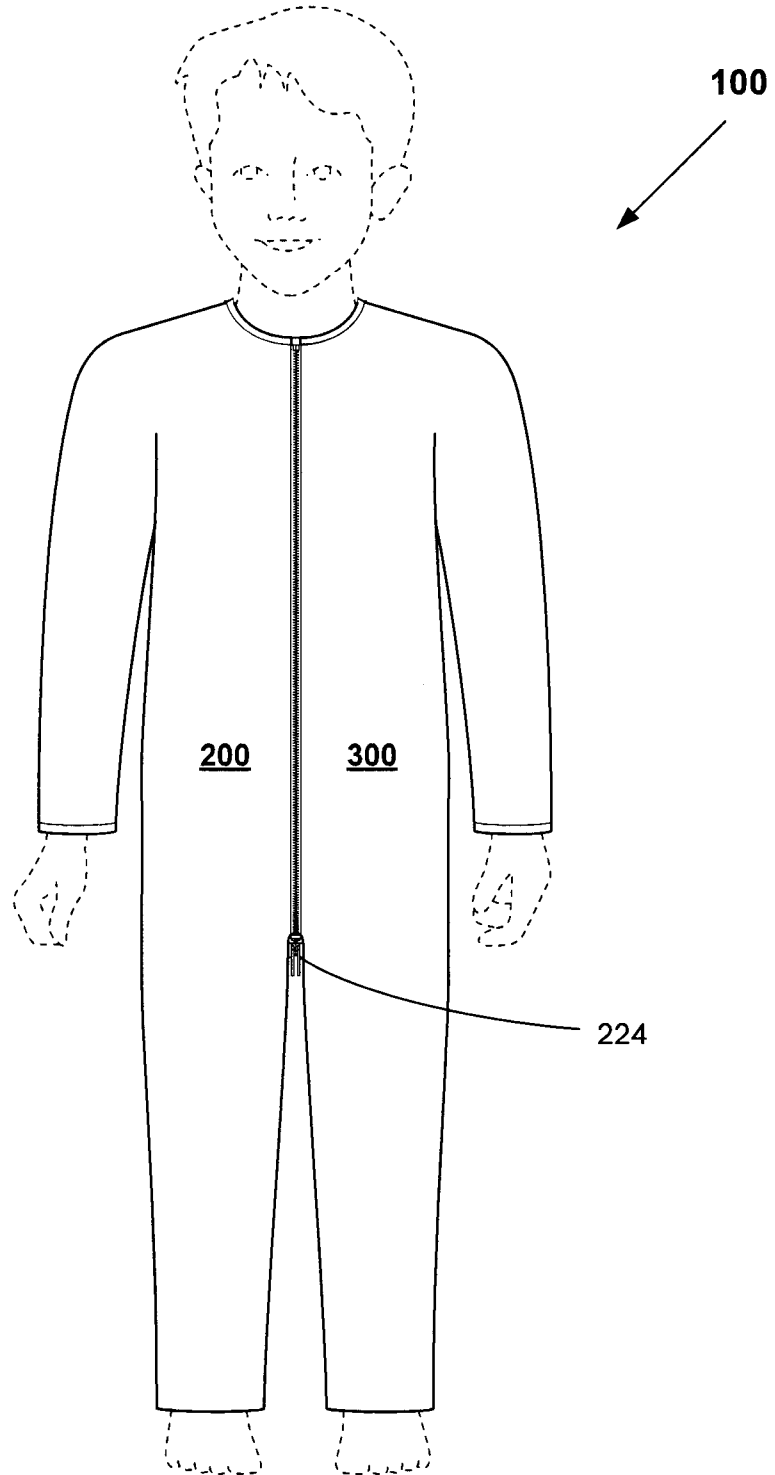


FIG. 5

6/15

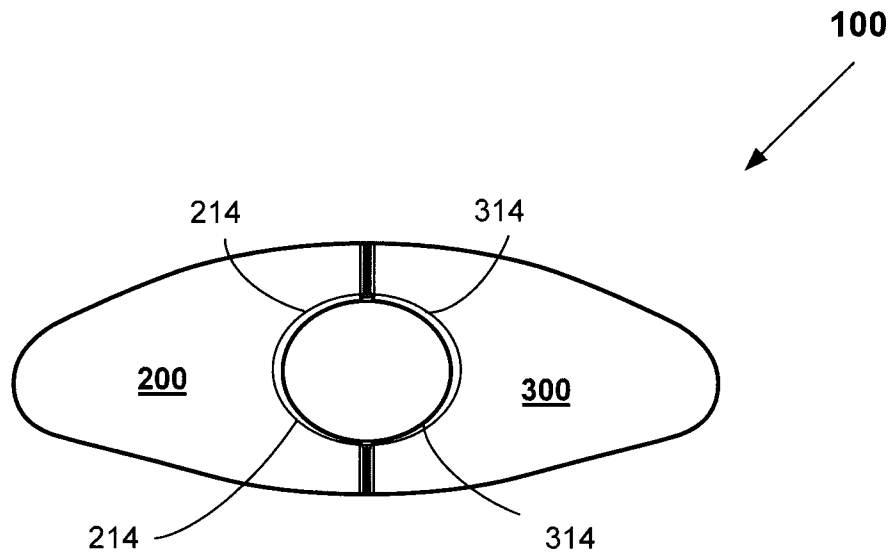


FIG. 6

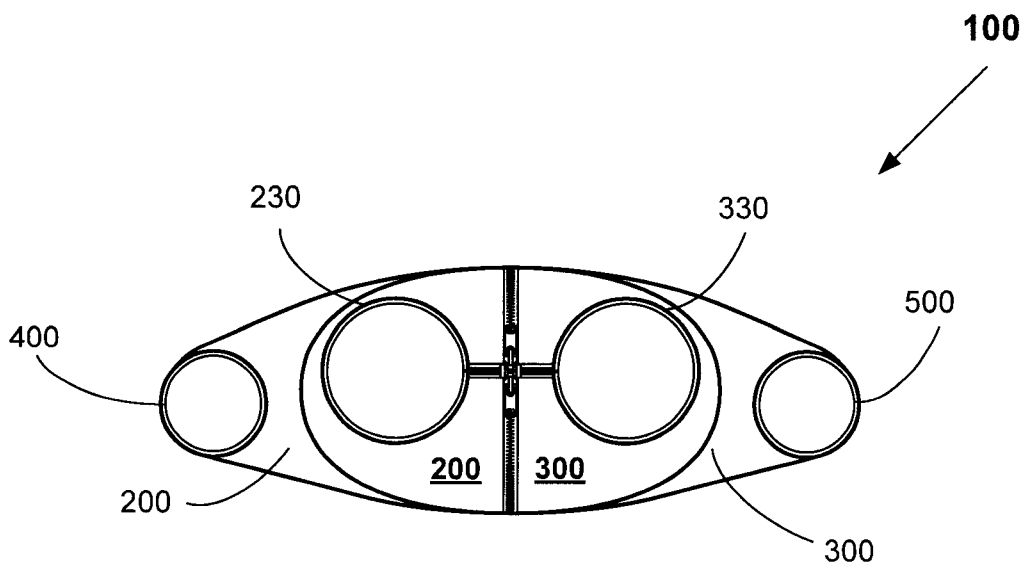


FIG. 7

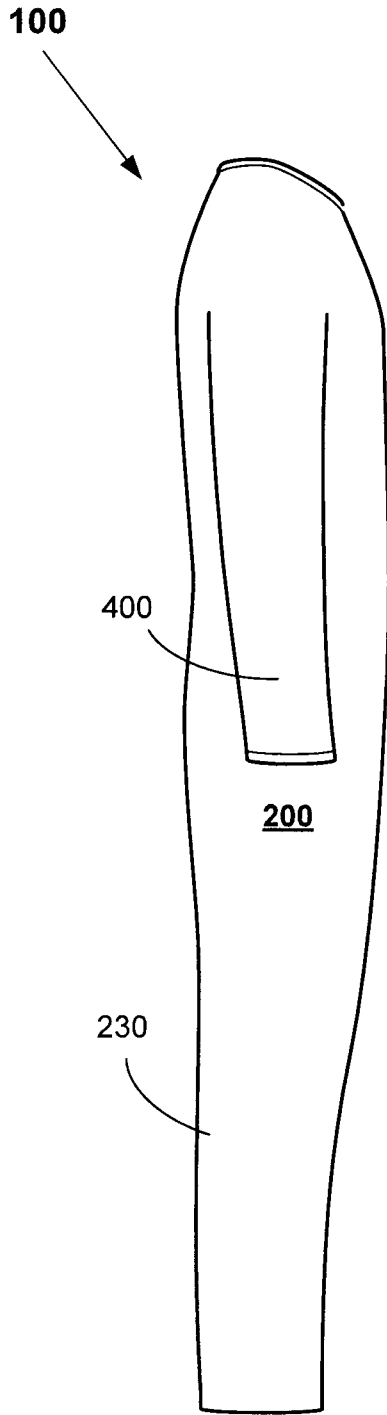


FIG. 8

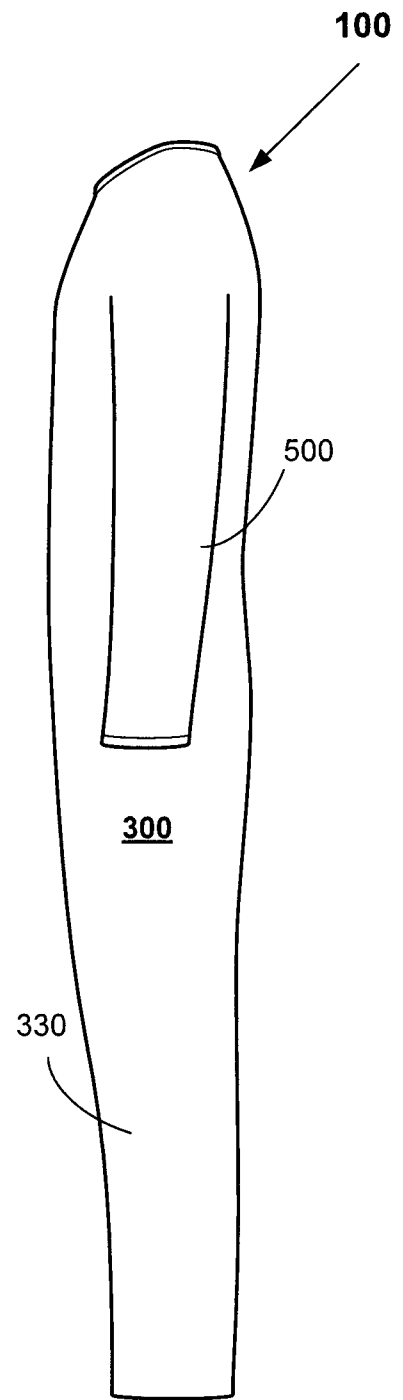


FIG. 9

8/15

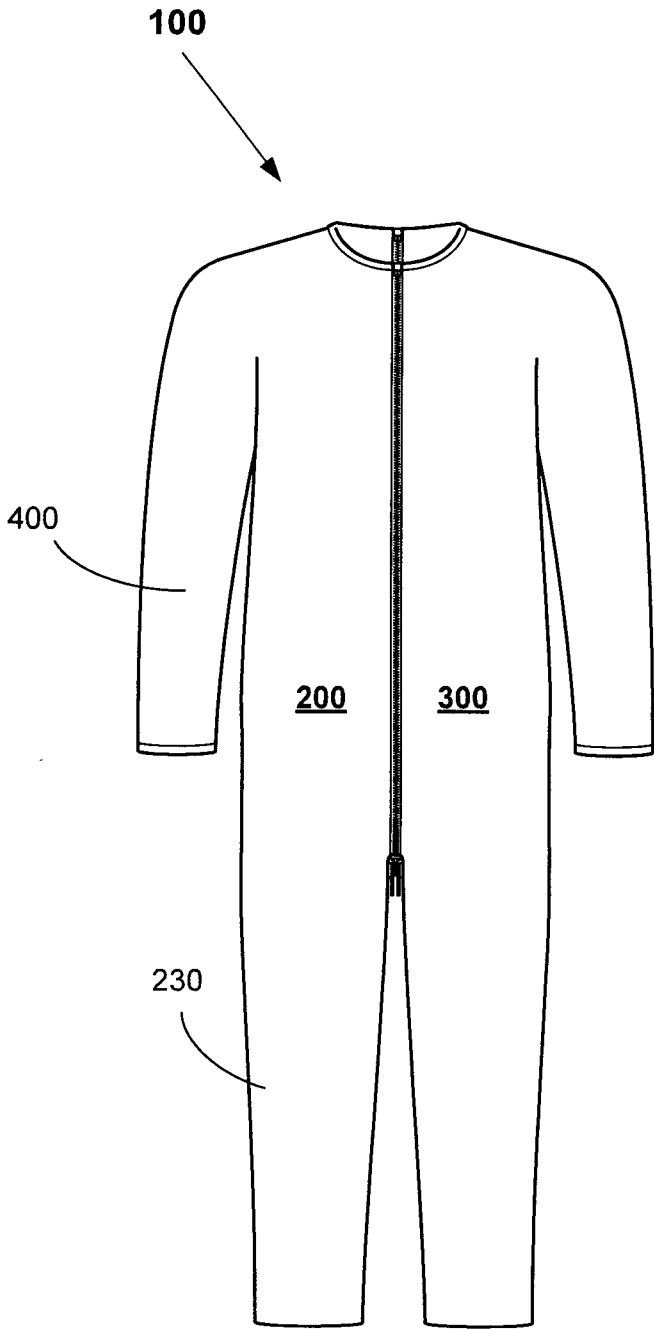


FIG. 10

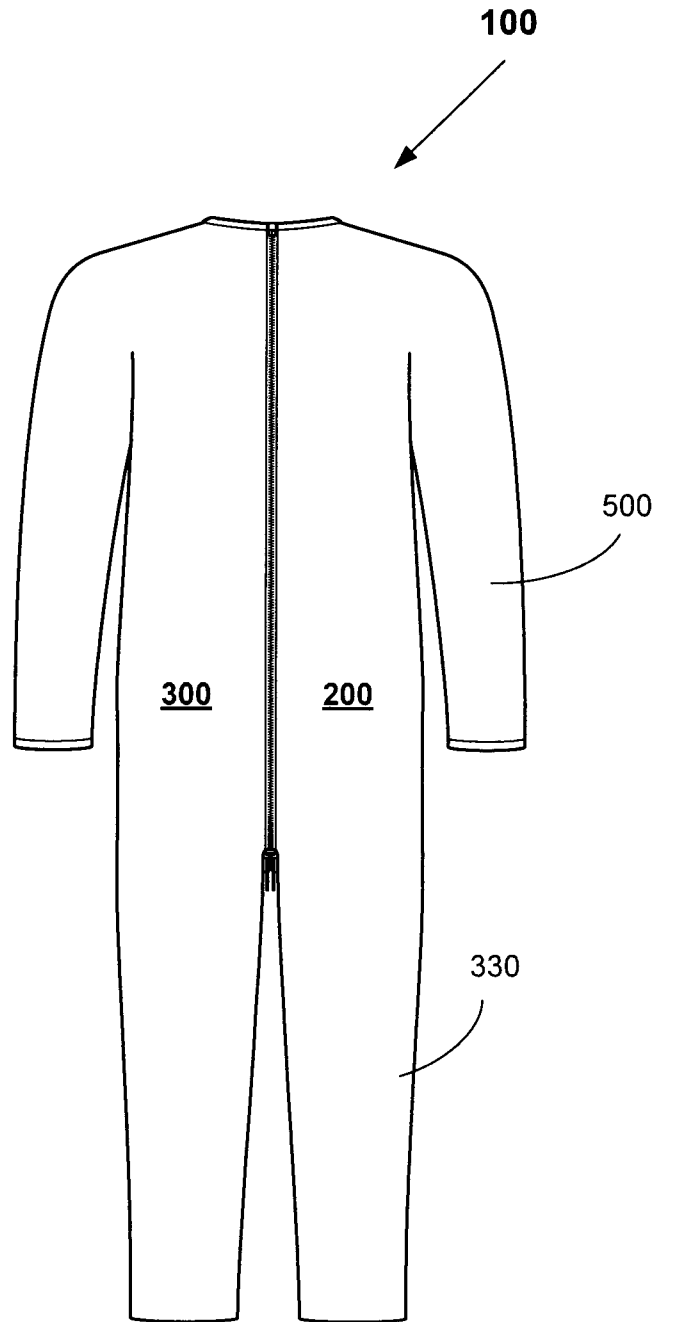


FIG. 11

9/15

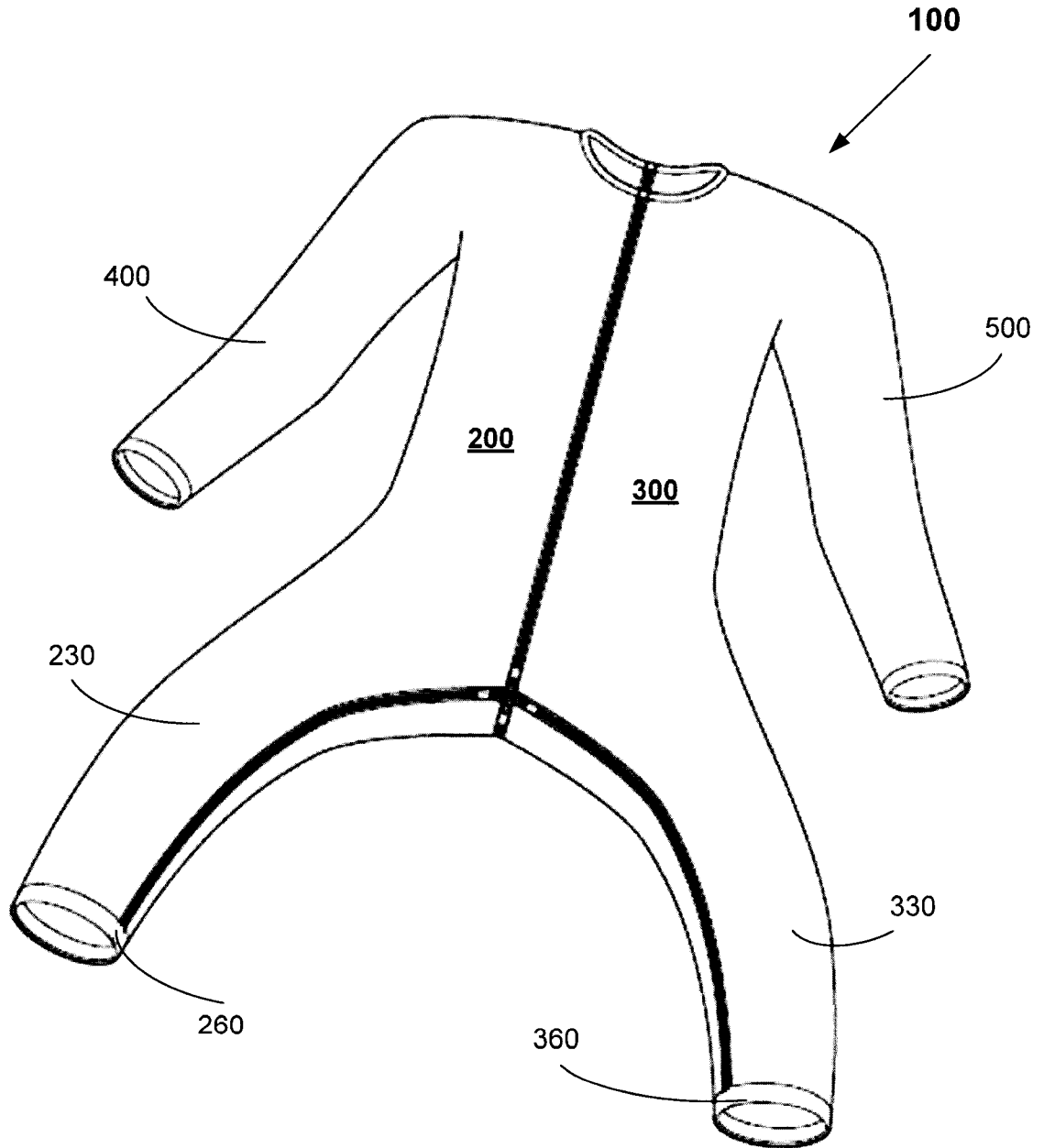


FIG. 12

10/15

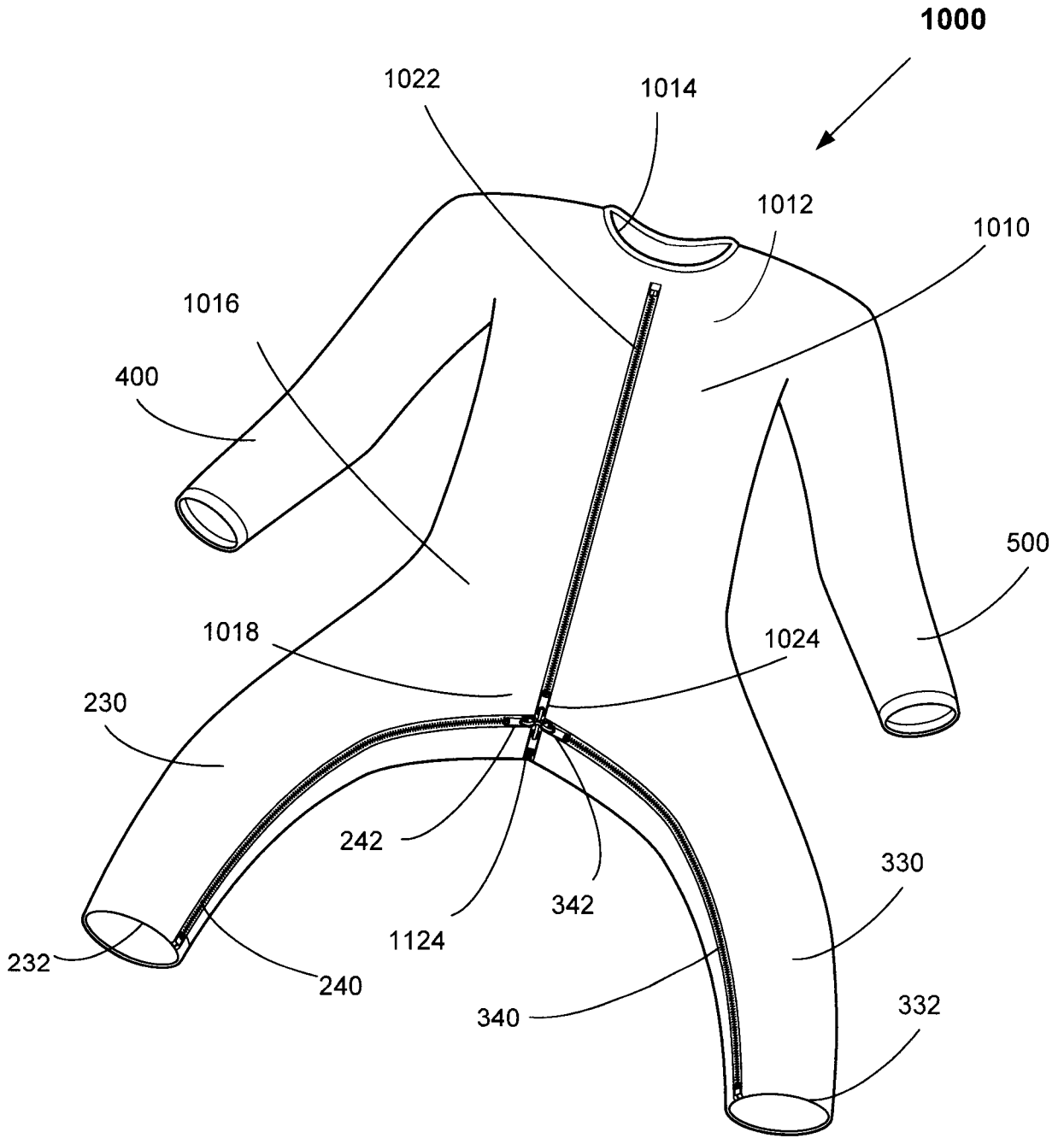


FIG. 13

11/15

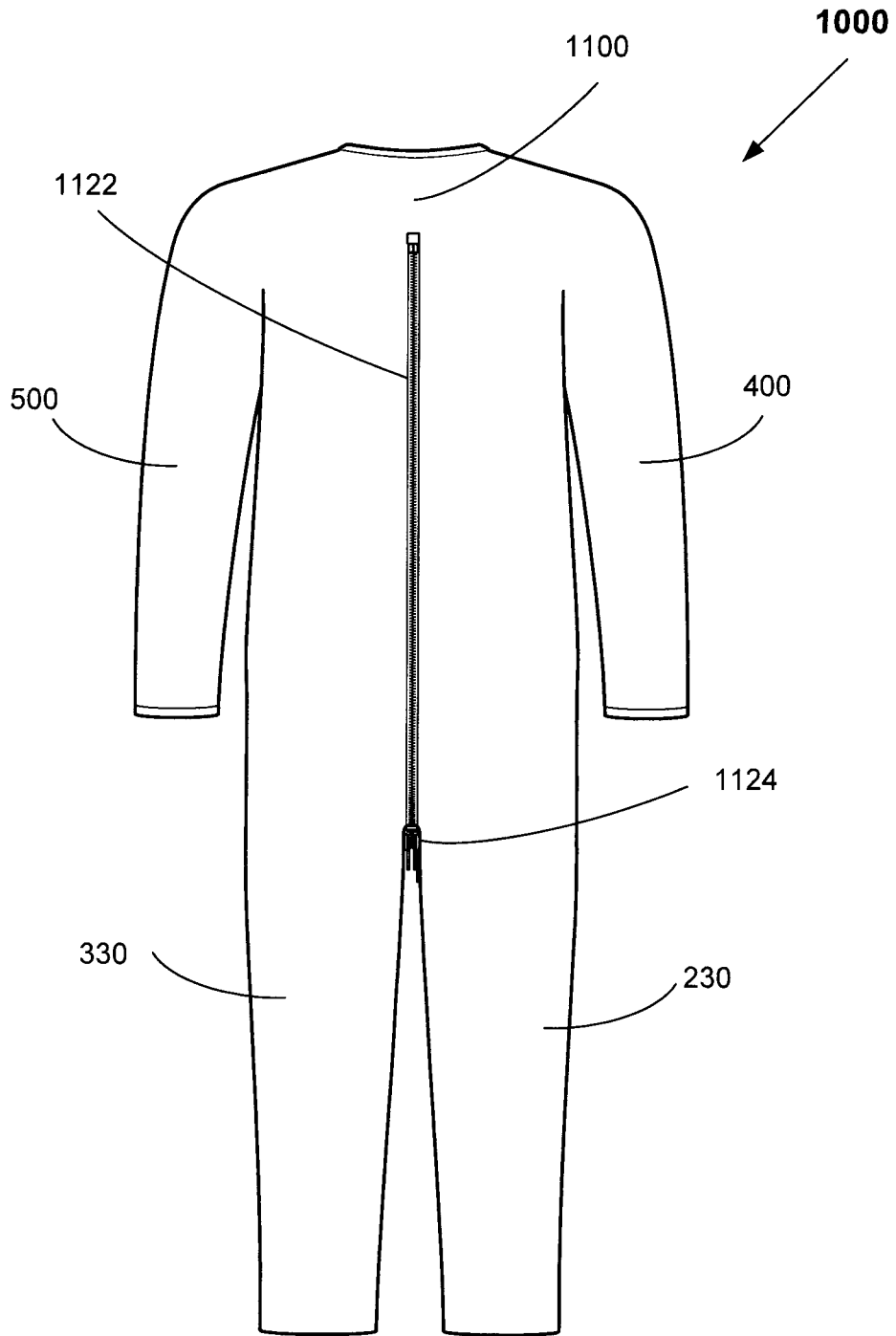


FIG. 14

12/15

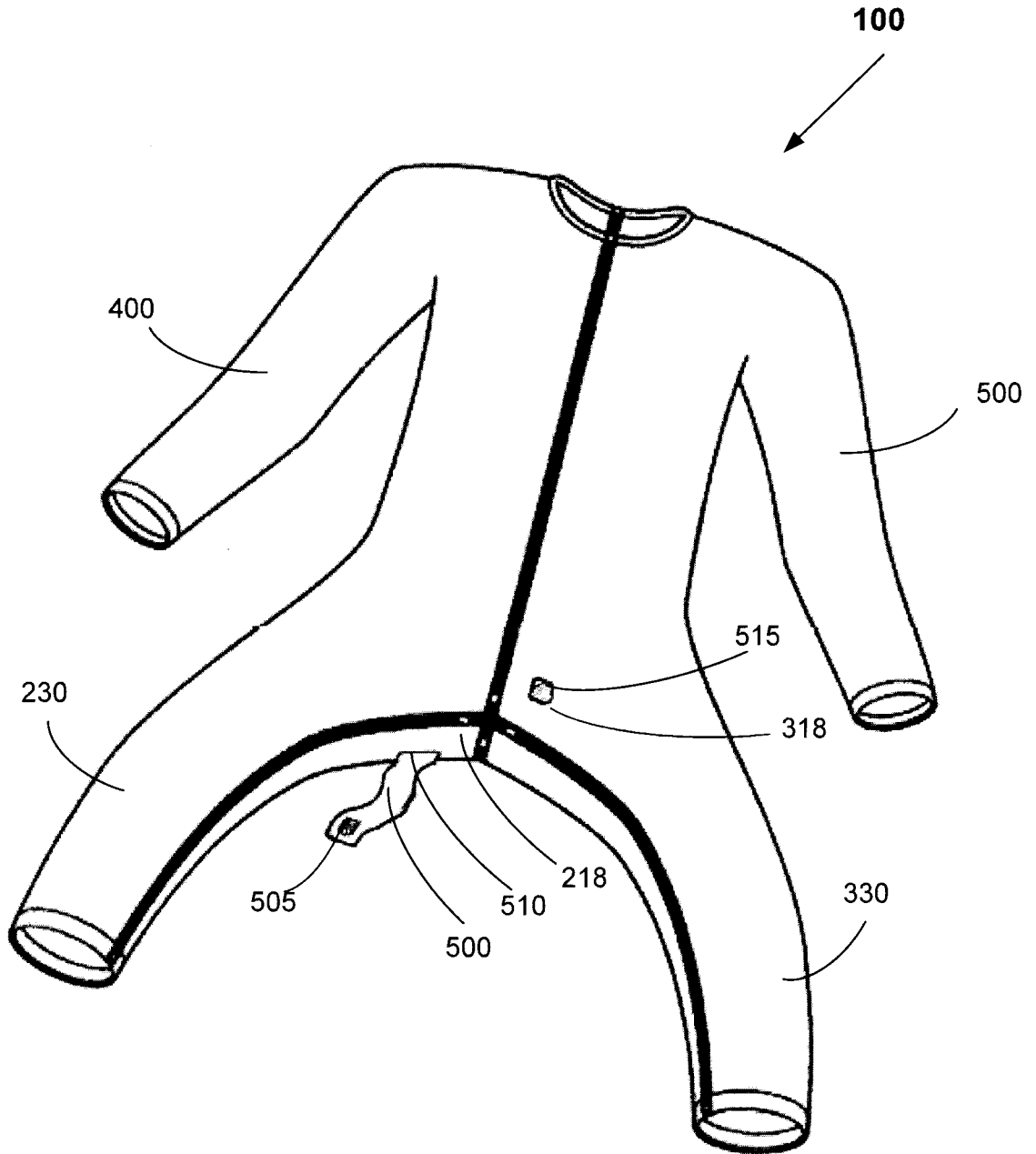


FIG. 15

13/15

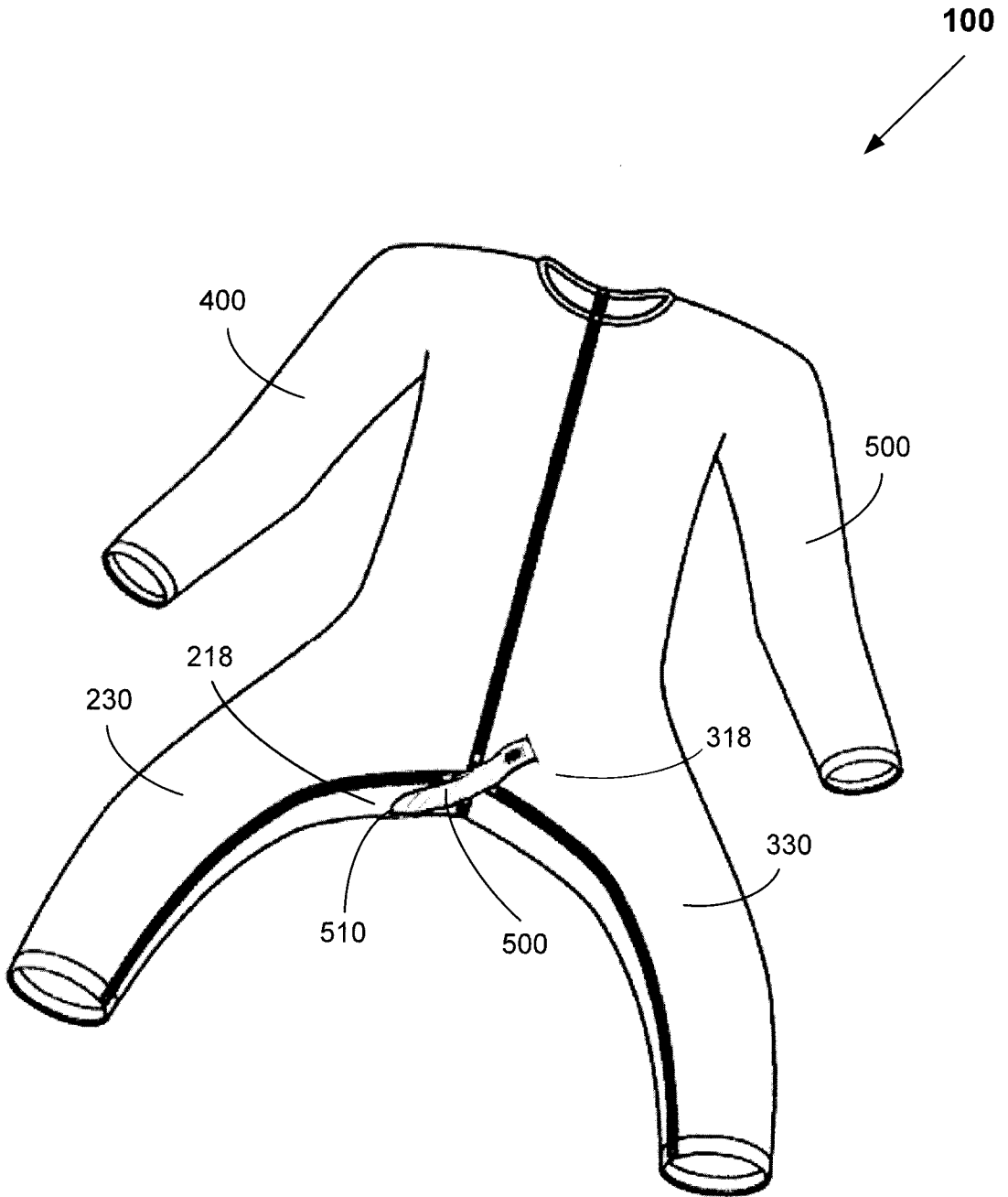


FIG. 16

14/15

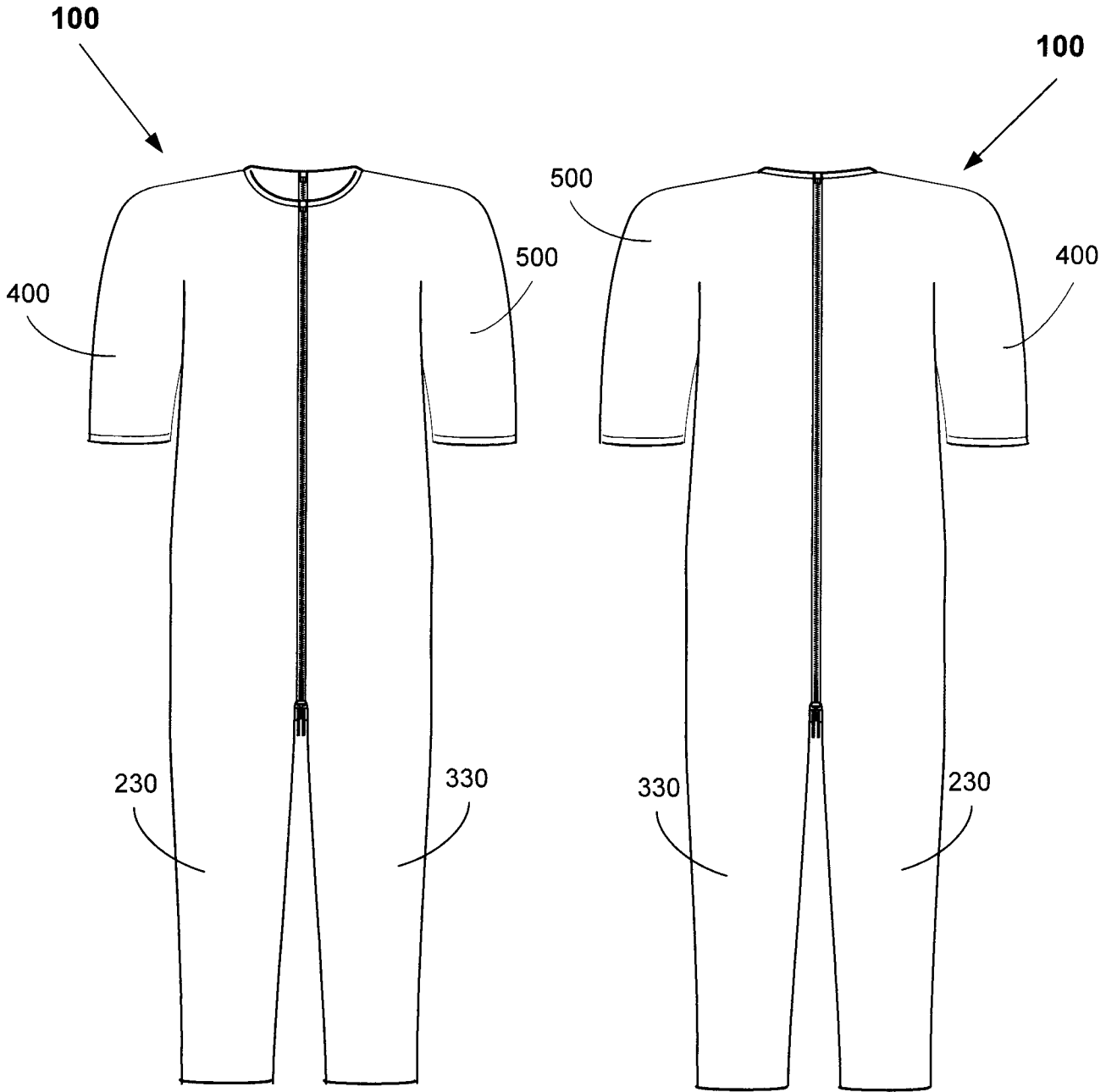


FIG. 17

FIG. 18

15/15

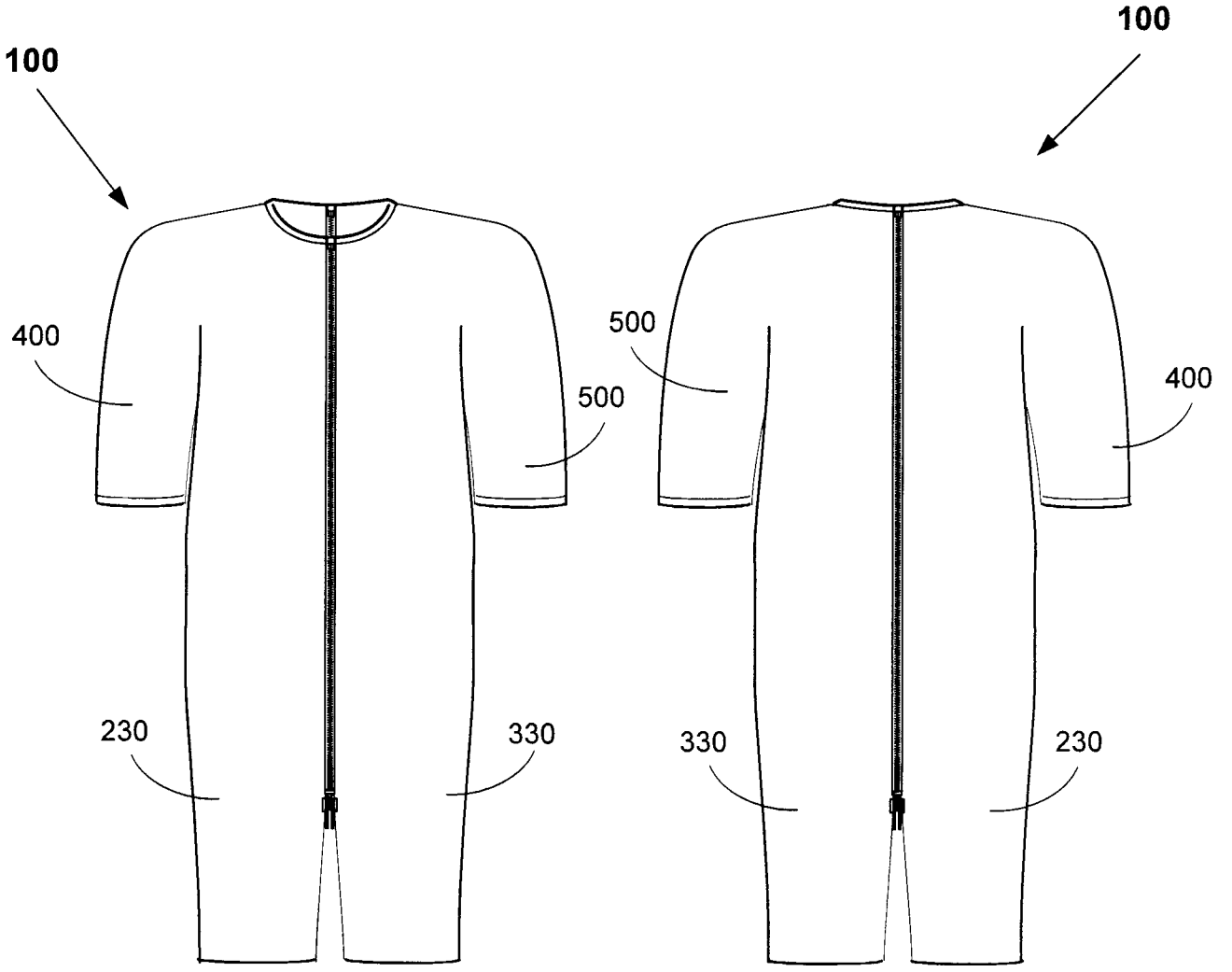


FIG. 19

FIG. 20

