

DESCRIPTION

Title of Invention

CLOTHING FOR UPPER HALF OF BODY

5 **Technical Field**

[0001] The present invention relates to an upper body garment.

Background Art

[0002] Conventionally, in upper body garments such as half-tops, cups
can be detachably disposed for the purpose of shaping the bust and
10 preventing the nipples of a wearer from being seen through. Shapes of
the cups and housing pockets in which the cups are disposed vary. For
example, there is a type in which right and left cups are disposed in
housing pockets respectively provided on both sides of a bust portion, or
a type in which single combined body of right and left cups is disposed
15 in a housing pocket opening upward like in the case of a brassiere
described in Patent Literature 1.

Citation List

Patent Literature

[0003] [Patent Literature 1] Japanese Unexamined Patent Publication
20 No. S63-85606

Summary of Invention

Technical Problem

[0004] However, for example, in the brassiere disclosed in Patent
Literature 1, although easiness of attachment and detachment of the cup
25 body into and from the housing pocket can be secured, it is difficult to
stabilize a position of the cup body at the time of wearing, and the cup

body may deviate from the bust during various motions. Therefore, in order to achieve a neat bust shape, it is necessary to adjust the position of the cup body after wearing, and there is a problem that inconvenience occurs during wearing.

5 [0005] The present invention has been made to solve the above-described problems, and an object thereof is to provide an upper body garment with a detachable cup capable of stable, close contact with respect to a bust of a wearer.

Solution to Problem

10 [0006] An upper body garment according to an aspect of the present invention includes a main body portion having a bust portion which covers a chest of a wearer, an integrally molded cup body in which a pair of right and left cups are connected by a connecting portion on a center frontside, and a lining portion joined to a back side of the main
15 body portion at the bust portion and configured to form a housing pocket which detachably houses the cup body between the main body portion and the lining portion, wherein an opening portion extending in a vertical direction is provided in a center front portion of the lining portion.

20 [0007] In this upper body garment, the integrally molded cup body in which the pair of right and left cups are connected by the connecting portion on the center front side is used. Further, the opening portion extending in the vertical direction is provided in the center front portion of the lining portion forming the housing pocket in which the cup body
25 is housed. This opening portion facilitates attachment and detachment of the cup body into and from the housing pocket. Further, unlike a

case in which a housing pocket which opens upward is adopted, it is possible to prevent the cup body housed in the housing pocket from being displaced or rotated. Therefore, it is not necessary to adjust a position of the cup body after wearing, and the detachable cup body can stably and closely contact a bust of a wearer.

[0008] Further, a vertical length of the opening portion may be larger than a vertical width of the connecting portion of the cup body and may also be smaller than a vertical width of the cup. Therefore, easiness of attachment and detachment of the cup body into and from the housing pocket and the stability of the cup body in the housing pocket can be suitably compatible.

[0009] Further, a joining line between the main body portion and the lining portion may have a protruding portion which protrudes toward both ends of the opening portion in a longitudinal direction. The opening portion is a portion to which a force is liable to be applied at the time of attaching and detaching the cup body, or the like. On the other hand, it is possible to enhance durability of the lining portion in the vicinity of the opening portion by bringing the joining line between the main body portion and the lining portion close to both ends of the opening portion in the longitudinal direction.

[0010] Further, the main body portion and the lining portion may be joined to each other by adhesion portions interspersed along the joining line, and at least one of the adhesion portions located at the protruding portion among the adhesion portions may have a shape extending in a direction intersecting the longitudinal direction of the opening portion. Therefore, a sufficient joining strength between the main body portion

and the lining portion in the vicinity of the opening portion is secured, and durability in the vicinity of the opening portion can be further enhanced.

Advantageous Effects of Invention

5 [0011] According to the upper body garment, a detachable cup body can stably and closely contact a bust of a wearer.

Brief Description of Drawings

[0012] FIG. 1 is a front view showing an embodiment of an upper body garment.

10 FIG. 2 is a rear view of the upper body garment shown in FIG. 1.

FIG. 3 is a front view showing an example of a cup body applied to the upper body garment.

FIG. 4 is a front view showing the upper body garment shown in FIG. 1 which is turned inside out.

15 FIG. 5 is an enlarged view of a main portion in FIG. 4.

FIGS. 6(a) and 6(b) are diagrams showing a modified example of an opening portion formed in a lining portion.

FIGS. 7(a) and 7(b) are diagrams showing another modified example of the opening portion formed in the lining portion.

20 FIG. 8 is a diagram showing yet another modified example of the opening portion formed in the lining portion.

Description of Embodiments

[0013] Hereinafter, preferred embodiments of an upper body garment according to one aspect of the present invention will be described in
25 detail with reference to the drawings. In the following description, for the sake of convenience, terms such as “upper,” “lower” and so on are

used assuming a wearing state of the upper body garment with a cup portion.

[0014] FIG. 1 is a front view showing an embodiment of the upper body garment. Also, FIG. 2 is a rear view thereof. The upper body garment 1 shown in FIG. 1 and FIG. 2 is formed as, for example, a half top. A length of the half top is shorter than that of a tank top, and an abdomen of a wearer is exposed. The upper body garment 1 includes a main body portion 2 configured to cover a torso around a bust of the wearer, a pair of right and left shoulder strap portions 3, and a cup body 4 which covers the bust of the wearer.

[0015] The main body portion 2 is formed of, for example, a fabric which has elasticity and does not require a fabric end treatment. Such fabrics include, for example, Bare Smooth (interlock with polyurethane) or the like. A front side of the main body portion 2 is a bust portion 5 which covers the bust of the wearer (refer to FIG. 1). In addition, a back side of the main body portion 2 is a back upper portion 6 which covers an upper side of a back part of the wearer (refer to FIG. 2). The bust portion 5 and the back upper portion 6 are continuous at both sides of the main body portion 2 and form a tubular shape to surround a chest of the wearer.

[0016] An upper edge portion 5a of the bust portion 5 and an upper edge portion 6a of the back upper portion 6 correspond to a neck hole of the upper body garment 1, and all the edge portions form a gentle concave shape downward. The lower edge portion 5b of the bust portion 5 and the lower edge portion 6b of the back upper portion 6 correspond to a hem of the upper body garment 1 and are formed to

linearly extend in a lateral direction. Right and left side upper portions 5c and 5c of the bust portion 5 and right and left side upper portions 6c and 6c of the back upper portion 6 correspond to a sleeve hole of the upper body garment 1, and all the side upper portions form a gentle concave shape toward a center part. Right and left side lower portions 5d and 5d of the bust portion 5 and right and left side lower portions 6d and 6d of the back upper portion 6 correspond to side hems of the upper body garment 1 and form a linear shape which hangs down so that a width of the main body portion 2 decreases downward.

[0017] The shoulder strap portion 3 is provided in a band shape to connect the upper edge portion 5a of the bust portion 5 and the upper edge portion 6a of the back upper portion 6. In the embodiment, the shoulder strap portion 3 is molded integrally with the main body portion 2, for example, using the same fabric which has elasticity and does not require a fabric end treatment as that of the main body portion 2. The shoulder strap portion 3 is put on both shoulders of the wearer from the front to the rear when worn and supports wearing of the upper body garment 1.

[0018] The cup body 4 is disposed in the bust portion 5 for the purpose of shaping the bust and preventing the nipples of the wearer from being seen through and so on. As shown in FIG. 3, the cup body 4 has a pair of right and left cups 11 and 11, and a connecting portion 12 connecting the cups 11 and 11 at a center front side. In the embodiment, the cups 11 and 11 and the connecting portion 12 are an integrally molded product due to molding using an elastic material, for example, such as urethane.

[0019] The cup 11 has a bowl shape corresponding to a bust shape of the wearer as a whole and has a shape close to a circle in a front view. The connecting portion 12 has a vertically constricted shape with respect to the right and left cups 11 and 11. That is, an upper edge portion 12a of the connecting portion 12 is curved downward, and a lower edge portion 12b of the connecting portion 12 is curved upward. A degree of curvature of the lower edge portion 12b is larger than a degree of curvature of the upper edge portion 12a so that the cup body 4 can easily follow a boundary line of the bust of the wearer. The degree of curvature of the lower edge portion 12b may be smaller than the degree of curvature of the upper edge portion 12a.

[0020] Subsequently, a configuration of the above-described bust portion 5 will be described in more detail.

[0021] FIG. 4 is a front view showing the upper body garment shown in FIG. 1 which is turned inside out. As shown in the drawing, in the upper body garment 1, a lining portion 13 is joined to a back side (skin side) of the bust portion 5. Due to the joining of the lining portion 13, a housing pocket S for housing the cup body 4 is formed on a back side of the bust portion 5. In forming of the housing pocket S, a thermoforming process is performed after the joining between the bust portion 5 and the lining portion 13. Therefore, it is possible to achieve a 3-dimensional effect for the fabric at the bust portion 5 and to configure the housing pocket S corresponding to a bulge of the cup body 4. It is preferable to select whether or not the thermoforming process is performed on each of the bust portion 5 and the lining portion 13 according to material properties such as the elasticity, elongation

recovery and so on of the bust portion 5 and the lining portion 13. As a result, a wearing pressure of the bust portion 5 may be appropriately adjusted, and a sense of stability of the bust is enhanced.

[0022] The lining portion 13 is formed of, for example, the same fabric which has elasticity and does not require a fabric end treatment as that of the main body portion 2. The upper edge portion 13a of the lining portion 13 has a gentle concave shape downward to follow the curved shape of the upper edge portion 5a of the bust portion 5. Projecting portions 14 that project upward with the same width as an end of the shoulder strap portion 3 on the main body portion 2 side are respectively provided on both side portions of the upper edge portion 13a of the lining portion 13. The projecting portions 14 overlap the ends of the shoulder strap portions 3 and suppress the extension of the shoulder strap portions 3 from being excessive. A lower edge portion 13b of the lining portion 13 has a curved shape corresponding to a shape of a lower edge portion of the cup body 4.

[0023] A center portion of the lower edge portion 13b of the lining portion 13 is curved upward according to the curved shape of the lower edge portion 12b of the connecting portion 12. The degree of curvature of the center portion of the lower edge portion 13b of this lining portion 13 is smaller than the degree of curvature of the lower edge portion 12b of the connecting portion 12 and is substantially the same as, for example, the degree of curvature of the upper edge portion 12a of the connecting portion 12. The lower edge portion 13b of the lining portion 13 may have a linear shape. Right and left side upper portions 13c and 13c of the lining portion 13 form a curved shape along

the curved shape of the right and left side upper portions 5c and 5c of the bust portion 5. Right and left side lower portions 13d and 13d of the lining portion 13 are substantially linear along upper sides of the side lower portions 5d and 5d of the bust portion 5.

5 [0024] An opening portion 15 extending in the vertical direction is formed in a center front portion of the lining portion 13. The opening portion 15 is a portion for attaching and detaching the cup body 4 into and from the housing pocket S. The opening portion 15 is formed in a slit shape by, for example, forming a linear cut in a center portion of the
10 lining portion 13. When the fabric having elasticity is used for the lining portion 13, a substantially elliptical opening portion 15 having sharp upper and lower ends is formed by forming the linear cut. A vertical length X of the opening portion 15 is larger than a vertical width (a minimum width) Y of the connecting portion 12 of the cup body 4
15 and smaller than a vertical width Z of the cup 11 (refer to FIGS. 3 and 4). The vertical width Y of the connecting portion 12 and the vertical width Z of the cup 11 may be based on, for example, a width in a plan view when the cup body 4 is placed on a flat surface.

[0025] When the cup body 4 is housed in the housing pocket S, for
20 example, the cup body 4 may be inserted into the housing pocket S by folding the cup body 4 to have a width shorter than the length X of the opening portion 15 and sequentially passing both ends of the cup body 4 in a folded state through the opening portion 15. Further, when the cup body 4 is detached from the housing pocket S, for example, the
25 connecting portion 12 may be grasped through the opening portion 15 and the cup body 4 may be withdrawn from the opening portion 15.

[0026] Further, as shown in FIG. 4, the lining portion 13 is joined to a back side of the bust portion 5 at a joining line L. In the embodiment, the joining line L is formed by a first joining line L1 along each edge portion of the lining portion 13, a second joining line L2 extending
5 above the opening portion 15, and a third joining line L3 extending below the opening portion 15.

[0027] The second joining line L2 as a whole gently curves downward and extends to connect substantially middle portions of the right and left side upper portions 13c and 13c of the lining portion 13. On the other
10 hand, the third joining line L3 as a whole curves upward with a degree of curvature greater than that of the second joining line L2 and extends to connect right and left lowest points of the lower edge portion 13b of the lining portion 13. Therefore, a center portion of the second joining line L2 is a protruding portion L2a which protrudes toward an upper end
15 15a of the opening portion 15, and a center portion of the third joining line L3 is a protruding portion L3a which protrudes toward a lower end 15b of the opening portion 15.

[0028] In the embodiment, the upper end 15a of the opening portion 15 is in contact with a tip end of the protruding portion L2a, and the lower
20 end 15b of the opening portion 15 is in contact with a tip end of the protruding portion L3a. The present invention is not limited to such a configuration, and the upper end 15a of the opening portion 15 may overlap a line of the protruding portion L2a or may be slightly spaced apart from the protruding portion L2a. Similarly, the lower end 15b of
25 the opening portion 15 may overlap a line of the protruding portion L3a, or may be slightly spaced apart from the protruding portion L3a.

[0029] The main body portion 2 and the lining portion 13 are joined to each other by adhesion portions P interspersed along the joining line L. For example, a dry curing type, moisture curing type, or reaction curing type adhesive may be used as an adhesive forming the adhesion portions P.

[0030] As shown in FIG. 5, for example, the adhesion portions P have a circular shape in a front view and are interspersed in a zigzag shape or a lattice shape within a region of the joining line L. Further, at least one of the adhesion portions P located at the protruding portions L2a and L3a among the adhesion portions P has a shape which extends in a direction intersecting a longitudinal direction of the opening portion 15. In the embodiment, an adhesion portion Pa closest to the upper end 15a of the opening portion 15 in the protruding portion L2a and an adhesion portion Pb closest to the lower end 15b of the opening portion 15 in the protruding portion L3a have a substantially elliptical shape of which a major axis is a direction orthogonal to the longitudinal direction of the opening portion 15.

[0031] As described above, in the upper body garment 1, the integrally molded cup body 4 in which the pair of right and left cups 11 and 11 are connected by the connecting portion 12 on the center front side is used. Also, the opening portion 15 which extends in the vertical direction is provided in the center front portion of the lining portion 13 forming the housing pocket S in which the cup body 4 is housed. The attachment and detachment of the cup body 4 into and from the housing pocket S becomes easy due to this opening portion 15.

[0032] Further, unlike a case in which the housing pocket which opens

upward is adopted, it is possible to prevent the cup body 4 housed in the housing pocket S from being displaced or rotated. Therefore, it is not necessary to adjust a position of the cup body 4 after wearing, and the detachable cup body 4 can stably and closely contact the bust of the wearer. Since the opening portion 15 is provided in the center front portion, air permeability of the bust portion 5 can be improved.

[0033] Also, in the above-described embodiment, the vertical length X of the opening portion 15 is larger than the vertical width Y of the connecting portion 12 of the cup body 4 and is also smaller than the vertical width Z of the cup 11. Therefore, easiness of the attachment and detachment of the cup body 4 into and from the housing pocket S and stability of the cup body 4 in the housing pocket S can be appropriately compatible with each other.

[0034] Also, in the above-described embodiment, the center portion of the second joining line L2 is the protruding portion L2a which protrudes toward the upper end 15a of the opening portion 15, and the center portion of the third joining line L3 is the protruding portion L3a which protrudes toward the lower end 15b of the opening portion 15. The opening portion 15 is a portion to which a force is liable to be applied at the time of attaching and detaching the cup body 4, or the like. On the other hand, it is possible to enhance durability of the lining portion 13 in the vicinity of the opening portion 15 by bringing the joining line L between the main body portion 2 and the lining portion 13 close to the upper end 15a and the lower end 15b of the opening portion 15.

[0035] Also, in the above-described embodiment, the main body portion 2 and the lining portion 13 are joined to each other by the

adhesion portions P interspersed along the joining line L. Additionally, at least one of the adhesion portions P located at the protruding portions L2a and L3a among the adhesion portions P extends in a direction intersecting the longitudinal direction of the opening portion 15. Accordingly, a sufficient joining strength between the main body portion 2 and the lining portion 13 in the vicinity of the opening portion 15 is secured, and durability in the vicinity of the opening portion 15 can be further enhanced.

[0036] The present invention is not limited to the above-described embodiment. For example, in the above-described embodiment, the main body portion 2 and the lining portion 13 are joined by the adhesion portions P which are cured products of the adhesive, but the method of joining the main body portion 2 and the lining portion 13 is not limited thereto, and other methods such as sewing may be used.

[0037] Also, in the above-described embodiment, the substantially elliptical opening portion 15 having the sharp upper and lower ends has been exemplified, but the shape of the opening portion 15 is not limited thereto. For example, it may be a rectangular opening portion 15A, as shown in FIG. 6(a), or may be a rhombic opening portion 15B as shown in FIG. 6(b).

[0038] Further, as shown in FIG. 7(a), for example, it may be an elliptical opening portion 15C. In this opening portion 15C, a center portion thereof has a rectangular shape, and both ends are a substantially semicircular shape. Further, as shown in FIG. 7(b), the lining portion 13 may be formed by right and left split members 13A and 13B, parts of center front side portions of the split members 13A and 13B may

overlap each other, and the opening portion 15D may be formed by joining ends of the overlapping portions to each other. In this case, since the cup body 4 housed in the housing pocket S is not able to be visually recognized from the opening portion 15D, an aesthetic appearance of a back side of the bust portion 5 can be improved.

[0039] In addition, as shown in FIG. 8, a plurality of opening portions 15 may be provided in the center front portion of the lining portion 13. In the example of FIG. 8, two opening portions 15 are provided parallel to each other at the center front portion of the lining portion 13. The opening portions 15 and 15 respectively have a substantially elliptical shape having sharp upper and lower ends and are provided symmetrically with an interval therebetween smaller than a length of the connecting portion 12 (a length in a direction in which the right and left cups 11 and 11 are connected), while the center front is located therebetween.

[0040] In this configuration, when the cup body 4 is housed in the housing pocket S, for example, the left cup 11 is inserted into the housing pocket S from the left opening portion 15, and the right cup 11 is inserted into the housing pocket S from the right opening portion 15. Additionally, the center portion of the connecting portion 12 is exposed to the back side (skin side) of the lining portion 13 between the opening portions 15 and 15. In this way, when the cup body 4 is detached from the housing pocket S, the connecting portion 12 exposed between the opening portions 15 and 15 can be easily grasped, and thus the detachment of the cup body 4 is very simple.

[0041] Also, the configuration of the shoulder strap portion is not

limited to the above-described embodiment. For example, a shoulder strap portion may be formed by joining piping which is a fabric end treatment of the neck hole and piping which is a fabric end treatment of the sleeve hole. Further, the shoulder strap portion may be formed by joining another tape member to the upper edge of the main body portion having no shoulder strap portion. The upper edge portion of the bust portion and the upper edge portion of the back upper portion to which the shoulder strap portion is connected may be formed in a straight line shape in the lateral direction (horizontal direction). The shoulder strap portion need not necessarily be provided. The lower edge portion 5b of the bust portion 5 and the lower edge portion 6b of the back upper portion 6 corresponding to the hem of the upper body garment 1 may have a curved shape or a wavy line shape. Further, the sleeve hole and the neck hole may have a wavy line shape.

[0042] In the above-described embodiment, a half top is illustrated as an upper body garment, but examples of the upper body garment to which the present invention is applied include a camisole, a tank top, and so on in addition to a half top.

Reference Signs List

[0043] 1 Upper body garment

2 Main body portion

4 Cup body

5 Bust portion

11 Cup

12 Connecting portion

13 Lining portion

	15, 15A to 15D Opening portion
	15a Upper end
	15b Lower end
	L(L1 to L3) Joining line
5	L2a, L3a Protruding portion
	P, Pa, Pb Adhesion portion
	S Housing pocket
	X Vertical length of opening portion
	Y Vertical width of connecting portion
10	Z Vertical width of cup

CLAIMS

[Claim 1]

An upper body garment comprising:

a main body portion having a bust portion which covers a chest
5 of a wearer;

an integrally molded cup body in which a pair of right and left
cups are connected by a connecting portion on a center front side; and

a lining portion joined to a back side of the main body portion at
the bust portion and configured to form a housing pocket which
10 detachably houses the cup body between the main body portion and the
lining portion,

wherein an opening portion extending in a vertical direction is
provided in a center front portion of the lining portion.

[Claim 2]

15 The upper body garment according to claim 1, wherein a vertical
length of the opening portion is larger than a vertical width of the
connecting portion of the cup body and smaller than a vertical width of
the cup.

[Claim 3]

20 The upper body garment according to claim 1 or 2, wherein a
joining line between the main body portion and the lining portion has a
protruding portion which protrudes toward both ends of the opening
portion in a longitudinal direction.

[Claim 4]

25 The upper body garment according to claim 3, wherein the main
body portion and the lining portion are joined to each other by adhesion

portions interspersed along the joining line, and

at least one of the adhesion portions located at the protruding portion among the adhesion portions has a shape extending in a direction intersecting the longitudinal direction of the opening portion.