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(54) **UNDERGARMENT**

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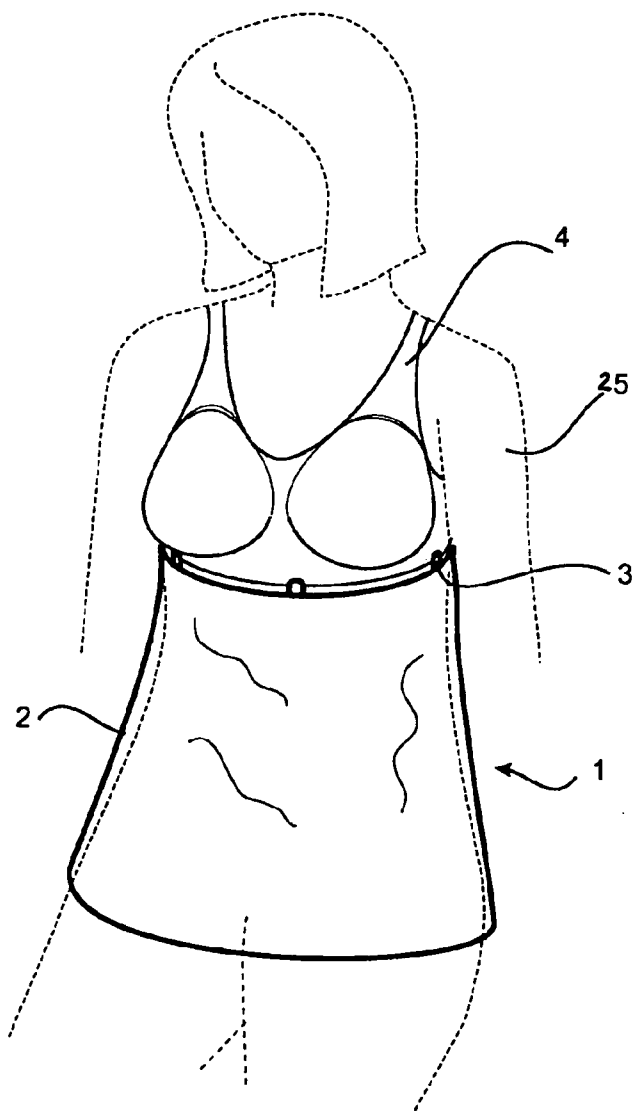
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(57) **ABSTRACT**

An undergarment including a waist-covering portion; and at least one fastener for releasably attaching the waist-covering portion to a brassiere; such that when the undergarment is conventionally worn, the waist-covering portion does not cover a wearer's breasts.

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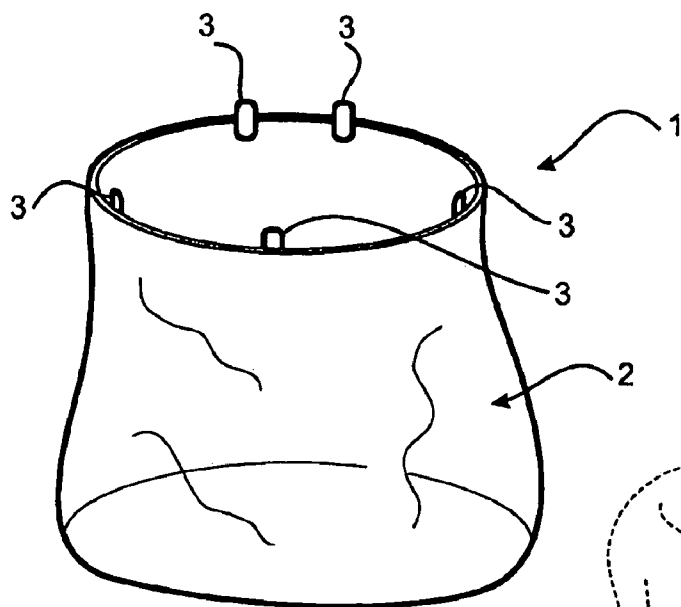


Figure 1

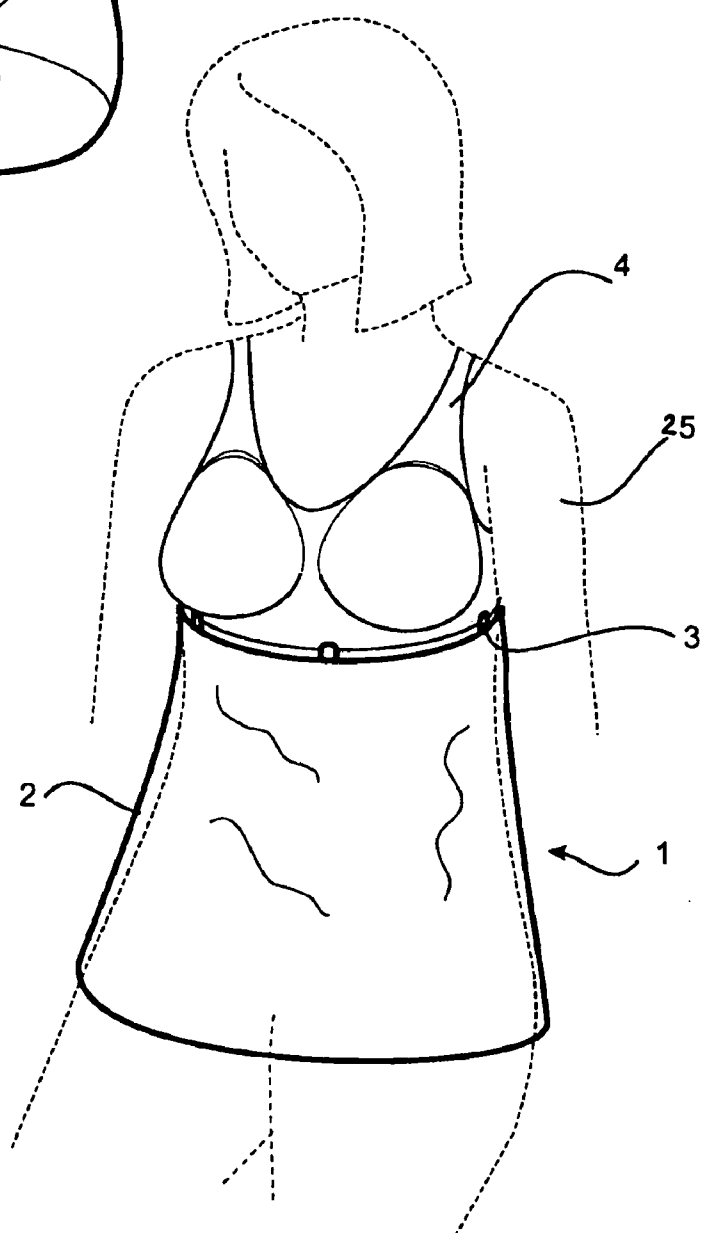


Figure 2

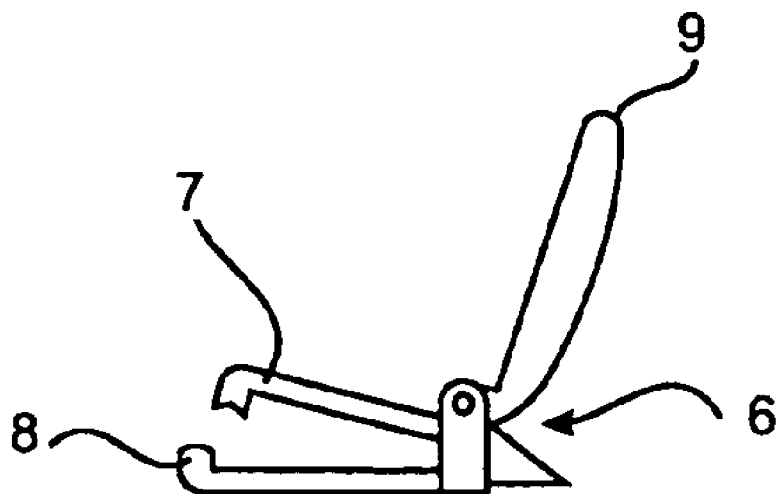


Figure 3a

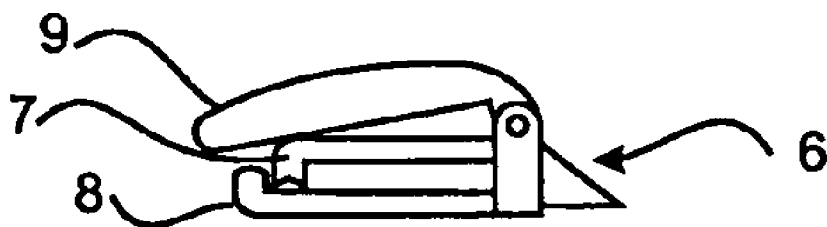


Figure 3b

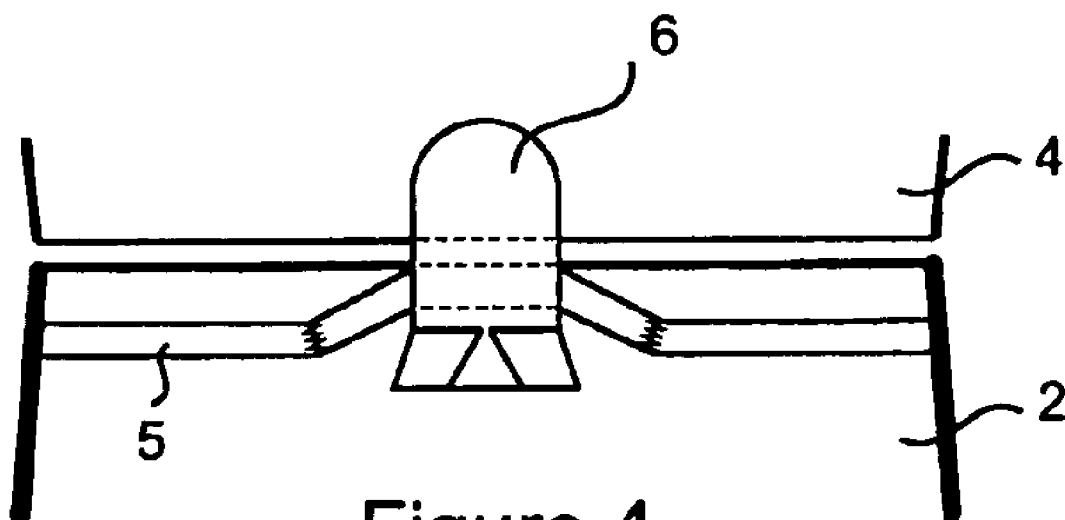


Figure 4

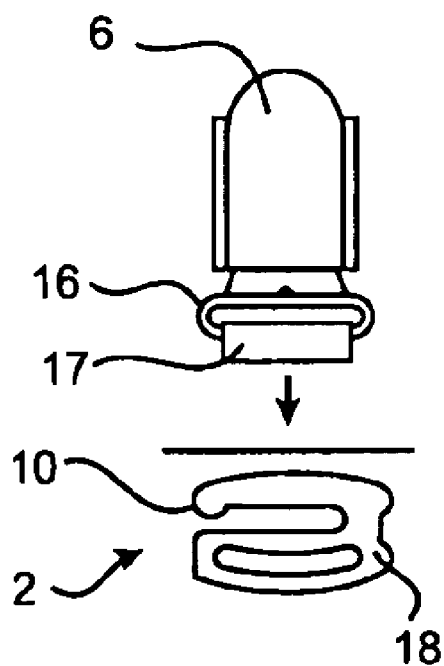


Figure 5

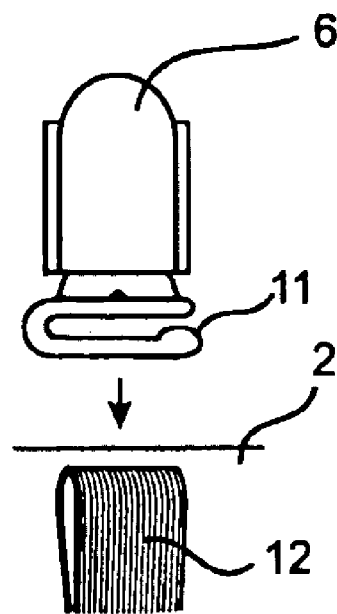


Figure 6

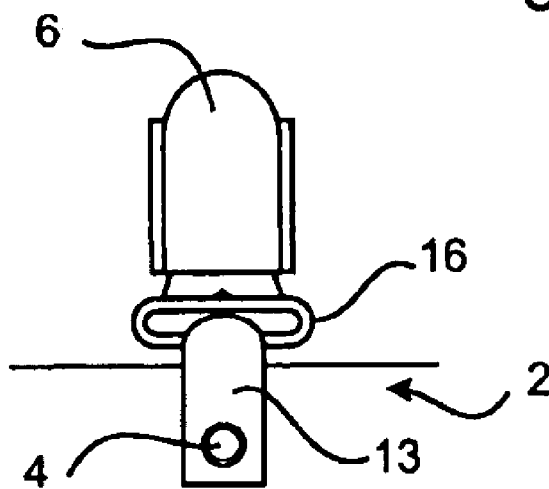


Figure 7

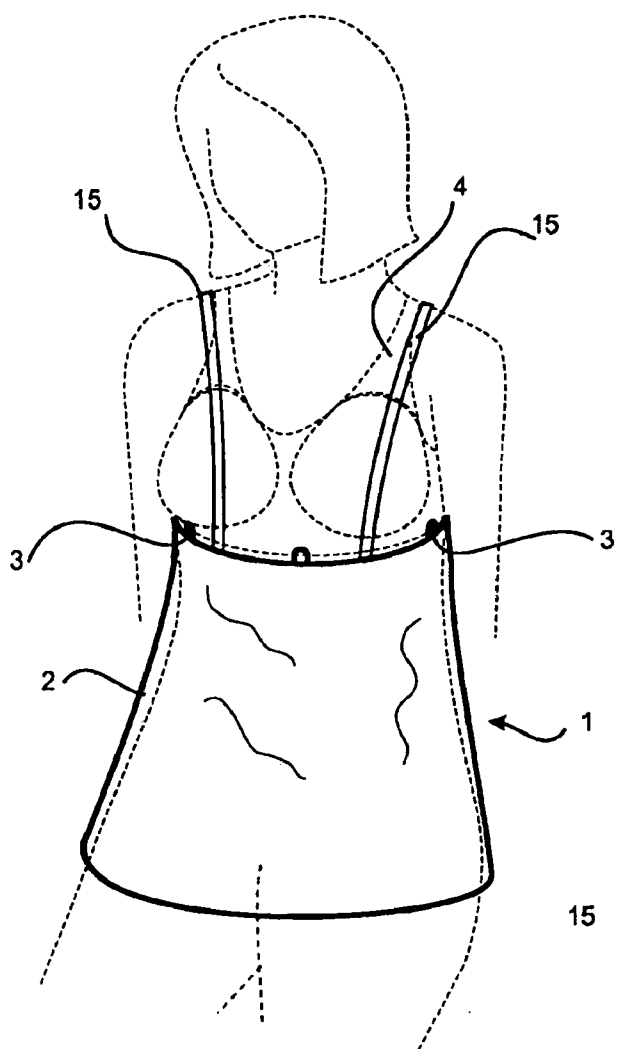


Figure 8

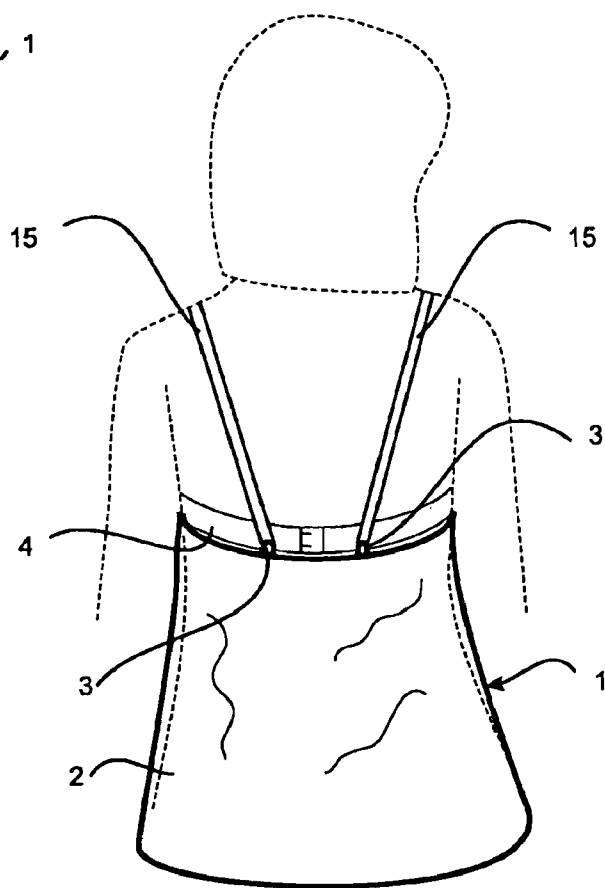


Figure 9

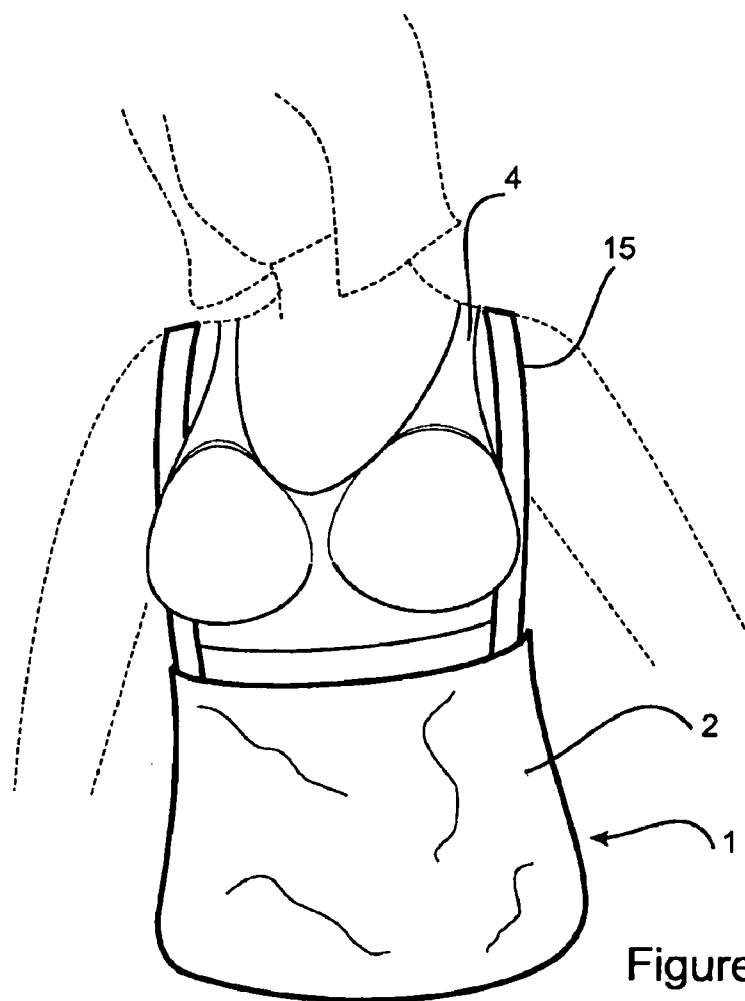


Figure 10

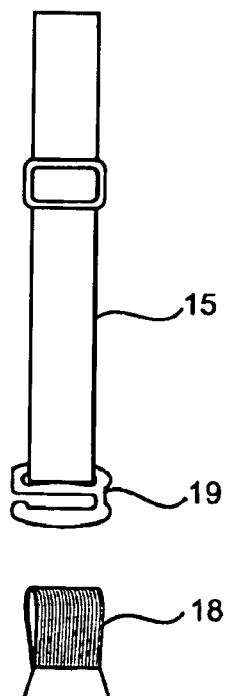


Figure 11

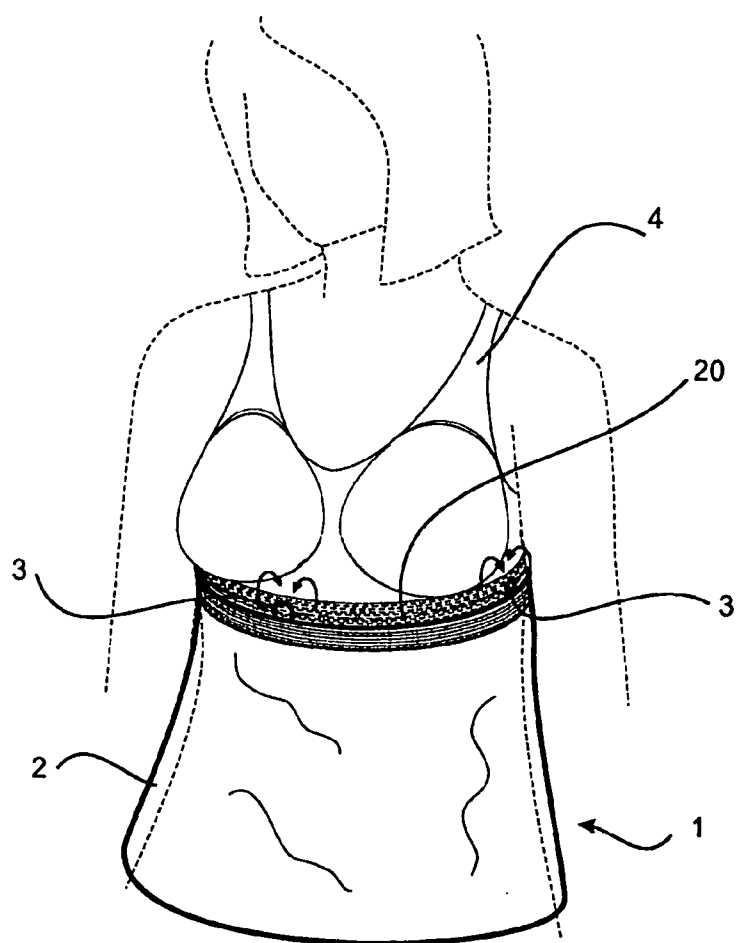


Figure 12

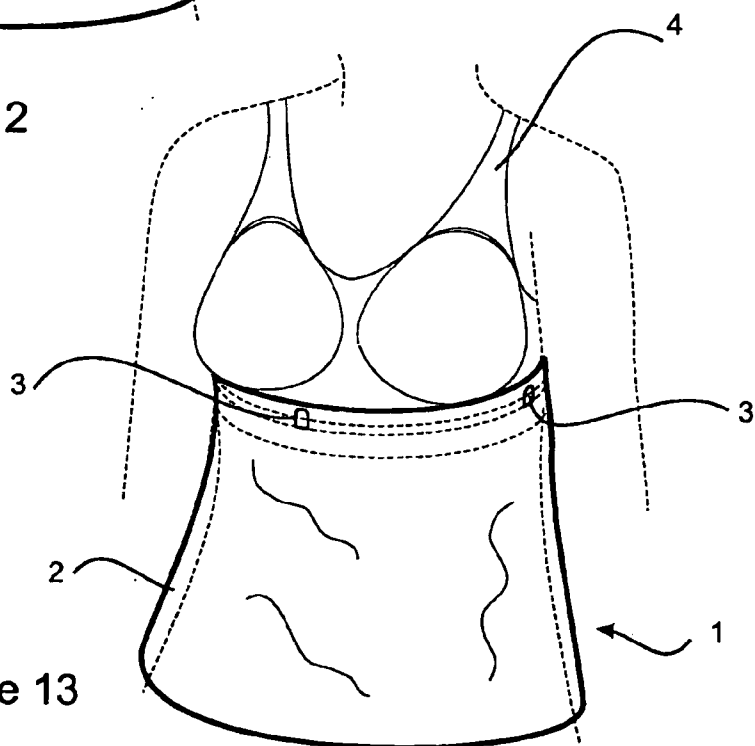


Figure 13

UNDERGARMENT

RELATED APPLICATION

[0001] The present application claims priority to Australian Application No. 2005229771 filed Nov. 8, 2005, which is incorporated herein in its entirety by reference.

FIELD OF THE INVENTION

[0002] This invention relates to an undergarment that is particularly suitable to be worn by breastfeeding mothers.

BACKGROUND OF THE INVENTION

[0003] One major concern for a new mother is the need to breastfeed her baby in public. As breastfeeding requires a mother to expose at least one breast to allow the baby to feed, the task often makes her feel very exposed and self-conscious. As a result, many new mothers are reluctant to go out in public for the fear their baby will need feeding, in which case the mother would feel significant embarrassment and discomfort.

[0004] The feeling of being exposed and embarrassed in public is heightened by the need to rearrange clothing worn by the mother in order to expose the breast. The most discrete method often requires a mother to lift up her shirt and gather it above her breasts in order to allow the baby access to her breasts for feeding. This results in not only the mother's breast being exposed in public, but also the mother's stomach and back region. A mother feels particularly self-conscious and embarrassed when this occurs, especially as immediately after giving birth to her baby her body shape is usually not the same as it was before she became pregnant. It can be very difficult to breastfeed discretely, especially without causing unnecessary anxiety and stress on both the mother and baby.

[0005] The exposure of the mother's stomach and back region due to the rearrangement of clothing during breastfeeding may also lead to the mother becoming very cold, especially during the winter months. The exposure of the stomach or back during cold weather may therefore result in the mother becoming ill. Often a mother chooses not to wear shorter tops and shirts whilst breastfeeding, as shorter tops lead to almost the whole of the mother's back being exposed whilst breastfeeding. This prevents a mother from wearing her regular clothing.

[0006] Further, during cold weather a mother will often wear layers of clothing to keep warm, including singlets, spencers and camisoles for example. As these undergarments all cover the mother's breasts, they will also need to be rearranged to expose a breast during breastfeeding. This requires many layers of clothing or undergarments to be pushed up and gathered above the breasts. The many layers of clothing are therefore positioned very near the baby's face, which may be both dangerous to the baby and also uncomfortable whilst it breastfeeds.

[0007] It would be advantageous if a mother did not have to rearrange as many layers of her clothing, and if her stomach or back was not exposed, whilst breastfeeding.

[0008] It is preferable for a mother to wear a nursing brassiere after giving birth. A nursing brassiere allows for easy access to the mother's breasts, which facilitates breast-

feeding. In one form of nursing brassiere, the brassiere cups are attached separately from the brassiere supports, and removably attached to the brassiere supports to allow access to the breasts. A nursing brassiere also provides support for the breasts, which can be sore and swollen after giving birth and throughout the time a mother is breastfeeding her baby. Therefore, while a nursing brassiere facilitates breastfeeding in itself, the mother's clothing, including undergarments, still need to be pushed and gathered above the breasts in order to allow access to the nursing brassiere.

[0009] It is an object of the present invention to provide an undergarment that alleviates some of the concerns of a mother during breastfeeding and preferably causes less exposure for a mother whilst breastfeeding.

SUMMARY OF THE INVENTION

[0010] With the above object in mind, the present invention broadly provides an undergarment comprising a waist-covering portion wherein the waist-covering portion extends from below a wearer's breasts substantially down to the wearer's hip region; and means for attaching the waist-covering portion to a brassiere, such that when the undergarment is conventionally worn the undergarment does not cover the wearer's breasts.

[0011] In one aspect the present invention provides an undergarment comprising a waist-covering portion extending, in use, from below a wearer's breasts substantially down to said wearer's hip region; and at least one fastener located on said waist-covering portion for releasably attaching the waist-covering portion to a brassiere, said fastener adapted to releasably attach to a non-specific target material or device thereby allowing said waist-covering portion to be releasably attached to a conventional brassiere; wherein when said undergarment is conventionally worn, said undergarment does not cover said wearer's breasts.

[0012] The undergarment of the present invention does not cover the wearer's breasts, which allows the breastfeeding of a baby without the need for the rearrangement of the undergarment to expose the breasts. Only an outer garment, such as a shirt, needs to be lifted above the wearer's breasts and rearranged during breastfeeding, which decreases the amount of clothing gathering near the baby's face.

[0013] The term "non-specific target material or device" refers to any kind of material or surface, thereby the fastener being of the type not having a specialised corresponding mating portion.

[0014] The term "conventional brassiere" refers to any standard, unaltered and unmanipulated brassiere, thereby the fastener being of the type that can be attached to any standard brassiere.

[0015] Further, since the undergarment does not require any rearrangement during breastfeeding, the undergarment will remain in the same position and allow the wearer's stomach and back regions to remain covered by the undergarment at all times during breastfeeding. As the undergarment is attached to the wearer's brassiere by means of a fastener, the attachment is secure, which prevents the pos-

sibility of the undergarment being pushed downwards when a wearer is carrying a child on their hip. Further, the undergarment allows a wearer to wear regular clothing, as the wearer does not need to be concerned with their whole back being exposed. The fastener for attaching the waist-covering portion to the brassiere does not require any alteration of the brassiere, thereby allows ease in transferring the undergarment to be worn with any conventional brassiere.

[0016] The present invention also provides an undergarment that does not require shoulder straps for support, although this is an alternative embodiment. The absence of the need for shoulder straps allows for the better utilisation of the brassiere, since the positioning of garment or undergarment straps often cover and conflict with the brassiere straps and, in particular, the convenient use of a nursing brassiere.

[0017] It is preferred that the at least one fastener is detachable from said undergarment. This allows for further utilisation of the undergarment, and for ease in washing the undergarment.

[0018] It is further preferred that the at least one fastener is transferrably locatable to a plurality of positions on said waist-covering portion, allowing for the desire and comfort of the wearer, as well as allowing for differently formed and shaped brassieres to be used with the undergarment.

[0019] It is further preferred that the at least one fastener is covered to avoid accessibility and injury to a baby. It is further preferred that the at least one fastener is a suspender-type clip.

[0020] In one form, the undergarment further comprises at least one fastener receiving portion for connecting said at least one fastener to said waist-covering portion, wherein said at least one fastener receiving portion includes a strip of elastic attached to an upper edge of said waist covering portion. In an alternative form, the fastener receiving portion includes at least one loop attached to an upper edge of said waist-covering portion. In yet another alternate form, the fastener receiving portion includes at least one hook attached to an upper edge of said waist-covering portion.

[0021] It is a further preferred feature of the present invention that the waist-covering portion is adapted to receive at least one strap extending over the wearer's neck and/or shoulder region. It is further preferred that the at least one strap is detachable from the waist-covering portion. The detachable strap or straps gives the wearer an option of utilising the undergarment solely by the brassiere attachment means, solely by the strap or straps, or by utilising both the brassiere attachment means and the strap or straps together. This provides for a more versatile undergarment depending on the need and desire of the wearer.

[0022] Therefore, the undergarment of the present invention achieves its object by allowing the wearer's breasts or brassiere to be easily accessible at all times, without the need for rearrangement of the undergarment, and also minimises the exposure of a wearer's stomach and back during breastfeeding. This allows the breastfeeding of a baby to be performed discretely and comfortably.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] Preferred embodiments of the present invention will now be described with reference to the accompanying drawings, in which:

[0024] FIG. 1 shows one embodiment of the undergarment of the present invention;

[0025] FIG. 2 shows the embodiment of FIG. 1 being worn together with a brassiere;

[0026] FIG. 3a shows an embodiment of a fastener used for attaching the waist-covering portion to the brassiere, the fastener being in the opened, non-securing position;

[0027] FIG. 3b shows the fastener of FIG. 3a in the closed, securing position;

[0028] FIG. 4 shows one embodiment of a fastener receiving portion and fastener for attaching the waist-covering portion to the brassiere;

[0029] FIG. 5 shows an alternative embodiment of a fastener receiving portion and fastener for attaching the waist-covering portion to the brassiere;

[0030] FIG. 6 shows yet another alternative embodiment of a fastener receiving portion and fastener for attaching the waist-covering portion to the brassiere;

[0031] FIG. 7 shows yet another alternative embodiment of a fastener receiving portion and fastener for attaching the waist-covering portion to the brassiere;

[0032] FIG. 8 shows a front view of an alternative embodiment of an undergarment of the present invention;

[0033] FIG. 9 shows the rear view of the embodiment of FIG. 8;

[0034] FIG. 10 shows yet another alternative embodiment of an undergarment of the present invention;

[0035] FIG. 11 shows one embodiment of the means for attaching shoulder straps to the waist-covering portion;

[0036] FIG. 12 shows yet another alternative embodiment of the undergarment present invention; and

[0037] FIG. 13 shows yet another embodiment of the undergarment of the present invention.

DESCRIPTION OF PREFERRED EMBODIMENT

[0038] The present invention will be described with reference to a number of preferred embodiments. It will be appreciated that persons skilled in the art could implement the present invention in many different ways, and variations may be produced without departing from the spirit and scope of the invention.

[0039] Considering initially the embodiment shown in FIG. 1, the undergarment 1 includes a waist-covering portion 2 and a plurality of fasteners 3 for attaching the waist-covering portion 1 to a brassiere.

[0040] The waist-covering portion 2 can be any type of material that covers the wearer's front and back region, at the front from at least just below the breasts downwards. The waist-covering portion 2 may sit by the wearer's breasts, but does not cover the breasts. It may extend downwards as long

as desired, however it is preferred the waist-covering portion 2 extends substantially down to the wearer's hip region.

[0041] The fasteners 3 may be of any suitable type. Fasteners may include (but are not limited to) press-studs, safety pins, hooks & eyes, Velcro, or suspender-type fasteners that would not require any alteration of a brassiere (i.e., be adapted to attach to a non-specific target material or device), and it is therefore preferred that suspender-type clips are used.

[0042] While the fasteners 3 may be of any number and be situated in any position around the waist-covering portion 2, it is preferred the fasteners 3 are positioned as shown in FIG. 1, the positions being approximately:

[0043] 1 clip at the centre of the front of the waist-covering portion 2, between the breasts; and

[0044] 2 clips at equal distances from the centre of the back of the waist-covering portion 2, preferably no less than 3.5 cm from the centre back to avoid the bulk of the rear brassiere closures; and

[0045] 2 clips at the side area of the waist-covering portion 2.

[0046] These specific positions are considered to be the most comfortable for the wearer, and are in positions for the complementary attachment to the majority of brassieres.

[0047] FIG. 2 shows the embodiment of FIG. 1 being worn by a person 25, and as attached to a nursing brassiere 4. The nursing brassiere 4 does not form part of the present invention, and any kind of conventional brassiere may be utilised with the present invention. As can be seen in FIG. 2, the undergarment 1 does not cover the wearer's breasts or the brassiere 4, so the undergarment 1 requires no rearranging whilst breastfeeding when used with a nursing brassiere 4. The undergarment 1 can keep the mother's stomach and back region covered at all times.

[0048] The waist-covering portion 2 may be made of any suitable material. It is preferred the waist-covering portion 2 is made from a resilient or flexible material. This aids in retaining the garment next to the skin of a user by stretching during use, regardless of the differences in body shape and size between users. It also allows sufficient stretch to resist lifting with the wearer's outer garments. In providing a good fit, the material should be stretchable circumferentially more than it stretches longitudinally. A 100% cotton fabric having stretchability in the range of from about 10% to about 30% along the warp and in the range of from about 10% to about 20% along the weft is expected to provide desirable results. A lightweight cotton underwear material should be highly suitable and can be doubled in thickness for increased comfort. Although any desired coloration can be used, the colours are preferably selected in order to allow concealment of the undergarment under clothes. The undergarment may alternatively be made from a fabric adapted to aid in thermal retention, such as Polartech®.

[0049] The length of the waist-covering portion 2 preferably extends down to the wearer's waist or hip region. A stretch hem or elastic is preferred at the top of the undergarment to assist in positioning under the breasts.

[0050] It is preferred that the fasteners for attaching the waist-covering portion 2 to the brassiere 4 are suspender-type clips 6, as shown in FIGS. 3a and 3b. The suspender-type clip 6 allows the brassiere fabric to be positioned between the two members 7,8 of the clip 6 which are then

clamped together by means of the tongue 9 to hold the brassiere fabric in place. No alteration of the brassiere itself is required with the suspender-type clips. The suspender-type clips 6 are preferably no wider than 1.75 cm, no longer than 3.5 cm and no deeper than 0.75 cm, for the comfort of the wearer. It is most preferable that smaller clips than the aforementioned measurements are used. Suspender-type clips are well known to persons skilled in the art and no further discussion on the mechanism of these clips need be provided.

[0051] The mechanism used to connect the suspender-type clips 6 to the waist-covering portion will depend upon the formation of the suspender-type clip 6 itself. One implementation of the attachment means (or "fastener receiving portion") is shown in FIG. 4. A strip of elastic 5 is stitched at intervals inside the waist-covering portion 2, and close to the top edge of the waist-covering portion 2. The elastic 5 is preferably stitched at intervals of approximately 2.5 cm the whole way around the waist-covering portion 2. This allows sufficient attachment for the elastic 5 to be held in place, while the intervals are large enough for the clips 6 to be clipped onto the elastic 5. Having intervals the whole way around the waist-covering portion 2 allows the wearer variations in the positioning of the clips 6. The jaws of the clip 6 first grasp the elastic 5, and can then grasp the brassiere fabric, attaching the undergarment 1 to the brassiere 4. The clip 6 is fully detachable from the waist-covering portion simply by unlocking the clip 6 and sliding it out from the elastic 5. The removal of the clips 6 allows for easy washing of the undergarment, and also allows the undergarment 1 to be converted to use without the clips 6, such as by shoulder straps.

[0052] FIGS. 5, 6 and 7 show variations for attaching the clip 6 to the waist-covering portion 2 (i.e., variations of the fastener receiving portion). In FIG. 5, the clip 6 integrally contains a full attachment clip loop 16. A piece of fabric or the like is formed into a loop 17 around the clip loop 16. A hook 18 may then be sewn into the waist-covering portion 2, and the hook 18 may be inserted into the fabric loop 17 attached to the clip 6, by the open arm 10 of the hook 18. The clip 6 can then grasp the brassiere fabric between its jaws 7,8, thus attaching the undergarment 1 to the brassiere 4. The clip 6 can be easily removed from the waist-covering portion 2 by sliding it out from the hook 18.

[0053] In FIG. 6, the clip 6 has an open loop 11 integrally attached. A fabric loop 12 may then be sewn into the waist-covering portion 2 to allow the open arm of the loop 11 to slide through, thereby attaching the clip 6 to the waist-covering portion 2.

[0054] In FIG. 7, a length of fabric 13 is sewn at one end onto the waist-covering portion 2. The length of fabric 13 is then threaded through the loop 16 in the clip 6, and folded over to attach to the end of the length of fabric 13 via a button or press-stud means 14. The clip 6 is then securely attached to the waist-covering portion 2, yet easily removable simply by unbuttoning the fabric loop 13.

[0055] Turning to FIGS. 8 and 9, an alternative implementation of the present invention is shown, utilising both the clips 3 and two shoulder straps 15. The clips 3 are used and attached as described above. The straps are detachable from the undergarment 1 to allow the undergarment 1 to be worn by the clips 3 only.

[0056] The straps 15 are preferably adjustable in length to allow for the desire and comfort of the wearer. Various forms

of strap members may be used and are readily apparent to one skilled in the art. The straps may be formed of a resilient material, or alternatively or in addition may comprise adjusting means such as a buckle to allow for the length adjustment. It is preferred the straps **15** are positioned to the sides of the wearer's breasts for the most comfort, and it is preferred the rear of the straps **15** are positioned to avoid the rear brassiere closure, again for the comfort of the wearer.

[0057] The straps **15** may be removably attached to the undergarment **1** by any suitable means, as readily known by those skilled in the art. For example, releasable attachments such as press-studs, buttons, a hook and eye arrangement or Velcro® may be used. To ensure the straps are securely fastened to the undergarment **1**, a hook and loop arrangement, as shown in FIG. **11** is preferred to be used. The loop **18** may be sewn into the waist-covering portion **2**, and a hook **19** may be used on the ends of the straps **15** for attaching to the loop **18**. The attachment of the straps **15** may utilise the clip attachment loops if the clip attachment loops are in suitable positions.

[0058] As shown in FIG. **10**, the undergarment **1** of the present invention may be worn solely by use of the straps **15**, with the clips **3** having been removed.

[0059] The undergarment **1** of the present invention should preferably include means for covering the clips **3** to keep the clips **3** out of the reach of the baby during breastfeeding. This may be achieved by attaching a band of fabric or lace **20** to the top edge of the waist-covering portion **2** which will cover the clips **3**, as shown in FIG. **12**. Alternatively, the band of fabric or lace **20** may fold over and into the jaws of the clips **3**. A further alternative is to attach the clips **3** below the top of the waist-covering portion **2**, as shown in FIG. **13**. In the latter case, the clips **3** should not be attached too low, as this may result in the undergarment **1** restricting use of the brassiere **4**. The clips **3** should be positioned for the undergarment **1** to be worn completely below the wearer's breasts.

[0060] While the present invention has been described with particular reference to being suitable whilst breastfeeding, it will be understood that the invention may also be worn generally as an undergarment. The undergarment of the present invention can thus be used with any type of brassiere, without requiring any alteration of the brassiere itself, however during breastfeeding, it is preferred the undergarment is worn with a nursing brassiere to best facilitate breastfeeding.

[0061] The present invention provides the advantage of ready access to the breast region of a wearer, which is particularly suitable for a mother to use whilst breastfeeding, where access to the breasts is paramount. It also provides the advantage to a mother of requiring no rearrangement of the undergarment in order to access the breasts for breastfeeding. This allows a mother to feel less anxious about exposing her stomach and back regions whilst breastfeeding. The present invention further provides the advantage of not conflicting with the straps of a brassiere, which is advantageous if a wearer is wearing a strapless brassiere yet still wants to wear an undergarment that covers their waist region. It is also advantageous for a mother who is wearing a nursing brassiere, as the undergarment of the present invention does not need to cover the straps of the nursing

brassiere, which is often where the cup attachment means are located. The present invention also allows a mother to wear regular clothing over the top of the undergarment, while not needing to be concerned about having their whole back being exposed.

1. An undergarment comprising:

a waist-covering portion extending, in use, from below a wearer's breasts substantially down to said wearer's hip region; and

at least one fastener located on said waist-covering portion for releasably attaching said waist-covering portion to a brassiere, said fastener adapted to releasably attach to a non-specific target material or device thereby allowing said waist-covering portion to be releasably attached to a conventional brassiere;

wherein when said undergarment is conventionally worn, said undergarment does not cover said wearer's breasts.

2. An undergarment according to claim 1 wherein said at least one fastener is detachable from said undergarment.

3. An undergarment according to claim 2 wherein said at least one fastener is transferrably locatable to a plurality of positions on said waist-covering portion.

4. An undergarment according to claim 1 wherein said at least one fastener is a suspender-type clip.

5. An undergarment according to claim 1 further comprising at least one fastener receiving portion for connecting said at least one fastener to said waist-covering portion, wherein said at least one fastener receiving portion includes a strip of elastic attached to an upper edge of said waist-covering portion.

6. An undergarment according to claim 1 further comprising at least one fastener receiving portion for connecting said at least one fastener to said waist-covering portion, wherein said at least one fastener receiving portion includes at least one loop attached to an upper edge of said waist-covering portion.

7. An undergarment according to claim 1 further comprising at least one fastener receiving portion for connecting said at least one fastener to said waist-covering portion, wherein said at least one fastener receiving portion includes at least one hook attached to an upper edge of said waist-covering portion.

8. An undergarment according to claim 1 wherein said waist-covering portion is adapted to receive at least one strap extending over said wearer's neck and/or shoulder region.

9. An undergarment according to claim 1 further comprising at least one strap attached to said waist-covering portion and extending over said wearer's neck and/or shoulder region.

10. An undergarment according to claim 8 wherein said at least one strap is detachable from said waist-covering portion.

11. An undergarment according to claim 9 wherein said at least one strap is detachable from said waist-covering portion.

* * * * *