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(54) **IMPROVEMENTS IN OR RELATING TO GARMENTS**

(57) A garment 100 may be an undergarment, an overgarment, an item of swimwear etc. The garment 100 includes a first zone of compression 118 which encircles the user around the upper legs and lower pelvis. During use the first zone of compression 118 provides compres-

sion to the pelvis of the user to help manage pelvic instability. The garment 100 further includes a second zone of compression 134 for supporting a baby bump of a pregnant user.

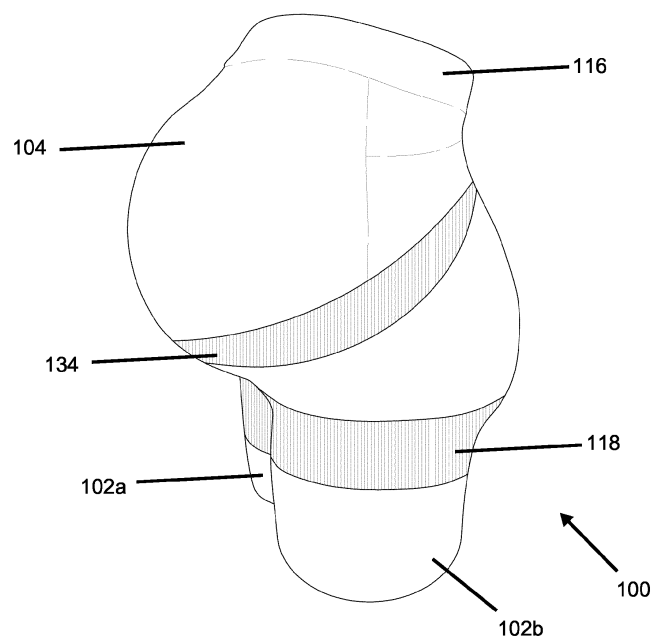


Fig. 6

Description

[0001] The strategic application of compression or pressure can provide support to internal structures (bones, muscles, tissues and the like) and can relieve the symptoms associated with certain diseases, conditions and/or syndromes. Thus a garment described herein may be used to relieve the pain and/or discomfort often associated with one or more diseases, conditions and/or syndromes.

[0002] It should be noted that throughout this disclosure, the term "baby bump" is used. This term is used in the colloquial manner to refer to the enlargement of the abdomen, which occurs during pregnancy. Also, the terms "comprise", "comprising" and/or "comprises" is/are used to denote that aspects and embodiments of this invention "comprise" a particular feature or features. It should be understood that this/these terms may also encompass aspects and/or embodiments which "consist essentially of" or "consist of" the relevant feature or features.

[0003] The present disclosure provides garments designed to compress or apply pressure to specific parts of a wearer's (or user's) body.

[0004] Described herein are garments that can be used to treat or prevent pelvic instability (in men and women). The garments may also be used to treat or prevent symphysis pubis.

[0005] The disclosed garments are designed or configured to compress, or provide pressure to, the pelvis and/or hip region.

[0006] The garments may be worn by men or women. The garments may be worn by people engaging in sport. The garments may be worn by pregnant women. Indeed the garments may find a particular use within the population of pregnant women as this population frequently experiences pelvic pain and/or discomfort during pregnancy. The garments described herein may be worn so as to treat, prevent or relieve pain or discomfort in the pelvic region as may occur during pregnancy.

[0007] The garments described herein may be worn around the legs, hips and/or waist.

[0008] The garment may be worn around at least part of the legs and/or waist.

[0009] Accordingly, the garment may comprise leg portions and a torso (or trunk) portion.

[0010] Each leg portion of the garment may be worn around at least part of the leg.

[0011] The torso portion may be worn around at least part of the torso (or abdomen or trunk), for example part of the lower torso (or trunk).

[0012] The leg and torso (trunk) portions of the garment may be joined together. The leg and torso portions may be seamlessly joined to provide an all-in-one garment that is worn around at least part of the legs and/or at least part of the torso (or trunk) of a user (wearer). Thus, in use (and/or when worn) the garment covers at least part of both a wearer's legs, the hip and buttock region and

at least part of the torso or trunk.

[0013] In one embodiment, and where the wearer is pregnant, the garment may extend to cover at least part of the baby bump. In some embodiments, the garment may be configured to cover the baby bump and at least part of the upper part of a wearer's torso or trunk.

[0014] The garment may take the form of a pair of tights, leggings, shorts or trousers. Where the garment takes the form of trousers, leggings or shorts, the garment may comprise leg portions intended to cover at least part of the users legs, which leg portions are joined, for example seamlessly joined to a torso or trunk portion which may extend to cover at least part of the lower torso /trunk and/or at least the part of the mid-part of the torso/trunk and/or at least part of the upper part of the torso/trunk.

[0015] The garment may comprise a cross crutch point where both leg portions meet and join to the torso/trunk portion.

[0016] The garment may comprise, consist of or consist essentially of, a first zone of compression.

[0017] The first zone of compression may be located in the region of the cross/crutch point of the garment and extend either side thereof in a loop, band or hoop around the garment.

[0018] The first zone of compression may extend around the garment being generally longer than it is wide. In some embodiments, the zone of compression may form a band around the garment, which band is in the region 1-20cm wide, for example 5 cm, 6 cm, 7 cm, 8 cm, 9 cm, 10 cm, 11 cm, 12 cm, 13 cm, 14 cm, 15 cm, 16 cm, 17 cm, 18 cm or 19 cm wide.

[0019] The first zone of compression may provide a compression force (or pressure) to the user of between 5 mm/Hg and 25 mm/HG, preferably between 10 mm/Hg and 20 mm/Hg, further preferably between 12 mm/Hg and 15 mm/Hg.

[0020] The first zone of compression may be located and/or configured to provide compression (or pressure) around the pelvis and/or hips of the wearer. For example, in use (or when worn) the garment may be configured to ensure that the first zone of compression lies adjacent to and encircles the lower part of the pelvis/hip of the wearer.

[0021] In use (or when worn) the garment may apply compression or pressure to a region of the wearer generally below the level of the sacroiliac joint and above the pubic arch. In this way, the first zone of compression may provide lower pelvic support.

[0022] The garment may (in use/when worn) apply compression to the hip bone region - including to the lower part of the ilium, the pubis region and the upper part of the ischium of the pelvis.

[0023] Compression or pressure from the first zone of compression may be applied uniformly around the wearer and uniformly to the various regions of the hip as described above. Alternatively, the level of compression or pressure may vary around the wearer with some parts of the first compression zone applying more or less com-

pression or pressure than others.

[0024] The first zone of compression may also extend to the upper thigh region and in such cases will also apply some compression to at least the top part of each of the user's or wearer's thighs.

[0025] The first zone of compression may provide a tighter fit against a wearer in the region where compression is to be provided, the tightness of fit being compared to the tightness of fit of other parts of the garment not comprising a zone of compression.

[0026] Where the garment is to be worn by a pregnant female the garment may further provide a second zone of compression.

[0027] The second zone of compression is configured to support the baby bump. In use and/or when the garment of this disclosure is worn, the second zone of compression acts to take at least a portion of the weight of the baby bump off the pelvis.

[0028] As such, in one embodiment, a garment according to this disclosure may comprise two zones of compression, one (first) zone extending as a band around at least part of the leg portion and lower torso of the garment and another (second) zone extending around the torso or trunk region of the garment

[0029] The second zone of compression may be distinct from and separate to the first zone of compression. That is to say, the first and second zones of compression do not touch or contact each other.

[0030] In a garment of this disclosure the first and second zones of compression have distinct and separate functions. The first zone of compression may exert more compression/pressure on the wearer (around the lower hips) than the second zone of compression (which supports the weight of the baby bump). For example, the level of compression or pressure exerted by the first zone of compression may be relatively greater than the amount of compression/pressure exerted by the second zone of compression.

[0031] Ensuring the first zone of compression is distinct and separate from the second zone of compression allows the garment to easily contain two zones of compression capable of delivering two different levels of compression to the wearer/user.

[0032] The first and second zones of compression may be separated by parts of the garment that provide lesser amounts of compression to the body of the wearer, for example, lesser amounts of compression that provided by either the first or second zones of compression.

[0033] The second zone of compression may comprise a band of compression which encircles the baby bump. In this way, the second zone of compression may be located in the torso/trunk section of the garment. In use (or when the garment of this invention is worn) the second zone of compression will extend under the baby bump and around the back, in particular the lower back of the wearer. The second zone of compression may extend through the garment such that it is configured to envelope and encircle a specific region of the torso/trunk of a wear-

er.

[0034] A supporting cup region extending, in use, down from the retaining portion and under the baby bump, to cup the baby bump and support the baby bump from the retaining portion;

[0035] The first and second zones of compression may comprise a zone of the garment (for example a band encircling the garment - one (a first zone) encircling the garment in the region of the crutch cross point and one (a second zone) encircling the torso/trunk portion of the garment) which are biased into contact with the wearer.

[0036] The first and second compression zones of the garment may be more biased into contact with the wearer than any other part of the garment.

[0037] The first zone of compression may be more biased into contact with the wearer than the second zone of compression.

[0038] The first zone of compression may be designed or configured to stretch around the wearer in at least the region of the hip to which compression is to be applied (as described above) and to grip the wearer tightly so as to provide compression (or pressure) and to provide support and/or stability to the muscles, ligaments, tendons, joints and bones which make up (or are present in) the pelvis.

[0039] Any second zone of compression may be designed or configured to stretch around the wearer so that it cups the baby bump and extends around the back of the wearer - in this way it acts to support the baby bump, lifting its weight off and away from the pelvis. Much like the first zone of compression (but with less compressive force) the second zone of compression grips the wearer tightly so as to provide the necessary support to the baby bump.

[0040] The first and second zones of compression may comprise an elasticated material.

[0041] The elasticated material may be resiliently stretchable.

[0042] The garment and in particular the zone of compression may be made from a varying mix of materials, including, for example, Merino Wool, Polyester, Silk, Polypropylene and Spandex.

[0043] The garment, and in particular the zone of compression, may comprise knitted materials.

[0044] The present disclosure relates to improvements in or relating to garments. As stated, examples facilitate management of symphysis pubis dysfunction (SPD) and pelvic girdle pain (PGP) also known as pelvic instability. The garments described herein may be used to treat or prevent pelvic instability (in both men and women). Thus, in one embodiment, the disclosure provides a garment described herein for use in the treatment or prevention of:

- (i) Symphysis pubis dysfunction (SPD) or pelvic girdle pain; and
- (ii) Pelvic instability.

[0045] In a further embodiment, the disclosure pro-

vides the use of a garment described herein for the treatment and/or prevention of:

- (i) Symphysis pubis dysfunction (SPD) or pelvic girdle pain; and
- (ii) Pelvic instability.

[0046] In a yet further embodiment, the disclosure provides a method of treating or preventing symphysis pubis dysfunction (SPD) or pelvic girdle pain; and pelvic instability, in a subject in need thereof, said method comprising providing a subject with a garment described herein and the subject donning a garment described herein so that compression and/or pressure is applied to at least the lower hip region (as described above). A subject in need thereof may be any subject suffering from symphysis pubis dysfunction (SPD), pelvic girdle pain and/or pelvic instability and/or any subject predisposed or susceptible thereto.

[0047] Symphysis pubis dysfunction is most commonly associated with pregnancy and childbirth. It is a condition that causes excessive movement of the symphysis pubis, either anterior or lateral, as well as associated pain in the legs and hips, possibly because of a misalignment of the pelvis. Symphysis pubis dysfunction is a condition that is associated with pelvic girdle pain and the names are often used interchangeably. It is thought to affect up to one in four pregnant women to varying degrees, with 7% of sufferers continuing to experience serious symptoms postpartum.

[0048] Symphysis pubis dysfunction is a very painful condition in pregnancy where the pelvis becomes unstable and stretched apart at the front by tensing muscles at the back. Conventional wisdom says it must be endured and as the foetus gets larger the condition becomes more debilitating. As well as affecting about 70,000 pregnant women in the UK in 2009 the condition can last for years after birth. It manifests itself as a continuous ache and severe pain during movement. Without wishing to be bound by theory, it is suggested that the hormone relaxin releases during the third trimester ready for childbirth therefore the symphysis pubis relaxes and creates pain and discomfort in many pregnant women resulting in pelvic instability.

[0049] In one example of the present disclosure, there is provided a garment comprising:

- a retaining portion which, in use, grips the torso of a pregnant user, above the baby bump;
- a sacroiliac belt connected with the retaining portion and which, in use, encircles the pelvis of the user; and
- a supporting cup region extending, in use, down from the retaining portion and under the baby bump, to cup the baby bump and support the baby bump from the retaining portion;
- wherein during use, the sacroiliac belt provides compression to stabilise the pelvis and the retaining por-

tion tends to hold the sacroiliac belt up at the chosen height relative to the pelvis, and tends to take at least part of the weight of the baby bump off the pelvis of the user.

[0050] The retaining portion may encircle the torso. The retaining portion may be elastic. The retaining portion may be reinforced around the top edge of the garment to resist or prevent the upper edge of the garment rolling down the torso, during use. The retaining portion may extend sufficiently above the sacroiliac belt (or any lower pelvic compression belt or first zone of compression) to grip the torso between the baby bump and the breasts of the user. The retaining portion may extend down the back and/or sides of the torso of the user. The retaining portion may be connected with the sacroiliac belt (or any lower pelvic compression belt or first zone of compression) at the level of the pelvis of the user. The retaining portion may comprise padding positioned against the body of the user, during use. The padding may comprise a body of foam material and/or crystals and/or gel. The padding may be positioned over the sacroiliac joints of the user.

[0051] The sacroiliac belt may be shaped to fit under the baby bump of the user. The sacroiliac belt may extend across the front of the pubis of the user, during use. The sacroiliac belt may comprise padding positioned against the body of the user, during use. The padding may be positioned against the hip joints and/or the pubis of the user. The padding may comprise a body of foam material and/or crystals and/or gel. The sacroiliac belt may provide a degree of compression and/or pressure and may comprise a knitted fabric or material or a body of different knitted compressions. The sacroiliac belt may be adjustable and/or flexible in girth. For example, the flexibility of the garments described herein, in particular the flexibility of the compression elements thereof (any sacroiliac belt, lower pelvic compression belt, first zone of compression, supporting cup element and/or second zone of compression) may be due, in part, to the knit construction of said elements. The sacroiliac belt may comprise an attachment arrangement for attachment to another garment worn by the user.

[0052] In one further example, there is provided a garment comprising:

- a lower pelvic compression belt which, in use, encircles the hips and pubis of the user; and
- a supporting cup region extending, in use, around and under the baby bump and around the back of the wearer, to cup and support the baby bump and to lift the weight of the baby bum off the pelvis;
- wherein the lower pelvic belt and the supporting cup region are distinct and separate from one another, do not touch each other and/or are not connected to one another, further wherein during use, the lower pelvic belt provides compression to stabilise the pelvis and to hold the lower pelvic belt at a predeter-

mined position relative to the pelvis, hips and pubis.

[0053] The lower pelvic compression belt may grip each thigh or leg of the wearer to provide pelvic support.

[0054] The cup region (or any second zone of compression) may comprise a single region of material or a plurality of regions of material which together form the cup (or a second zone of compression). The cup region (or second zone of compression) may comprise a single region of material with different grades of compression around the pelvis and under the baby bump. Where the cup region (or second zone of compression) comprises a plurality of regions of material, those regions may overlap. The plurality of regions may overlap below the baby bump. Each of the cup regions may be attached to the retaining portion and extend down a respective side of the bump and under the bump. The cup regions may be attached at the lower end thereof to the sacroiliac belt. In one embodiment, the cup region may be attached to a lower end thereof to the lower pelvic support (or to a first zone of compression). In a further embodiment, the cup region may not be attached to the lower pelvic support (or to a first zone of compression). The cup region may be adjustable and/or flexible so that it moves and expands with the growth of the baby bump but always provides the required degree of compression/support.

[0055] The garments described herein may be formed, at least in part, from technical fabric to provide moisture management and/or temperature management to the user. The garment may comprise at least one pocket for containing a body of copper and/or magnet and/or local heat source and/or transcutaneous electrical nerve stimulator machine. The pocket may be in the region of the sacroiliac joint and/or the pelvis of the user, when in use.

[0056] The garment may fully enclose the body of the user, at least from the sacroiliac belt to a height above the baby bump. The garment may further comprise a bra portion. The garment may further comprise braces which extend, in use, over the shoulders of the user for support.

[0057] Any of the garments described herein may be an undergarment, outergarment or an item of swimwear.

[0058] The described garments may be (or comprise) a girdle or tights.

[0059] Examples of the invention will now be described solely by way of example and with reference to the accompanying drawings, in which:

Figure 1 shows a side view of a garment in the form of a girdle or tights;

Figure 2 shows a front view of the girdle or tights;

Figure 3 shows a front view of the girdle with more detail of the adjustable sacroiliac belt;

Figure 4 shows a further view, partly to one side, showing a supporting cup to support the baby bump;

Figure 5 shows a front view of an alternative garment;

Figure 6 shows a side view of the alternative garment; and

Figure 7 shows a rear view of the alternative gar-

ment.

Detailed Description of Figures 1 to 4

5 Overview

[0060] Referring first to Figs. 1 to 4, the drawings show a garment 10 being worn by a user 12. The illustrated garment 10 is an example of garments in the form of a girdle for wearing as an undergarment. The user is shown in the drawings as pregnant, having a baby bump 14. The girdle 10 includes a retaining portion 16 which, in use, grips the torso of a user 12, above the baby bump. The girdle 10 also has a sacroiliac belt 18. The sacroiliac belt 18 is connected with the retaining portion 16 and encircles the user 12, around the pelvis. The girdle 10 also has a cup region 34 (see below) extending, in use, down from the retaining portion 16 and under the baby bump 14, to cup the baby bump 14 and support the baby bump 14 from the retaining portion. During use, the sacroiliac belt 18 provides compression to stabilise the pelvis of the user. The retaining portion 16 tends to hold the sacroiliac belt 18 up at the chosen height relative to the pelvis. The retaining portion 16 also tends to take at least some of the weight of the baby bump 14 off the pelvis of the user.

Retaining Portion

[0061] In this example, the retaining portion 16 encircles the torso of the user 12.

[0062] The retaining portion 16 includes a ring of elastic material which tends to contract in order to grip the torso. The upper edge 20 of the retaining portion 16 is reinforced. This may be by forming a seam, incorporating additional knitted compression at the edge 20 or by other means. The reinforcement of the upper edge 20 improves the grip of the upper edge 20 around the torso. The reinforcement also resists the upper edge rolling or slipping down the torso during use, for example while the user is moving.

[0063] In this example, the retaining portion 16 includes the upper edge 20 around the torso, and also includes a lower retaining portion 22 which extends down the back and side of the torso of the user. The lower portion 22 extends down to the level of the pelvis of the user, at which level the lower portion 22 is connected with the sacroiliac belt 18, for example by stitching. Other alternatives are discussed below. Consequently, the torso is encircled both by the upper edge 20 of the retaining portion 16 and by the sacroiliac belt 18, and the lower portion 22 connects these encircling formations together. In this example, the lower portion 22 extends sufficiently above the sacroiliac belt to place the upper edge 20 so that it will grip the torso between the baby bump 14 and the breasts 24 of the user. At this height, the torso can be gripped firmly in order to retain the position of the sacroiliac belt 18, but without undue discomfort for the

user. The grip is borne by the rib cage of the user.

[0064] Within the lower retaining portion 22, padding may be provided which will rest against the body of the user, during use. For example padding may be provided in the region 26. The padding 26 is positioned over the sacroiliac joints of the user. The purpose of the padding 26 is to avoid unnecessary discomfort caused by pressure from the girdle 10 on the sacroiliac joints.

[0065] The upper edge 20 may also carry a fixing 27, such as a hook or clip, allowing the upper edge 20 to be fixed to a bra (not shown) worn by the user 12. In this example, the fixing 27 is at the front of the girdle 10, against the breast bone.

Sacroiliac Belt

[0066] The sacroiliac belt 18 extends around the pelvis of the user 12. The belt 18 is therefore below the level of the baby bump 14. The purpose of the sacroiliac belt 18 is to provide compression to the pelvis. This stabilises the pelvis to help relieve symphysis pubis dysfunction pain. For this purpose, the sacroiliac belt 18 may be formed of a strong elasticated or stretch material. Modern production techniques for elasticated and stretch material may allow the material to be sufficiently strong to stabilise the pelvis, and also to be sufficiently stretchy to expand as the pregnancy progresses. Alternatively, the girth of the belt 18 may be adjustable, by an optional mechanism indicated schematically at 28. The adjustment mechanism, if provided, may be in the form of hook and eye fixings, hook and fleece fixings such as Velcro (RTM) of other adjustable mechanisms. The purpose of adjustment is to allow the strength of compression exerted by the belt 18 to be adjustable and also to allow the belt 18 to be adjusted for pelvic support during pregnancy and postpartum.

[0067] The belt 18 may incorporate padding positioned against the body of the user, during use, particularly at pressure points or sensitive positions. In this example, padding 30 is provided at the front of the user 12, positioned against the pubis region of the user. Additional padding indicated generally at 32 may be provided against the hip joints of the user. The purpose of the padding 30, 32 is to allow compression to be applied to the pelvis by the belt 18, without undue pressure points arising around the torso of the user 12, in order to improve management of SPD and PGP pain, without creating additional unnecessary discomfort.

[0068] The belt 18 may further comprise an attachment arrangement (not shown) for attachment to maternity briefs, tights, swimming costumes or other garments worn by the user.

Supporting Cup

[0069] The girdle 10 further comprises a supporting cup region, shown particularly in figs 2 and 3. The cup region 34 extends down from the retaining portion 16 at

positions indicated at 36 and under the baby bump 14, generally at 38. This allows the cup region 34 to provide a supporting cup for the baby bump 14, helping to support the weight of the baby bump 14 from the retaining portion 16. That is, part of the weight of the baby bump 14 is transferred into the cup region 34, which in turn transfers the weight to the retaining portion 16, at the positions 36. The retaining portion grips the rib cage of the user, in this example, so that at least part of the weight of the baby bump 14 is taken off the pelvis of the user. That part of the weight is transferred to the rib cage, by the retaining portion 16. Reducing the weight on the pelvis is expected to reduce pain and discomfort experienced by the user, and may also enhance the effectiveness of the belt 18 in stabilising the pelvis. In this example, the cup region 34 comprises a plurality (in this case two) of regions of material which together form the cup region 34. In other examples there may be a single region of material or more than two. In the illustrated garment, the regions are labelled 34a and 34b. Each of the regions 34a, 34b is attached to the retaining portion 16 at the respective position 36 on respective sides of the girdle 10 and hence on respective sides of the baby bump 14, when worn. Each region 34a, 34b extends down the respective side of the bump 14 where the portions 34a and 34b cross over in the region 38 and are then each secured to the sacroiliac belt 18 generally at 40.

[0070] Each of the regions 34a, 34b will be compression indicated schematically at 42. This allows adjustment of the size of the cup formed by the cup regions 34a, 34b to accommodate the increasing size of the baby bump 14 as the pregnancy progresses.

[0071] When the cup region 34 is formed of a single region of material, there will be no cross over region 36, and it is envisaged that the garment 10 can be formed in a seamless construction, at least around the baby bump and the pelvis.

Material Choices and Other Alternatives

[0072] Figure 5 illustrates an alternative example garment. The example of Figure 5 has all of the features of the first example described above and additionally incorporates a bra portion 44. The bra portion 44 incorporates bra straps 46 which serve as braces over the shoulders of the user 12. Accordingly, the garment illustrated in Fig. 5 may be used as a girdle as described above, or may be in the form of swimwear or other outerwear. Alternatively, braces or straps 46 may be used over the shoulders of the user and have direct attachment to the upper edge 20, without the bra 44 being provided.

[0073] In the examples shown, the garment 10 is open to the front, between the upper edge 20 and the cup region 34. Alternatively, the cup regions 34a, 34b may be extended or supplemented by an additional region of material, in order to fully enclose the body of the user 12, at least from the sacroiliac belt 18 to a height above the baby bump 14 corresponding with the height of the upper

edge 20.

[0074] Many different materials can be used in the formation of the garment 10. Many elasticated fabrics could be chosen for reasons of comfort. Fabrication techniques for elasticated material now have wide variation in the overall strength of the elasticity, and allow local variation within a single sheet of fabric, so that the garment 10 can be locally strengthened or weakened. For example, the garment 10 will be required to be relatively strong in the region forming the sacroiliac belt and may be much softer or gentle in other regions of the garment 10. Technical fabrics could be used, particularly for moisture management and/or temperature management in the interests of the comfort of the user 12,

[0075] Pockets can be formed around the garment 10, and various positions. One example pocket 48 is indicated in Fig. 1. Pockets may be desirable for a body of copper and/or magnet and/or local heat source and/or transcutaneous electrical nerve stimulator (TENS) machine. It is found that holding one of these items against the body of the user 12 can help relieve some of the symptoms associated with SPD and PGP pain.

Concluding Comments

[0076] Many variations and modifications can be made to the apparatus described above, without departing from the scope of the present invention. Many different sizes, shapes and relative sizes and shapes of components and regions can be chosen, particularly according to the physique of the intended user. Many different materials, including those conventionally used for the construction of underwear or other garments can be chosen for the construction of the garment 10.

[0077] The garment 10 is desirably constructed in a seamless manner for further improvement of the comfort of the user 12.

[0078] The garment may be an undergarment such as a girdle or tights, or an outer garment, or an item of swimwear.

[0079] When the garment is worn beneath outer clothing, the presence of the sacroiliac belt is discreetly hidden. The retaining portion 16 functions to retain the sacroiliac belt 18 in the desired position, thereby enhancing the comfort of the user.

Summary

[0080] The drawings illustrate a hidden sacroiliac belt/pelvic support. The hidden sacroiliac belt 38 will preferably be adjustable to use postpartum. This belt will stabilise the pelvis relieving symphysis pubis dysfunction pain. The sacroiliac belt will preferably be able to be attached to another pregnancy girdle of a different style. The extra padding 32 will be there to provide extra comfort and will preferably be on the sacroiliac belt for the hips as a major symphysis pubis dysfunction symptom can be grinding hips and pain in the sacroiliac joints will

help relieve symphysis pubis dysfunction pain in one of the main effected areas. The non-roll down effect of the upper edge 20 is just over baby bump 14 to give that extra support as the baby bump grows and baby bump eventually drops in the third trimester.

[0081] The adjustable clip 27 may be added for extra support as baby bump drops in the third trimester if needed.

[0082] The hidden cross over at 38 will be there for extra support to hold the baby bump 14 up off the pelvis. The rounder shape of the sacroiliac belt 18 under the bump 16 will preferably include extra padding 30 for comfort and to lift the weight of the bump.

[0083] The girdle 10 may be used by all mums-to-be and symphysis pubis dysfunction sufferers. This girdle will assist in relieving sacroiliac joint pain (back ache), hold the pelvis together and support baby bump all in one. It will assist in managing symphysis pubis dysfunction by controlling the movement and stabilising the pelvis by holding it together using the sacroiliac belt and by lifting baby bump and taking pressure off the pelvis by using the cup region 34. The girdle will not roll down below baby bump and will provide real support and may use an adjustable clip to hook over the bra as baby bump grows. The sacroiliac belt may have extra padding as a rounder support for baby bump.

[0084] It is to be appreciated that the embodiment of the invention described above with reference to the accompanying drawings has been given by way of example only and that modification may be made.

[0085] Accordingly, in the example provided above, there is provided a girdle comprising a sacroiliac belt. The belt will be hidden during use.

[0086] The girdle is able to support the abdomen whilst at the same time relieving sacroiliac joint pain and pelvic pain by giving the pelvis more stability. It may be adjustable to changing shape and will fit around the bump to take the pressure from off the pelvis. It may be a discreet and comfortable support. The design may be made to ensure a non roll-down effect, particularly at the upper edge 20. It may lift the baby bump to help relieve discomfort in the back, pelvis, abdomen and hips. There may be extra support and added comfort for the symphysis pubis, sacroiliac joint area and hips. The hidden Sacroiliac belt may be flexible to support the pelvis in pregnancy and/or postpartum.

[0087] The pregnancy girdle may take the extra weight of baby bump off the pelvis relieving pelvic girdle pain in the lower abdomen, hips and sacroiliac joint area. There may be extra support for the baby bump using a hidden cross over effect like a wrap around the inside of the pregnancy girdle.

[0088] The hidden sacroiliac belt may help with most hip, low back pain and pelvic instability by supporting the pelvis, restricting movement and controlling the condition.

[0089] The girdle may be more supportive than conventional attempts to support the baby bump and help

ease aches and pains in pregnancy especially in the third trimester of a pregnancy.

[0090] This kind of support is trying to eliminate the need to use a separate belt during pregnancy and postpartum. Sacroiliac belts, in general, are regarded as one of the best belts ideal for most hip and low back pain, maternity pelvis instability, sacroiliac syndrome and acute lower back pain.

[0091] There may be extra padding in the sacroiliac joint area, as described. Any of the padding described may be memory foam, crystals or gels. This extra support may or may not have a cooling or heating sensation to relieve sacroiliac joint pain. This padding may provide extra support to this area when sitting or suffering from sacroiliac joint pain.

[0092] The sacroiliac belt may be adjustable to use postpartum, for example by using hooks and eyes or Velcro (RTM) to attach to the girdle. Sacroiliac belts, in general, are regarded as one of the best belts ideal for most hip and low back pain, maternity pelvis stability, sacroiliac syndrome and acute lower back pain.

[0093] The hidden sacroiliac belt may have a rounder finish underneath baby bump for extra comfort and so it does not dig in and cause added pain.

[0094] There may be an optional adjustable clip or extra material to hook onto the sufferer's bra for added support as baby bump grows.

[0095] There may be extra optional padding in the hip area taking pressure off the hips while wearing the hidden sacroiliac belt.

[0096] There may be optional extra padding in the pubis area taking pressure off the pelvis while wearing the hidden sacroiliac belt with a rounder shape under bump for extra comfort.

[0097] The sacroiliac belt may optionally be able to be attached to another pregnancy girdle of a different style.

Detailed Description of Figures 5 to 7

[0098] Figures 5 to 7 illustrate a garment 100 having a first zone of compression 118 and a second zone of compression 134. The zones of compression 118, 134 apply pressure to different parts of a wearer's body.

[0099] The garment 100 comprises leg portions 102a, 102b and a torso portion 104. The leg portions 102a, 102b and torso portion 104 join together at a cross crutch point 106. When worn by a user, the garment 100 is worn around an upper portion of the legs, around the hips and around the torso of the user. The leg portions 102a, 102b of the garment 100 are worn around an upper portion of a user's legs. The torso portion 104 is worn around a user's torso. When worn by a pregnant user, the torso portion 104 of the garment 100 is worn around the user's baby bump.

[0100] The first zone of compression 118 is located in the region of the cross crutch point 106 and extends either side thereof around the garment 100. The first zone of compression 118 extends from the upper thigh to the

lower part of the hips of a wearer. In use the first zone of compression 118 is located around the lower part of the pelvis of the wearer to apply compression to the ilium, the pubis region and the upper part of the ischium of the pelvis. The first zone of compression 118 provides lower pelvic support to a wearer. The lower pelvic support provided can assist in treating or preventing pelvic instability.

[0101] The first zone of compression 118 can take the form of a sacroiliac belt to provide support, compression and/or pressure generally to a region of the wearer below the level of the sacroiliac joint and above the pubic arch.

[0102] The second zone of compression 134 is located in the torso portion 104 of the garment 100. The second zone of compression 134 extends around a pregnant user's torso to support their baby bump. The second zone of compression 134 extends from a user's back forward and downward under their baby bump, thereby spreading the weight of the baby bump to the user's back and lifting it off the pelvis.

[0103] The first and second compression zones 118, 134 are separate and distinct. This allows the compression zones 118, 134 to exert different levels of compression on the wearer. The first compression zone 118 exerts a greater compression force to the wearer than the second zone of compression 134.

[0104] As can be seen in Figure 7, a connection portion 108 is provided between the first and second compression zones 118, 134. In use, the connection portion 108 extends down the centre of a wearer's lower back.

[0105] The garment 100 further includes a retaining portion 116. The retaining portion 116 is at the end of the torso portion 104 of the garment 100. In use, the retaining portion 116 extends around a user's torso, above the baby bump of a pregnant user. The retaining portion 116 is reinforced to retain the garment 100 at the desired height on the user and prevents the garment 100 from slipping or rolling down from the desired height on the user.

Claims

1. A garment comprising:

leg portions to be worn around at least part of the legs,
a torso portion to be worn around at least part of the torso,
a cross crutch point where the leg portions and torso portion join,
a first zone of compression, and
a second zone of compression;

wherein the first zone of compression is located in the region of the cross crutch point and extends either side thereof in a band around the garment, and said second zone of compression is located in the torso region of the garment; and

- wherein the first zone of compression and the second zone of compression are separate and distinct.
2. A garment according to claim 1, wherein the first zone of compression and the second zone of compression provide different grades of compression.
 3. A garment according to claim 1 or 2 wherein in use the first zone of compression is more biased into contact with the wearer than the second zone of compression.
 4. A garment according to any one of claims 1 to 3, wherein the first zone of compression is configured to apply compression and/or pressure to a region of a wearer generally below the level of the sacroiliac joint and above the pubic arch and wherein the second zone of compression is configured to support a baby bump and to lift at least a portion of the weight of the same off the pelvis.
 5. A garment comprising:
 - a retaining portion which, in use, grips the torso of a pregnant user, above the baby bump;
 - a sacroiliac belt connected with the retaining portion and which, in use, encircles the pelvis of the user; and
 - a supporting cup region extending, in use, down from the retaining portion and under the baby bump, to cup the baby bump and support the baby bump from the retaining portion;

wherein during use, the sacroiliac belt provides compression to stabilise the pelvis and the retaining portion tends to hold the sacroiliac belt up at the chosen height relative to the pelvis, and tends to take at least part of the weight of the baby bump off the pelvis of the user.
 6. A garment according to claim 5, wherein, in use, the retaining portion encircles the torso of the user and/or contains elastic.
 7. A garment according to any of claims 5 to 6, wherein the retaining portion comprises an upper edge which is reinforced to resist the upper edge rolling down the torso of the user during use.
 8. A garment according to any of claims 5 to 7, wherein the sacroiliac belt comprises knitted compression positioned against the body of the user during use.
 9. A garment according to claim 8, wherein the knitted compression is positioned, in use, over the sacroiliac joints and/or against the hip joints and/or against the pubis of the user.
 10. A garment according to any of claims 5 to 9, wherein the sacroiliac belt and/or the supporting cup region is flexible.
 11. A garment according to any of claims 5 to 10, the garment fully enclosing the body of the user, during use, at least from the sacroiliac belt to a height above the baby bump.
 12. A garment comprising:
 - a lower pelvic compression belt which, in use, encircles the lower pelvis, hips and pubis of the user; and
 - a supporting cup region extending, in use, around and under the baby bump and around the back of the wearer, to cup and support the baby bump and to lift the weight of the baby bump off the pelvis;

wherein the lower pelvic belt and the supporting cup region are distinct and separate from one another; and

wherein during use, the lower pelvic compression belt provides compression to stabilise the pelvis and to hold the lower pelvic compression belt at a predetermined position relative to the pelvis, hips and pubis.
 13. A garment according to claim 12, wherein the lower pelvic compression belt grips each thigh or leg of the wearer.
 14. A garment according to any preceding claim, wherein the garment is formed of a seamless construction, and/or wherein the garment is an undergarment, outer garment or an item of swimwear.
 15. Use of a garment according to any preceding claim for treating, preventing or managing pain and/or discomfort associated with one or more selected from the group consisting of:
 - (i) pelvic instability;
 - (ii) symphysis pubis; and
 - (iii) pain or discomfort in the pelvic region as may occur during pregnancy.

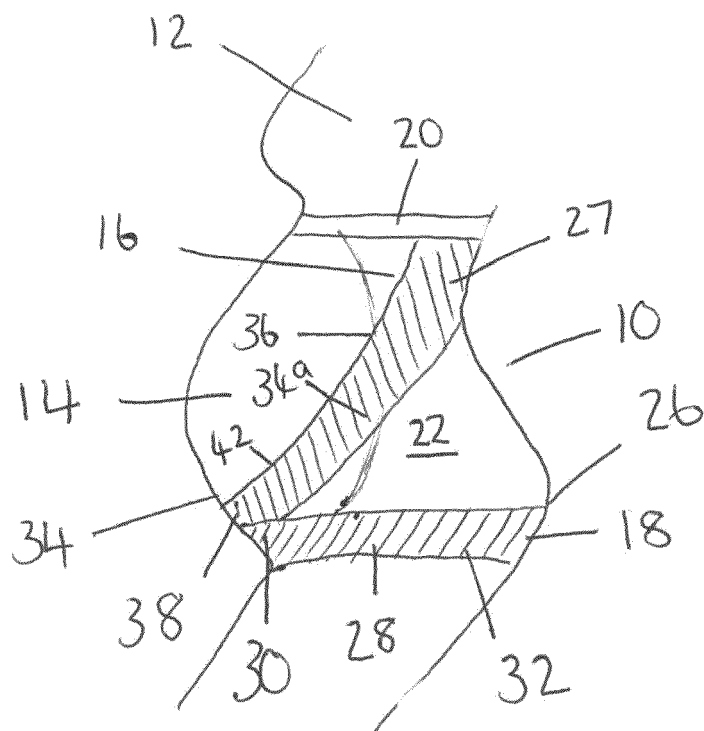


Figure 1

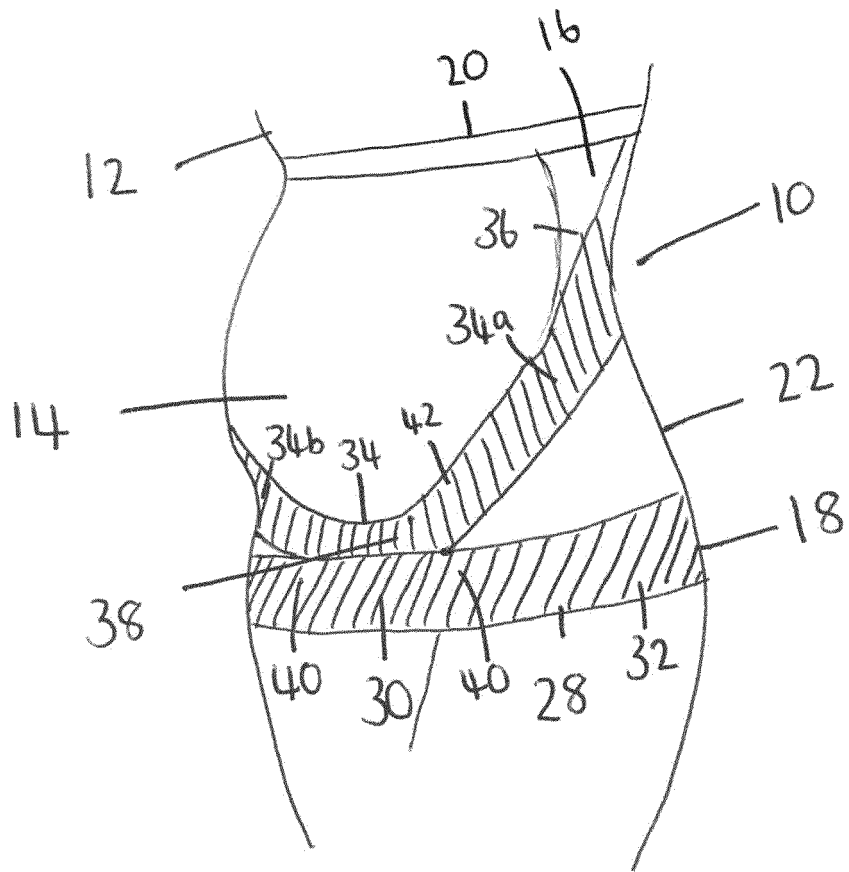


Figure 2

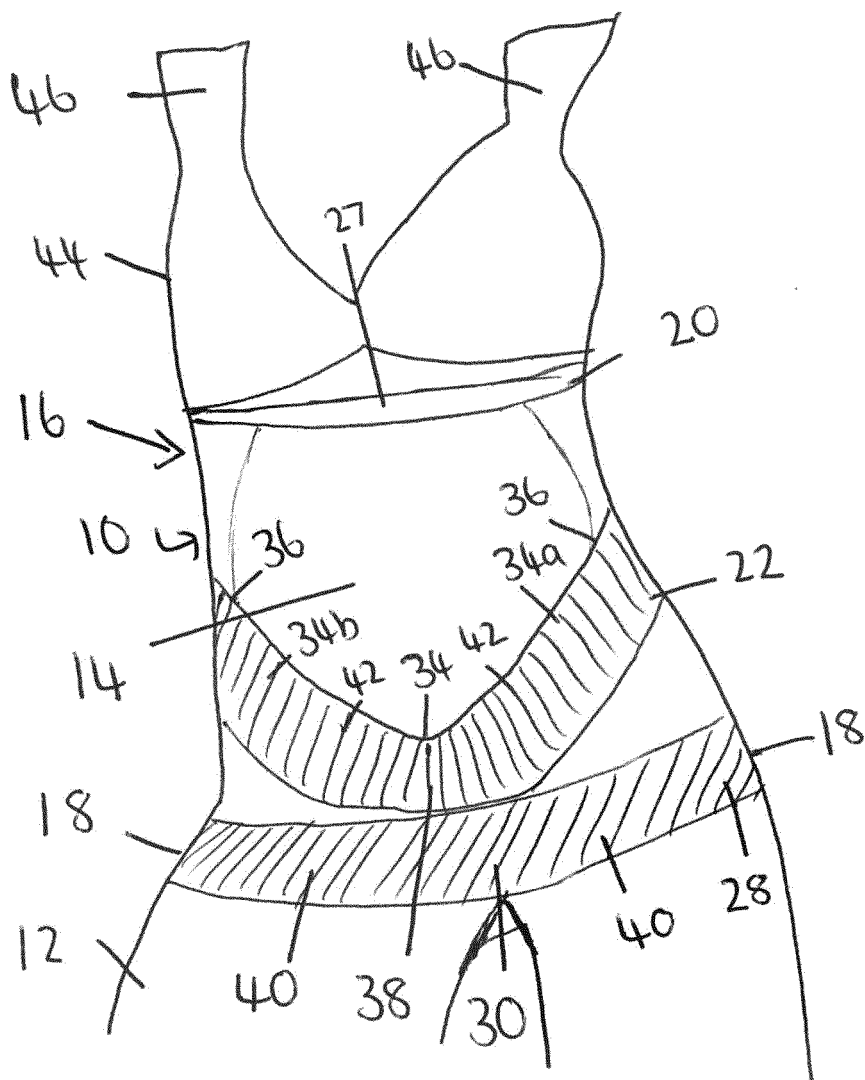


Figure 3

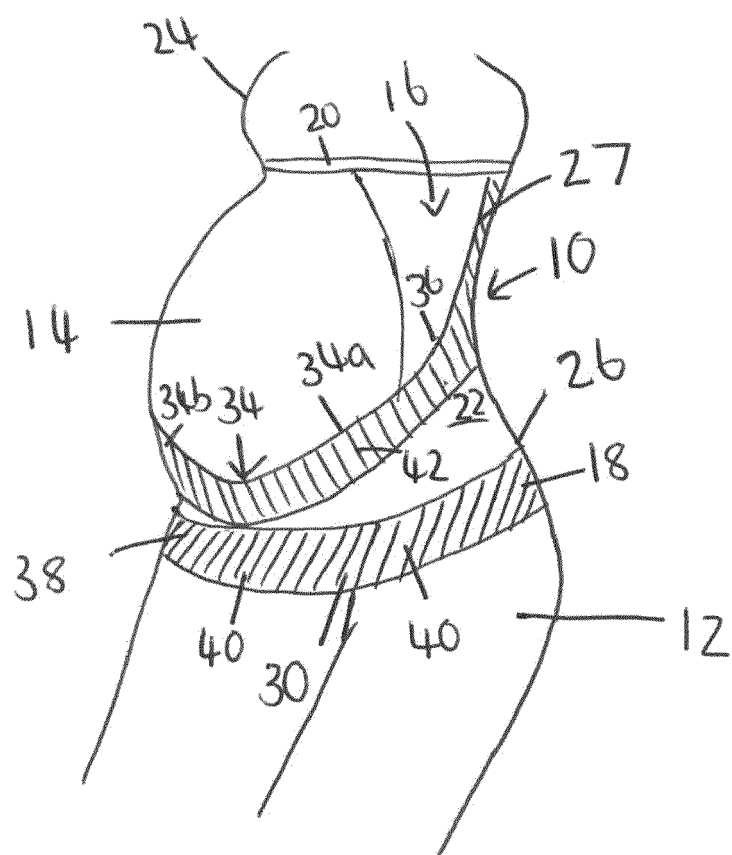
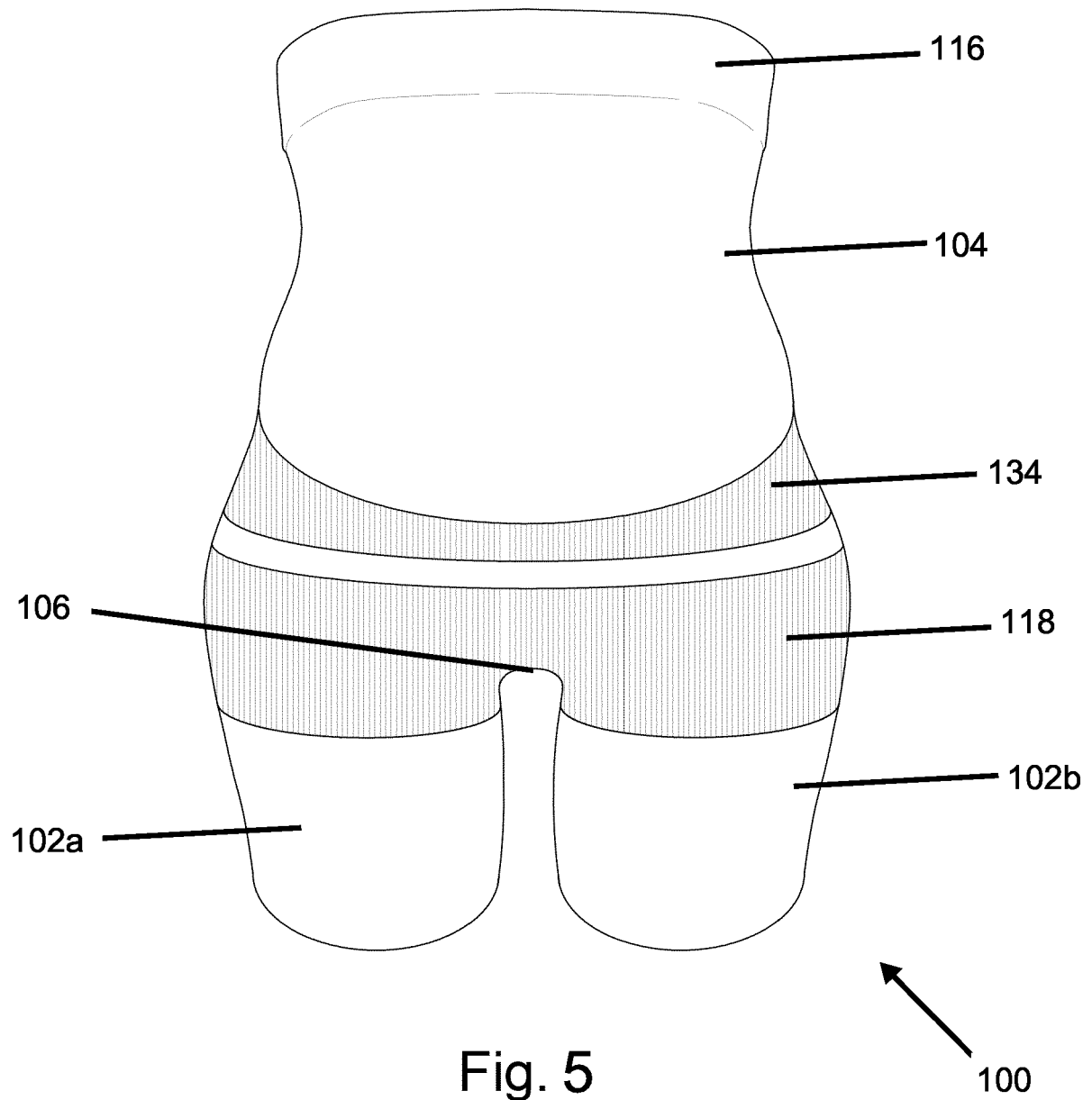


Figure 4



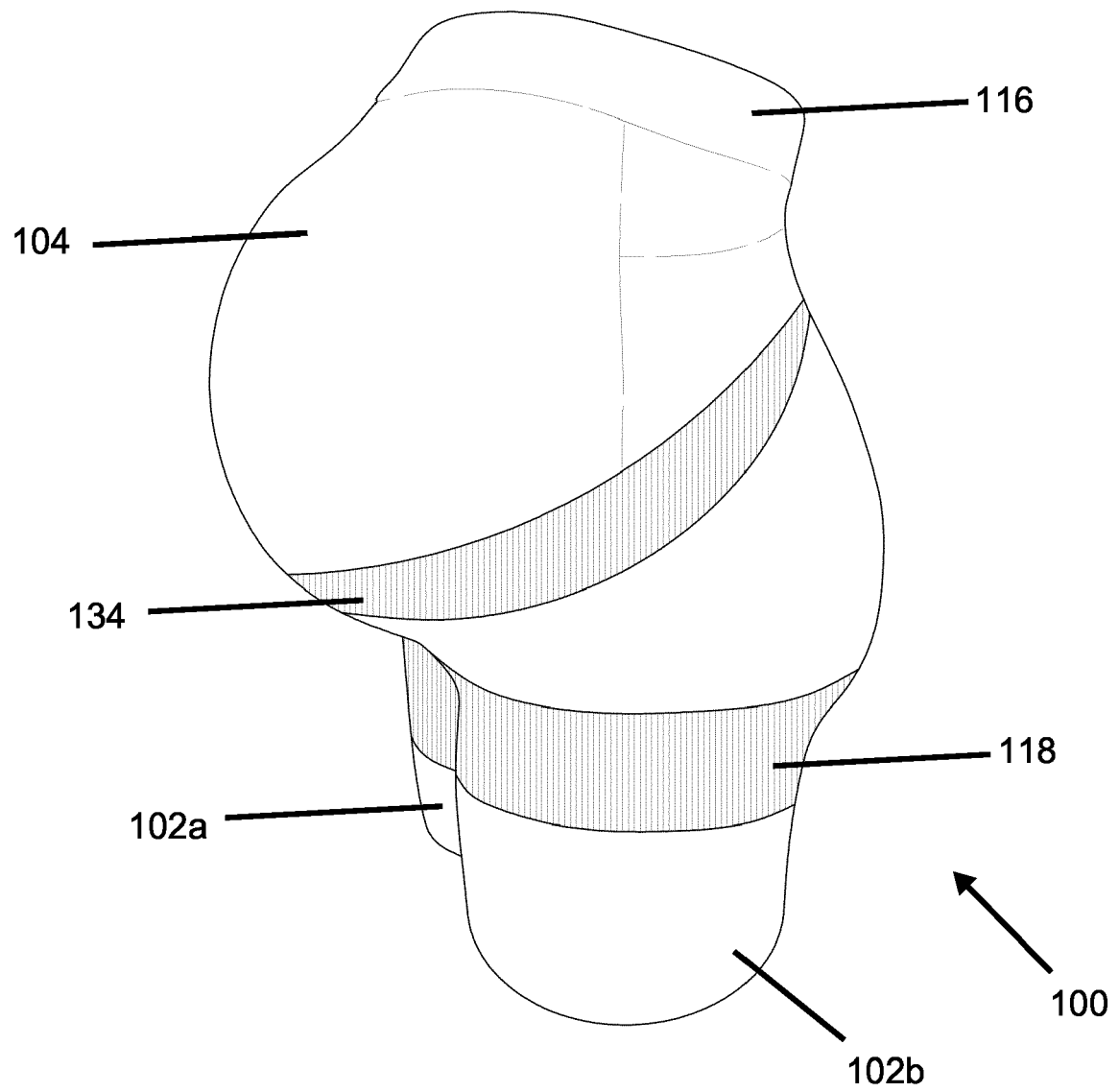
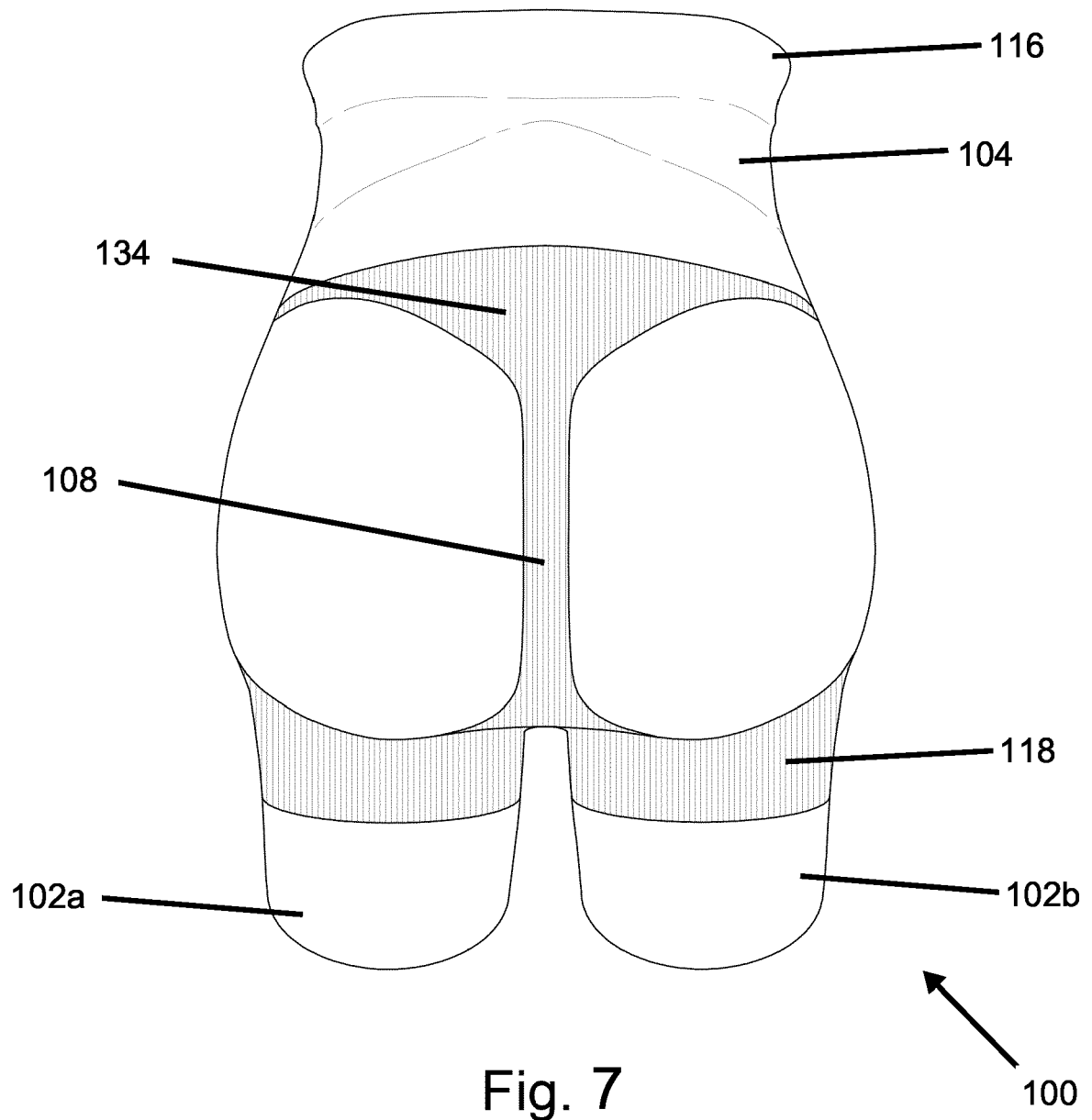


Fig. 6





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Place of search The Hague		Date of completion of the search 7 November 2019	Examiner Monné, Eric
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