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(71) Applicant: **Top Form Brassiere Mfg. Co., Limited**
Kowloon, Hong Kong (CN)

(72) Inventor: **Wan, Ho Yau**
Kowloon (HK)

(74) Representative: **Perkins, Sarah et al**
Stevens Hewlett & Perkins
1 St. Augustines Place
Bristol BS1 4UD (GB)

(54) **Air permeable pad for brassiere**

(57) A pad body (20) comprises grooves and apertures on at least one side. At least some of the apertures are located at intersections of grooves. The grooves are in a pattern of a plurality of rows and columns. A brassiere pad (10) comprises the pad body (20). A brassiere pad (10) comprises the pad body (20) placed between an

upper layer (30) and a lower layer (40). The upper layer (30) and the lower layer (40) are made of a thin permeable material or comprise a plurality of apertures (70). The upper layer and/or lower layer comprise(s) grooves on at least one side of the layer.

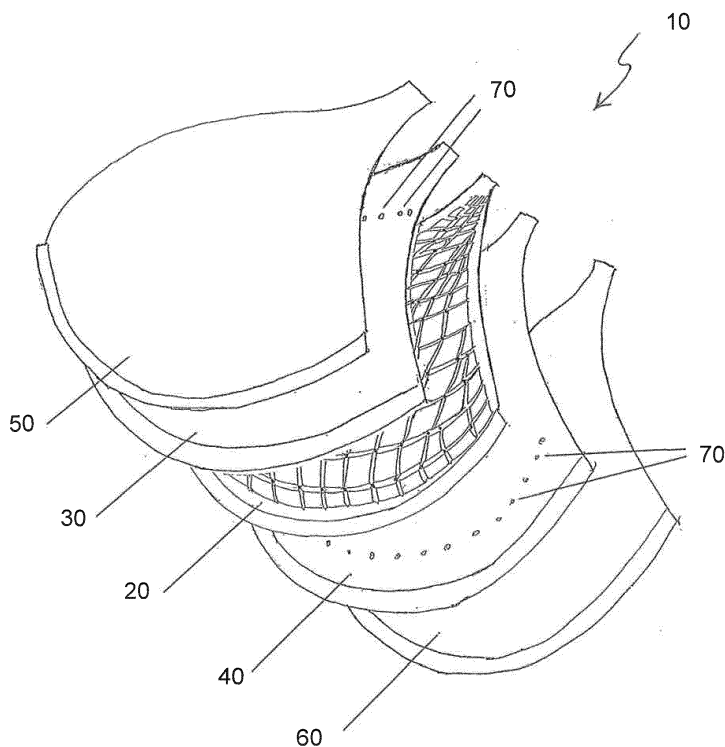


FIG. 2

Description**BACKGROUND OF THE INVENTION**

[0001] The present invention relates generally to a pad for use in garments. In particular, the present invention relates to a brassiere pad for women's brassieres or a pad for men's underpants having a pad body with apertures and grooves to provide ventilation.

OBJECTS OF THE INVENTION

[0002] It is an object of the present invention to provide a pad for use in garments, such as brassieres for women, and underpants for men. The pad has a plurality of apertures and grooves in order to provide ventilation to wearers.

DISCLOSURE OF THE INVENTION

[0003] The present invention relates generally to a pad for use in garments, such as brassieres for women and underpants for men. The pad has a plurality of apertures and grooves in order to provide ventilation and heat dissipation.

[0004] The design of the pad in accordance with the present invention has air passages in the form of grooves and apertures so that the wearer's body heat can be dissipated from the inner layer to the outer layer to effectively attain ventilation and heat dissipation effect and provide a more comfortable underwear or brassiere for the wearer.

[0005] There is disclosed herein a brassiere pad comprising a pad body, an upper layer and a lower layer; wherein the pad body comprises grooves and apertures at intersections of the grooves and is placed between the upper layer and the lower layer.

[0006] Preferably, the grooves are in a pattern of a plurality of rows and columns.

[0007] Preferably, the brassiere pad further comprises a piece of fabric on at least one of the upper layer and the lower layer.

[0008] Optionally, the upper layer comprises grooves on at least one side of the upper layer.

[0009] Optionally, the lower layer comprises grooves on at least one side of the lower layer.

[0010] It is preferred that the upper layer and the lower layer are made of a thin permeable material.

[0011] Alternatively, the upper layer and the lower layer may comprise a plurality of apertures.

[0012] There is also disclosed herein a brassiere cup comprising the brassiere pad described above.

[0013] There is disclosed herein a method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;

(c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;

(d) placing the pad body between the upper and lower layers;

(e) covering the upper and/or lower layers with fabric;

(f) molding the fabric, the upper and lower layers, and the pad body together to form the brassiere pad.

[0014] There is further disclosed herein a method of manufacturing a brassiere pad comprising the steps of:

(a) providing a pad body with a plurality of rows and columns of grooves;

(b) punching apertures at the intersection of the grooves of the pad body;

(c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;

(d) placing the pad body between the upper and lower layers;

(e) covering the upper and/or lower layers with fabric;

(f) molding the fabric, the upper and lower layers, and the pad body together to form the brassiere pad.

[0015] Also, there is disclosed herein a method of manufacturing a brassiere pad comprising the steps of:

(a) providing a pad body with a plurality of grooves;

(b) punching apertures at the intersection of the grooves of the pad body;

(c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;

(d) placing the pad body between the upper and lower layers;

(e) molding the upper and lower layers, and the pad body together to form the brassiere pad.

[0016] There is further disclosed a method of manufacturing a brassiere pad comprising the steps of:

(a) providing a pad body with a plurality of rows and columns of grooves;

(b) punching apertures at the intersection of the grooves of the pad body;

(c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;

(d) placing the pad body between the upper and lower layers;

(e) molding the upper and lower layers, and the pad body together to form the brassiere pad.

[0017] There is disclosed a method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of grooves;

- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) covering the pad body with fabric; and
- (d) molding the fabric and the pad body together to form the brassiere pad.

[0018] There is further disclosed a method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of rows and columns of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) covering the pad body with fabric; and
- (d) molding the fabric and the pad body together to form the brassiere pad.

[0019] It will be appreciated that the pad body described above can be used in other garments, which are also within the scope of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] Preferred forms of the present invention will now be described by way of example with reference to the accompanying drawings, wherein:

- FIG. 1 is a perspective illustration of the pad body having apertures and grooves of the present invention; and
- FIG. 2 is an exploded perspective view of the brassiere pad of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0021] As shown in Figure. 1, a preferred embodiment of pad body 20 of the present invention comprises a plurality of rows and columns of grooves 120; and apertures 110 at intersections of grooves 120 on one side of pad body 20. Optionally, grooves 120 and apertures 110 are located on both sides of pad body 20. It will be appreciated that apertures 110 may not need to be restricted to be located at intersections of grooves 120.

[0022] Pad body 20 can be used alone and/or adhered on fabric on one or both sides of pad body 20 to form a brassiere pad to be used in making a brassiere cup.

[0023] Figure 2 illustrates an embodiment of a brassiere pad 10. Brassiere pad 10 comprises pad body 20 placed between upper layer 30 and lower layer 40.

[0024] Optionally, brassiere pad 10 may comprise pad body 20 and either upper layer 30 or lower layer 40 only.

[0025] Additionally and optionally, a piece of fabric 50, 60 respectively may be further provided to be laid on upper layer 30 and/or the lower layer 40.

[0026] Upper layer 30 and lower layer 40 are made of a thin permeable material, or alternatively comprise a plurality of apertures 70, to allow air ventilation throughout the brassiere pad 10. In an embodiment, the size of

apertures 70 can be so tiny that the apertures 70 are almost invisible in order to maintain the feminine and beauty of the intimate apparel

[0027] A structure of grooves 120 and apertures 110 of pad body 20 forms a passage for air to flow through in different directions and to allow for air ventilation, such that heat can enter into lower layer 40, through grooves 120 and apertures 110 of pad body 20, and exit from upper layer 30.

[0028] Optionally, upper layer 30 and/or lower layer 40 may further comprise grooves on at least one side of the layer (not shown).

[0029] It is a further option that upper layer 30 and/or lower layer 40 may comprise apertures at intersections of grooves on at least one side of the layer (not shown).

[0030] Brassiere pad 10 may be applied to a brassiere cup.

[0031] Accordingly, it is intended that the present invention not be limited to the described embodiments, but that it has the full scope suggested by the above-language, as well as equivalents thereof.

Claims

1. A brassiere pad comprising a pad body, an upper layer and a lower layer; wherein the pad body comprises grooves and apertures at intersections of the grooves and is placed between the upper layer and the lower layer.
2. The brassiere pad of claim 1, wherein the grooves are in a pattern of a plurality of rows and columns.
3. The brassiere pad of claims 1 or 2 further comprising a piece of fabric on at least one of the upper layer and the lower layer.
4. The brassiere pad of claims 1 or 2, wherein the upper layer comprises grooves on at least one side of the upper layer.
5. The brassiere pad of claims 1 or 2, wherein the lower layer comprises grooves on at least one side of the lower layer.
6. The brassiere pad of claims 1 or 2, wherein the upper layer and the lower layer are made of a thin permeable material.
7. The brassiere pad of claims 1 or 2, wherein the upper layer and the lower layer comprise a plurality of apertures.
8. A brassiere cup comprising the brassiere pad of claims 1 or 2.
9. A method of manufacturing a brassiere pad compris-

ing the steps of:

- (a) providing a pad body with a plurality of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;
- (d) placing the pad body between the upper and lower layers;
- (e) covering the upper and/or lower layers with fabric;
- (f) molding the fabric, the upper and lower layers, and the pad body together to form the brassiere pad.

10. A method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of rows and columns of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;
- (d) placing the pad body between the upper and lower layers;
- (e) covering the upper and/or lower layers with fabric;
- (f) molding the fabric, the upper and lower layers, and the pad body together to form the brassiere pad.

11. A method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) providing upper and lower layers made of permeable material or with a plurality of apertures punched on the upper and lower layers;
- (d) placing the pad body between the upper and lower layers;
- (e) molding the upper and lower layers, and the pad body together to form the brassiere pad.

12. A method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of rows and columns of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) providing upper and lower layers made of

- permeable material or with a plurality of apertures punched on the upper and lower layers;
- (d) placing the pad body between the upper and lower layers;
- (e) molding the upper and lower layers, and the pad body together to form the brassiere pad.

13. A method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) covering the pad body with fabric; and
- (d) molding the fabric and the pad body together to form the brassiere pad.

14. A method of manufacturing a brassiere pad comprising the steps of:

- (a) providing a pad body with a plurality of rows and columns of grooves;
- (b) punching apertures at the intersection of the grooves of the pad body;
- (c) covering the pad body with fabric; and
- (d) molding the fabric and the pad body together to form the brassiere pad.

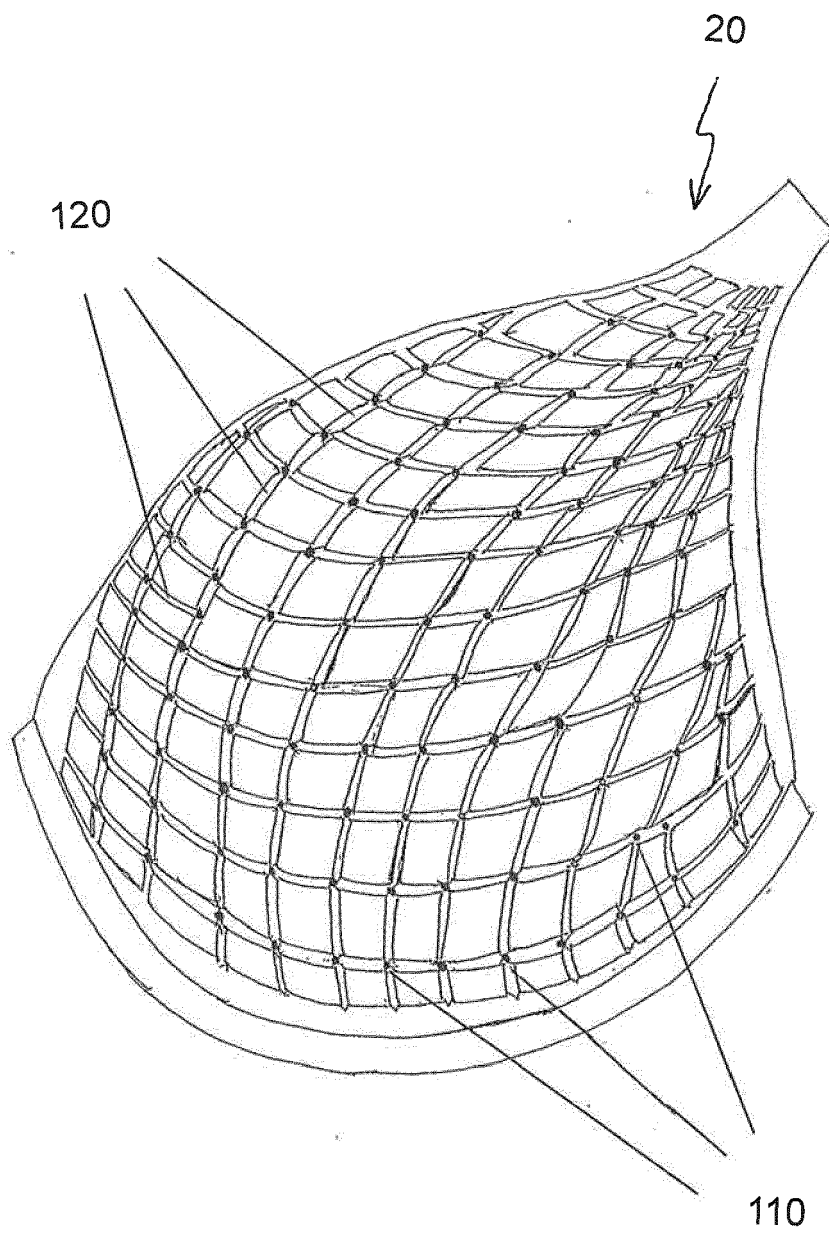


FIG. 1

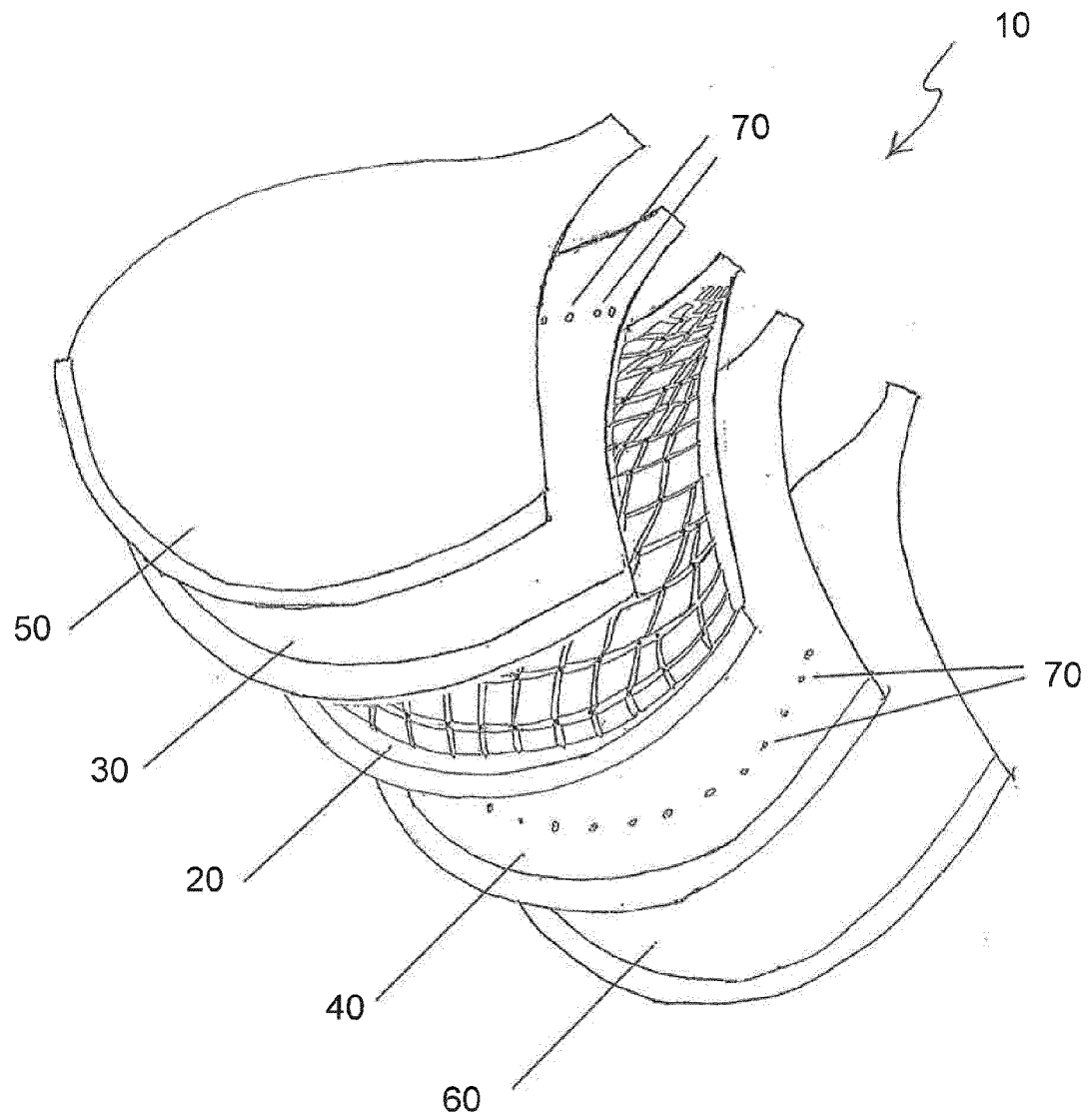


FIG. 2