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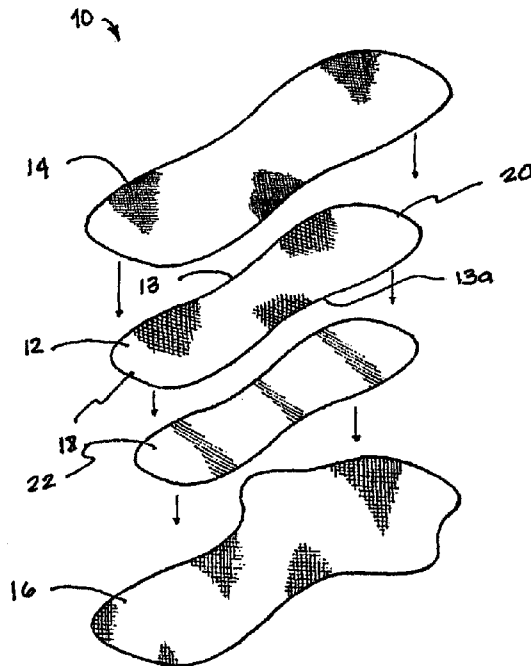
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- (54) Title: AN UNDERGARMENT LINER TO PREVENT CAMEL TOE APPEARANCE ON LADIES APPAREL

FIG. 1



(57) Abstract: This invention discloses an undergarment liner to prevent a camel toe appearance along the private or genital portion of a woman. This liner comprises a multilayered, a liquid permeable cover sheet, a liquid impermeable backing sheet having a periphery heat sealed with the periphery of said liquid permeable cover sheet, and an absorbent core secured in between said liquid permeable cover sheet and liquid impermeable backing sheet, characterized in that a plastic insert being secured in between said absorbent core and liquid impermeable backing sheet. Due to the firmness of the plastic insert, the liner will not creep up in the middle or form a fold- line thereof, thus preventing the formation of a camel toe appearance on the user's apparel.

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## **SPECIFICATION**

### **AN UNDERGARMENT LINER TO PREVENT CAMEL TOE**

#### **APPEARANCE ON LADIES APPAREL**

##### **FIELD OF THE INVENTION**

5           The present invention relates generally to undergarments liners but more particularly to liners that prevents certain body contours from being visible when worn with tight fitting clothes.

##### **BACKGROUND OF THE INVENTION**

          In designing clothing for women, effort is made to provide a smooth  
10       appearance when, in the normal course of wear, the garment fits snugly around the crotch area. A problem is presented, however, in the design of tight fitting clothing such as exercise bottoms, leggings, tights, tight pants or swimwear and the like that compliments and emphasizes the female figure. Garments that are fitted at the pelvic area create a problem when the fabric  
15       clings to the female contours and reveals the imprint or impression of the labia majora, particularly, if the garment has a central seam that tightly overlies the labia majora. This imprint or impression of labia majora is commonly called "camel toe". While a fashionable appearance is desired, the "camel toe" effect is not desirable and can be a source of discomfort or embarrassment to  
20       the wearer.

          Previous approaches in addressing this problem have included panty liners which are worn directly on the woman's underwear, or other inserts

(reusable) made of a smooth, sometimes rigid material which are designed to be attached to or inserted into women's underwear, designed to present a smooth outer surface which covers the camel toe. However, this approach has a number of problems. After certain length of time, the panty liner due to its softness and material will eventually conform to the female labial contours resulting in "camel toe". In some cases the liner is thick enough to show a padded outline through clothing, which is no longer appealing to the eyes of an observer. This kind of liner will also not work for swimwear.

In the present invention, the aforementioned problem of visual privacy is addressed by providing a liner attached to the crotch portion or vaginal area of a woman's undergarment, such as workout tights, leggings, swimsuits or the like. This liner is constructed with a first or top layer of a liquid permeable sheet material, an absorbent layer underlying said top layer, and a liquid impermeable back sheet provided at the bottom of said liner whereby the peripheral edges thereof are secured by heat applied method. To ensure that camel toe appearance will not occur, a plastic sheet preferably Polyethylene terephthalate (PET) material is inserted in between the absorbent layer and the liquid impermeable back sheet.

The primary object of this invention therefore is to provide a liner that is disposable and hygienic to prevent a "camel toe" appearance on ladies apparel attached to the crotch portion of ladies undergarment or directly onto clothing, whereby said liner having a generally flexible plastic sheet material inserted therein prevents the clothing from clinging to and outlining the

genitals of the user.

Another object of this invention is to provide a liner to prevent a camel toe appearance on ladies apparel wherein the plastic material is disposed in between the absorbent sheet and the back sheet thereof.

5 Still an object of this invention is to provide a liner to prevent a camel toe appearance on ladies apparel wherein the plastic sheet is made of polyethylene terephthalate (PET) material.

Yet, another object of this invention is to provide a liner to prevent a camel toe appearance on ladies apparel wherein said liner waterproof and  
10 made of thin hygienic and safe hypoallergenic sheets having a predetermined form to fit the crotch portion of swimwear and a plastic sheet preferably PET material following the contour of said hygienic paper sheets being inserted thereto.

These and other objects and advantages will come to view and will be  
15 understood upon a reading of the detailed description when taken in conjunction with the accompanying drawing.

#### **BRIEF DESCRIPTION OF THE SEVERAL VIEW OF THE DRAWING**

Figure 1 is an exploded view of the preferred embodiment for an  
20 undergarment liner to prevent the "camel toe" appearance on ladies apparel according to the present invention;

Figure 2 is an isolated sectional view of the assembled undergarment liner in accordance with what is shown in Figure 1;

Figure 3 is an exploded view of another embodiment for an

undergarment liner to prevent camel toe appearance on ladies apparel according to the present invention;

Figure 4 is an isolated sectional view of the assembled undergarment liner in accordance with what is shown in Figure 3;

5 Figure 5 is an exploded view of the third embodiment for an undergarment liner to prevent camel toe appearance on ladies apparel according to the present invention; and

Figure 6 is an isolated sectional view of the assembled undergarment liner in accordance with what is shown in Figure 5.

## 10 DETAILED DESCRIPTION

Referring now to the FIGS., an undergarment liner, pad, or panty liner to prevent the formation of a "camel toe" appearance along the private or genital part of the user in accordance with the present invention is illustrated at 10. The undergarment liner 10 includes a multilayered, absorbent body or core 12 positioned between a liquid permeable cover sheet 14 and a liquid impermeable backing sheet 16. The absorbent core 12 is provided with an elongated first end portion 18 having a relatively rounded first end of generally uniform width and a generally enlarged rounded second end portion 20 having a relatively wide second end extending therefrom. Alternatively, it may be said  
15 that the absorbent core 12 has a pair of opposed side edges 13, 13a, extending lengthwise thereof from the rounded first end 18 to the rounded second end portion 20, and a pair of opposed intermediate points respectively located on the side edges. The side edges are generally parallel to each other from the first end 18 to the intermediate points and are generally flared  
20

outwardly from one another from the intermediate points to the second end 20. In use, the liner 10 is preferably placed at the crotch portion of an undergarment (not shown) with the relatively-wider second end portion 20 disposed toward the front of the undergarment.

5           The absorbent core 12 is provided with a low density/high loft material like cotton wadding or wood pulp fibre capable of quickly absorbing and distributing liquids.

          The backing sheet 16, preferably a relatively thin film of polyethylene or polyvinyl or any other suitable plastic, provides a moisture barrier for  
10 preventing liquids from passing through the panty liner 10. The backing sheet 16 is secured to the absorbent core 12 over its entire common surface. As the backing sheet 16 has somewhat larger dimensions than those of the absorbent core 12, the backing sheet extends outwardly from all sides of the absorbent core 12 when secured thereto.

15           The dimensions of the liquid permeable cover sheet 14 coincide with those of the backing sheet 16 so that it too will extend outwardly from all sides of the absorbent core 12 as shown in the FIG 1. Preferably, the periphery of the cover sheet 14, comprising a relatively thin nonwoven, polymeric material such as rayon or any other suitable plastic, is attached by a suitable adhesive  
20 or heat sealing to the overlapping portions of backing sheet 16. Thus, the cover sheet 14 itself is not bonded directly to the absorbent core 12 but rather "floats" over such.

The attached portions of the cover sheet 14 and the backing sheet 16 are dimensioned so as to possibly provide the liner 10 with side flaps or "wings" (not shown) capable of being partially folded around the narrowed crotch portion of an undergarment. The outside of the backing sheet 16 is provided with spaced-apart adhesive layers (not shown) which serves as a means for attaching the panty liner 10 to an undergarment.

To prevent a "camel toe" appearance on apparel along the private or genital portion of the woman, the liner 10 is provided with a plastic insert 22 inserted in between the absorbent core 12 and the liquid impermeable backing sheet 16. Said plastic insert 22 is in the form of a sheet material of predetermined thickness and is preferably made of, but not limited to polyethylene terephthalate material or commonly known as PET material. Any plastic material or polymer, however, can also be used such as polyvinyl chloride (PVC), Acrylonitrile Butadiene Styrene (ABS), fluoroplastics, Polycarbonates, Polyethylene and the like. The size and dimension of the plastic insert 22 is similar to the size of the absorbent core 12. Said plastic insert 22 is adhesively bonded on one face to said backing sheet 16 with the opposing face being likewise adhesively bonded to the absorbent core 12. Due to the firmness of the plastic insert 22, the liner 10 will not creep up in the middle or form a fold-line thereof, thus preventing the formation of a camel toe appearance on the user's apparel. As shown in Figure 1 of the drawing, the plastic insert 14 extends rearwardly, along the substantial length of said liner 20, that is, from the front portion up to the back portion thereof. This

embodiment is suitable for use when the user is in an activity that requires her body to bend such as in dancing, exercising or gymnastics. This will ensure that camel toe appearance will not be formed in the entire area being covered by the liner 10.

5           In the second embodiment shown in Figure 3, the liner 10a comprises of a cover sheet 14a, an absorbent core 12a, a backing sheet 16a, and a plastic insert 22a similar to the first embodiment shown in Figure 1. The difference, however, is that the length of the plastic insert 22a is substantially half of that of the plastic insert 22 of the first embodiment, which substantially  
10 covers half of the length of said liner 10a. The plastic insert 22a of the second embodiment covers only the front portion of the liner 10a and is secured in between the absorbent core 12a and backing sheet 16a by any adhesive means preferably on top of said backing sheet 16a, and is designed to cover on the front portion thereof and to prevent the appearance of the camel toe  
15 the private or genital portion of the user. This embodiment is meant for users that are not athletic and does not require activities similar to the users of the first embodiment.

The third embodiment of this invention as shown in Figure 5 of the drawing, depicts a liner 10b for undergarments which is preferable used for  
20 swimwear and the like. Said liner 10b comprises a backing sheet 24 made of thin soft paper material and a hygienic cover sheet 26 preferably made of thin soft polypropylene faced hypoallergenic paper tape 28. The hygienic cover sheet 26 is provided with adhesive means at the inner side to be secured on

said backing sheet 24. The backing sheet 24 and the hygienic cover sheet 26 are of the same size and having a shape of hour glass, adapted to cover the crotch portion of the swimwear. To prevent a "camel toe" appearance on apparel along the private or genital portion of the user, the undergarment liner 5 10b is provided with a plastic insert 22b inserted in between the hygienic cover sheet 26 and the backing sheet 24. Said plastic insert 22b is in the form of a sheet material of predetermined thickness and is preferably made of, but not limited to polyethylene terephthalate material or commonly known as PET material. Any plastic material or polymer, however, can also be used such as 10 polyvinyl chloride (PVC), Acrylonitrile Butadiene Styrene (ABS), fluoroplastics, Polycarbonates, Polyethylene and the like. The plastic insert 22b is similarly shaped with said hygienic cover sheet 26 and backing sheet 24 but has a bit smaller size and dimension with that of said backing sheet 24 and the hygienic cover sheet 26. This would allow the hygienic cover sheet 26 to 15 adhesively secure the plastic insert 22b to said backing sheet 24. Due to the firmness of the plastic insert 22b, the liner 10b will not creep up in the middle or form a fold-line thereof, thus preventing the formation of a camel toe appearance on the user's apparel.

As a variation, a lubricant may be incorporated into the outer edges of 20 the lining (at the top, where the liner 10, 10a, 10b contacts the body of the user) for the purpose of eliminating or reducing friction points that lead to chafing in the area.

While the inventive liner has been described with a high degree of particularity, it will be appreciated by those skilled in the art that numerous modifications and substitutions may be made thereto. Therefore, it is to be understood that the present invention is not limited to the embodiments  
5 described above, but encompasses any and all embodiments within the scope of the present invention.

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**CLAIM:**

1. A liner to prevent a camel toe appearance on ladies apparel comprising a multilayered, a liquid permeable cover sheet, a liquid impermeable backing sheet having a periphery heat sealed with the periphery of said liquid permeable cover sheet, and an absorbent core secured in between said liquid permeable cover sheet and liquid impermeable backing sheet, characterized in that a plastic insert being secured in between said absorbent core and liquid impermeable backing sheet.  
5
2. A liner to prevent a camel toe appearance on ladies apparel according to claim 1 wherein said plastic insert extending along the substantial length of said liner.  
10
3. A liner to prevent a camel toe appearance on ladies apparel according to claim 1 wherein said plastic insert extending from one end to substantially cover half of the length of said liner.
4. A liner to prevent a camel toe appearance on ladies apparel according to claim 1, 2 or 3, wherein said plastic insert is preferably made of polyethylene terephthalate material.  
15
5. A liner to prevent a camel toe appearance on ladies apparel comprising, a soft paper backing sheet, and a hygienic cover sheet secured with said backing sheet, characterized in that a plastic insert being adhesively secured in between said cover sheet and backing sheet.  
20

6. A liner to prevent a camel toe appearance on ladies apparel according to claim 5 wherein said plastic insert extending along the substantial length of said liner.
7. A liner to prevent a camel toe appearance on ladies apparel according to claim 5 wherein said plastic insert is preferably made of polyethylene teraphthelate material.
8. A liner to prevent a camel toe appearance on ladies apparel according to claim 5 wherein said hygienic cover sheet is made of thin soft polypropylene faced hypoallergenic paper tape.
9. A liner to prevent a camel toe appearance on ladies apparel according to claims 1 or 5, wherein a lubricant is provided into the outer edges thereof said liner contacts the body of the user for the purpose of eliminating or reducing friction points that lead to chafing in the area.

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FIG. 3

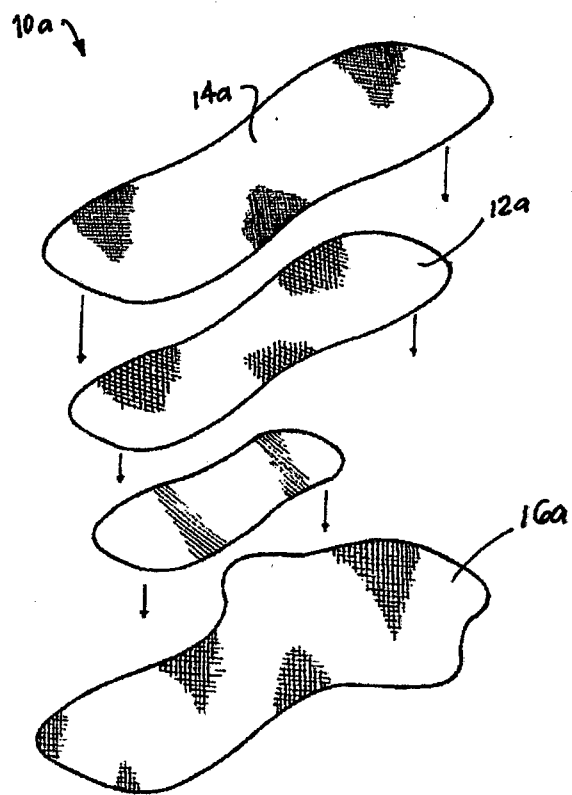


FIG. 4

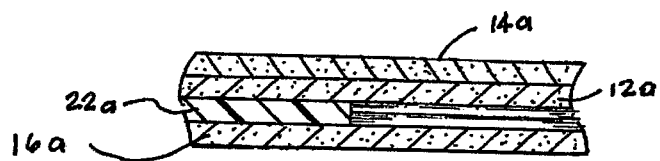


FIG. 5

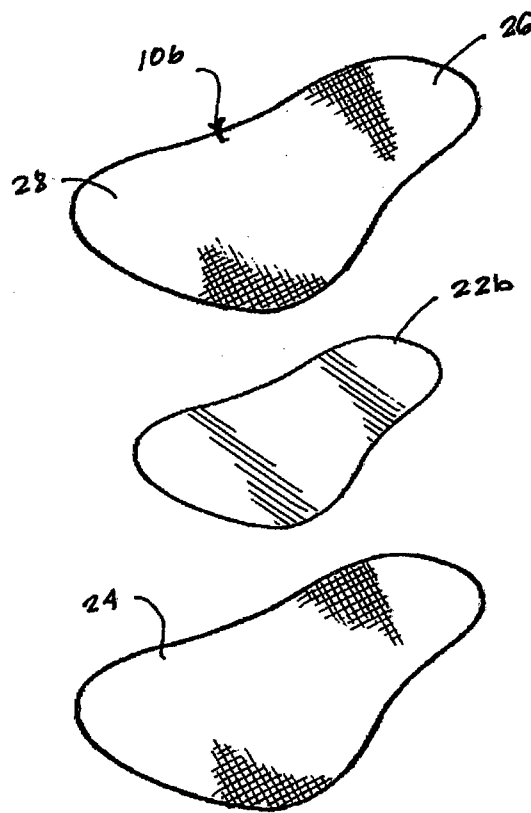


FIG. 6

