



EUROPEAN PATENT APPLICATION
published in accordance with Art. 153(4) EPC

(43) Date of publication:
12.10.2022 Bulletin 2022/41

(21) Application number: **20897126.7**

(22) Date of filing: **26.03.2020**

(51) International Patent Classification (IPC):
A41C 1/06 ^(2006.01) **A41C 3/00** ^(2006.01)
A41C 1/12 ^(2006.01)

(52) Cooperative Patent Classification (CPC):
A41C 3/08; A41C 3/12; A41B 2300/52; A41F 15/00

(86) International application number:
PCT/CN2020/081430

(87) International publication number:
WO 2021/109369 (10.06.2021 Gazette 2021/23)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(30) Priority: **02.12.2019 CN 201922141024 U**

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(54) **UNDERGARMENT**

(57) An undergarment (100) is disclosed which includes a brassiere part (1). The brassiere part (1) includes cups (11) and wings (12) fixedly connected with the cups (11), and the wings are used for transversely surrounding a user. The cups (11) and/or the wings (12)

are provided at an edge thereof with an adhesive strip (2). The undergarment (100) according to the present invention increases the degree of comfort and aesthetic appeal.

100

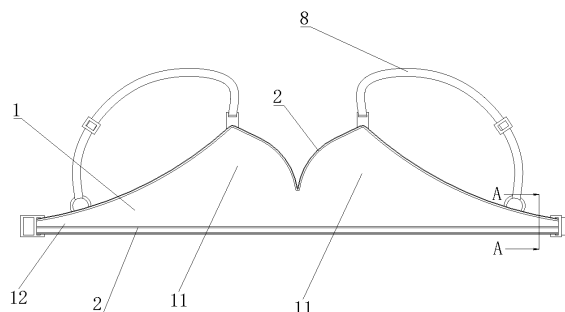


Fig. 1

Description

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present invention is a continuation application of international application No. PCT/CN2020/081430, filed on March 26, 2020, which is based upon and claims priority to China Patent Application No. 201922141024.X filed on December 2, 2019 with the title of "undergarment", the entire contents of which is incorporated herein for all purposes by this reference.

Technical Field

[0002] The present invention belongs to the field of garment, and specifically relates to an underwear.

Background Art

[0003] Underwear is a necessity for women in daily life. It can not only prevent women's breasts from sagging, but also play a role in shaping and make women's dress more beautiful. Nowadays, women's underwear on the market mainly includes underwire type, boneless type and vest type, etc. The bra is generally fixed on the human body through a button. However, because everyone's upper circumference is different, it is easy to remove the underwear through a simple buttoned connection, which affects the comfort and safety of the underwear. In view of the disadvantage of the prior art underwear, it is urgent in the art to design an underwear that can improve comfort and aesthetics.

[0004] The information disclosed in the background art is intended merely to provide better understanding of the general background of the invention and should not be taken as an admission or any suggestion in any form that such information constitutes prior art known to those skilled in the art.

Summary of the Invention

[0005] The object of the present invention is to provide an undergarment that can improve the comfort and the aesthetics of a user.

[0006] To this end, the present invention provides an undergarment which includes a brassiere part. The brassiere part includes cups, and wings fixedly connected with the cups and used for transversely surrounding a user. The cups and/or the wings are provided at an edge thereof with an adhesive strip. The bra wings in this disclosure are the strips of fabric that go around the sides and back of a user's body, attaching to the cups at one end and a fastening member at the other.

[0007] In an embodiment of the present invention, the undergarment further includes an underpants part. The underpants part includes a trouser body; two opening parts formed on both under sides of the trouser body for legs to pass through; and a waist part formed on an upper

part of the trouser body and designed for surrounding a waist of the user. The adhesive strip is further provided on the opening parts and/or the waist part are at an edge thereof.

[0008] In an embodiment of the present invention, the number of the adhesive strip formed on the opening parts and/or the waist part is plural and they are parallel arranged and are spaced apart.

[0009] In an embodiment of the present invention, the undergarment further includes an underpants part integrally formed with the brassiere part. The underpants part is provided, on a side distal from the brassiere part, with two opening parts for the user's legs to pass through. The edges of the opening parts are provided with the adhesive strip.

[0010] In an embodiment of the present invention, the cups and/or the wings are provided at an edge thereof with one single first adhesive strip.

[0011] In an embodiment of the present invention, the cups, the wings and the underpants part and connected with one another by a front patch and a rear patch, and the adhesive strips are formed on the front and rear patches.

[0012] In an embodiment of the present invention, the adhesive strip formed on the wings is configured as an arcuate strip that can be used to lift the chest.

[0013] In an embodiment of the present invention, the arcuate strip includes left and right symmetrical curved segments that curve in a direction toward a bottom of the underpants part. In an embodiment of the present invention, the adhesive strip is manufactured by means of hot-melt extrusion.

[0014] In an embodiment of the present invention, the undergarment further includes shoulder straps which are adhesively secured, along the width of the shoulder straps, onto the brassiere part. The bonding seams of the shoulder straps are located on a side of the shoulder straps facing the user.

[0015] According to the present invention, after the undergarment is put on, the edges of the undergarment is tightened by the adhesive strip, which makes the undergarment difficult to move. Therefore, the comfort and safety of the undergarment can be effectively improved. On the other hand, the adhesive strips formed on the edges of the wings can also have a good pulling effect on women's breasts, so that the undergarment of the present invention can have a shaping effect. In addition, the adhesive strips can be transparent or made in other colors, which does not affect the overall aesthetics of the undergarment, but also has a better decorative effect to a certain extent, thereby further improving the aesthetics of the undergarment.

Brief Description of the Drawings

[0016]

Figure 1 is a schematic view of the undergarment

according to an embodiment of the present invention;

Figure 2 is a view of the undergarment shown in Figure 1 along the A-A direction;

Figure 3 is a schematic view of the undergarment according to another embodiment of the present invention;

Figure 4 is a schematic view of the undergarment according to another embodiment of the present invention;

Fig. 5 is a rear view of the undergarment shown in Fig. 4.

Detailed Description of the Invention

[0017] Specific embodiments of the present invention will be described in detail with reference to the accompanying drawings, but it should be understood that the scope of the present invention is not limited to the specific embodiments.

[0018] The term "comprise", or variations thereof such as "comprises" or "comprising" throughout the specification and claims, will be understood to imply the inclusion of a stated element or component but not the exclusion of other elements or components, unless expressly stated otherwise.

[0019] Figs. 1 and 2 show the structure of the undergarment 100 first embodiment of the present invention. As shown in FIGS. 1 and 2, the undergarment 100 includes a brassiere part 1. The brassiere part 1 includes cups 11 and wings 12 fixedly connected to the cup 11 for laterally surrounding the user. A rubber strip 2 is formed on the edge of the cup 11 and/or the wings 12. The undergarment 100 according to an embodiment of the present invention is provided with the adhesive strip 2 on the edge of the cup 11 and/or the wing(s) 12. The adhesive strip 2 is less elastic than the cloth of the undergarment 100 itself, so that the adhesive strip 2 can tighten the edges of the cup 11 and/or the wings 12. Therefore, the edges of the undergarment 100 can fit the human body more closely. With this arrangement, on the one hand, after the undergarment 100 of the present invention is put on, the tightened edges make the undergarment 100 less likely to shift, thereby effectively improving the comfort and safety of the undergarment 100. On the other hand, the adhesive strip 2 formed on the edge of the belt 12 can also have a good lifting effect on the breasts of women, so that the undergarment 100 of the present invention can also have a shaping effect. In addition, the adhesive strip 2 can be made in transparent or other colors, so that it will not affect the overall aesthetics of the undergarment 100, but also can play a better decorative effect to a certain extent, thereby further improving the aesthetics of the undergarment 100.

[0020] Fig. 3 shows the structure of the undergarment 100 according to a second embodiment of the present invention. As shown in FIG. 3, the undergarment 100 further includes an underpants part 3. The underpants

part 3 includes a trouser body 31, left and right openings 4 formed on both sides of the trouser body 31 for the user's legs to pass through, and a waist part 33 formed above the trouser body 31 for laterally surrounding the user. The adhesive strip 2 is further formed on the edge of the openings 4 and/or the waist part 33. Due to the fact that the elasticity of the adhesive strip 2 is less than the cloth of the undergarment 100 itself (therefore less than the openings 4 and/or the waist part 33), it can be seen that the adhesive strip 2 formed on the edge of the opening 4 and/or waist 33 can tighten the edge of the opening 4 and/or waist 33, so that the opening 4 and/or waist 33 can fit the body better. Therefore, when men or women wear the underpants 3, the tightened edges can effectively prevent the underpants 3 from shifting, so that the underpants 3 can be worn with higher security.

[0021] It should be noted that the "left and right" in the specification should be understood as the left and right directions of the human body when the user uses the underpants 31 normally.

[0022] Preferably, as shown in FIGS. 1 to 3, a plurality of parallel adhesive strips 2 may be formed at intervals on the edges of the belt 12 and/or waist 33. A plurality of parallel adhesive strips 2 formed at the edge of the wings 12 and/or waist part 33 can effectively improve the tightening strength of the wings 12 and/or waist part 33. Due to the fact that the traditional wings 12 and/or waist part 33 are prone to displace, according to the arrangement of the present invention, the fixing and attachment effect of the wings 12 and/or the waist 33 can be further improved, thereby further improving the safety and aesthetics of the undergarment 100 of the present invention.

[0023] Preferably, in the first embodiment of the undergarment 100 as shown in FIG. 1, two parallel strips 2 may be formed on the edge of the wings 12 at intervals.

[0024] Figs. 4 and 5 show the structure of the undergarment 100 according to another embodiment of the present invention. As shown in Figures 4 and 5, the undergarment 100 further includes an underpants part 5 integrally formed with the brassiere part 1, and a side of the underpants part 5 away from the brassiere part 1 is provided with a left opening 4 and a right opening 4 for the user's legs to pass through. The adhesive strip 2 is formed on the edge of the opening 4. As stated above, the adhesive strip 2 formed on the edge of the opening 4 can tighten the edge of the opening 4, so that the opening 4 can fit the human body more closely, which can effectively prevent the underpants 3 from being moved. The problem of displacement thus can be avoided when the underpants 5 are put on.

[0025] Preferably, as shown in FIGS. 1, 3 and 5, a single adhesive strip 2 can be formed on the edge of the cup 11 and/or the opening 4. The cup 11 and/or the opening 4 are the positions where the displacement is generally small. Therefore, a single adhesive strip 2 is usually enough to meet the tightness requirement of the edges of the cup 11 and/or the opening 4 and fit the human body more closely. The single adhesive strip 2 can also

avoid the problem of forming a large contact area with the human body. Too large contact area may generate tightening marks on the surface of the human body and affect the appearance.

[0026] In the preferred embodiment shown in Figures 4 and 5, the cup 11, the wings 12 and the underpants part 5 can all be formed by connecting the front patch 6 and the back patch 7, and the adhesive strip 2 is formed on both the front patch and the back patch 7. The front patch 6 and the back patch 7 are fixed by means of adhesive bonding, so that the cup 11, the wings 12 and the underpants part 5 are integrally formed into one-piece undergarment. It should be noted that, according to the embodiment of the undergarment 100 of the present invention shown in FIGS. 4 and 5, the brassiere part 1 and the underpants 5 are integrally formed, so that the cup 11 and the wings 12 of the brassiere part 1 should be understood as the area located in the corresponding position of the female body. Of course, the corresponding area can also be determined according to the position of the adhesive strip 2.

[0027] Preferably, in the embodiment of the undergarment 100 as shown in FIGS. 4 and 5, the adhesive strips 2 at the wings formed on the front patch 6 and the back patch 7 may be three strips and they are arranged at intervals and parallel with one another.

[0028] Preferably, as shown in FIG. 4, the adhesive strip 2 formed on the wings 12 may be configured as an arc-shaped strip 21 that can be used to lift the chest. Preferably, as shown in FIG. 4, the arc-shaped adhesive strip 21 may include two symmetrically arranged arc-shaped sections 211, and the arc-shaped section 211 is bent toward the direction of the underpants 5. With this arrangement, when the undergarment 100 shown in FIGS. 4 and 5 is put on, the arc-shaped section 211 of the arc-shaped strip 21 can fit the curve of the female chest, thereby having a certain shaping effect. The undergarment according to the present invention therefore makes the female body more attractive.

[0029] In a preferred embodiment, the adhesive strip 2 can be processed by hot melt extrusion.

[0030] Preferably, as shown in FIGS. 1 to 5, the undergarment 100 may further include a shoulder strap 8, and the shoulder strap 8 may be configured to be glued or fixed along its width onto the brassiere part 1. The seam (not shown in the figure) of the shoulder strap 8 is located on the side of the shoulder strap 8 facing the human body, so as to further improve the aesthetics of the undergarment 100 after being worn.

[0031] Preferably, the shoulder strap 8 can be configured to be adjustable in length.

[0032] It should be noted that, unless otherwise specified, the technical terms or scientific terms used herein should be the ordinary meaning understood by those skilled in the art to which the invention belongs.

[0033] The foregoing description of specific exemplary embodiments of the present invention has been presented for purposes of illustration and example. The descrip-

tions are not intended to limit the invention to the precise form as disclosed, and obviously many modifications and variations are possible in light of the above teachings. The exemplary embodiments are chosen and described in order to explain the particular principles of the invention and its practical application to thereby enable those skilled in the art to implement and utilize various exemplary embodiments of the invention and various alternatives and modifications. It is intended that the scope of the invention are defined by the claims and equivalents thereof.

Claims

1. An undergarment, comprising a brassiere part, the brassiere part including:
 - cups; and
 - wings fixedly connected with the cups and used for transversely surrounding a user;
 - wherein the cups and/or the wings are provided at an edge thereof with an adhesive strip, the adhesive strip having a lower elasticity than that of the cups or the wings.
2. The undergarment according to claim 1, further comprising an underpants part, the underpants part including:
 - a trouser body,
 - two opening parts formed on both under sides of the trouser body for legs to pass through; and
 - a waist part formed on an upper part of the trouser body and designed for surrounding a waist of the user;
 - wherein the adhesive strip is further provided on the opening parts and/or the waist part are at an edge thereof.
3. The undergarment according to claim 2, wherein the number of the adhesive strip formed on the opening parts and/or the waist part is plural and they are parallel arranged and are spaced apart.
4. The undergarment according to claim 1, further comprising an underpants part integrally formed with the brassiere part, the underpants part is provided, on a side away from the brassiere part, with two opening parts for the user's legs to pass through, wherein the edges of the opening parts are provided with the adhesive strip.
5. The undergarment according to claim 2 or claim 4, wherein the cups and/or the wings are provided at an edge thereof with one single first adhesive strip.
6. The undergarment according to claim 4, wherein the

cups, the wings and the underpants part and connected with one another by a front patch and a rear patch, and the adhesive strips are formed on the front and rear patches.

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7. The undergarment according to claim 6, wherein the adhesive strip formed on the wings is configured as an arcuate strip that can be used to lift the chest.

8. The undergarment according to claim 7, wherein the arcuate strip includes left and right symmetrical curved segments that curve in a direction toward a bottom of the underpants part.

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9. The undergarment according to any of claims 1 to 4, wherein the adhesive strip is manufactured by means of hot-melt extrusion.

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10. The undergarment according to any of claims 1 to 4, further comprising shoulder straps which are adhesively secured, along their width, onto the brassiere part, wherein seams of the shoulder straps are located on a side of the shoulder straps facing the user.

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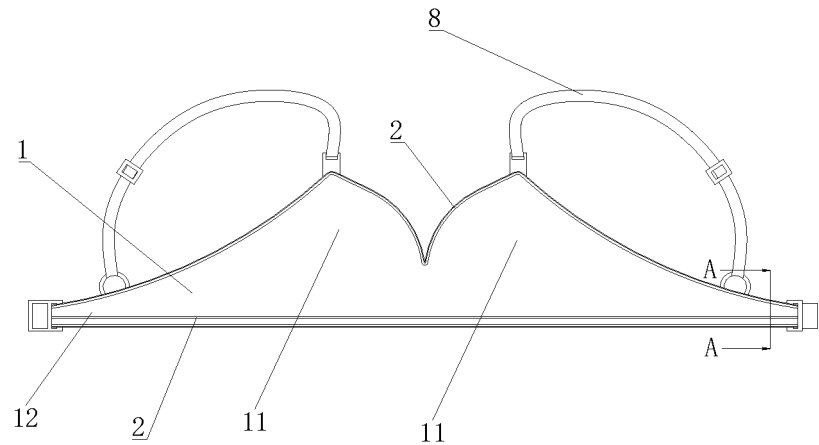


Fig. 1

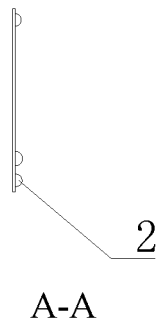


Fig. 2

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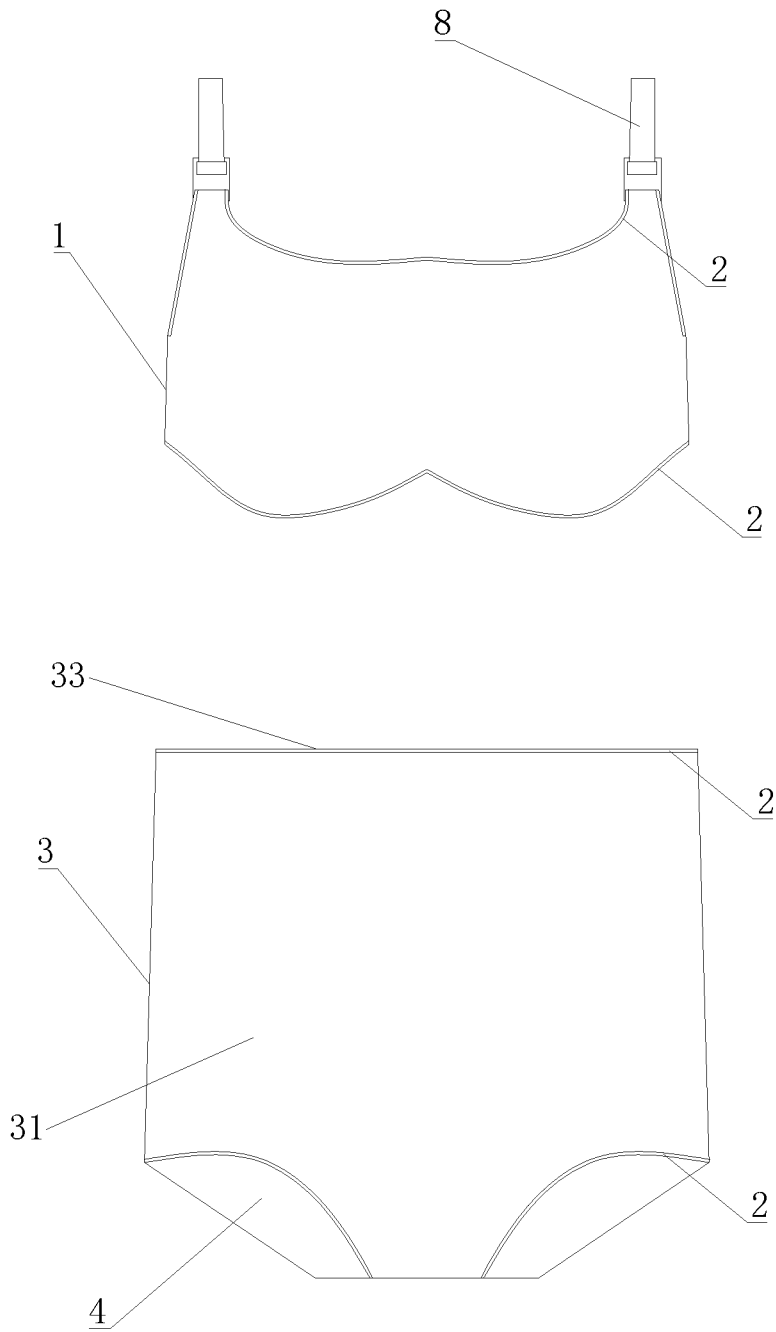


Fig. 3

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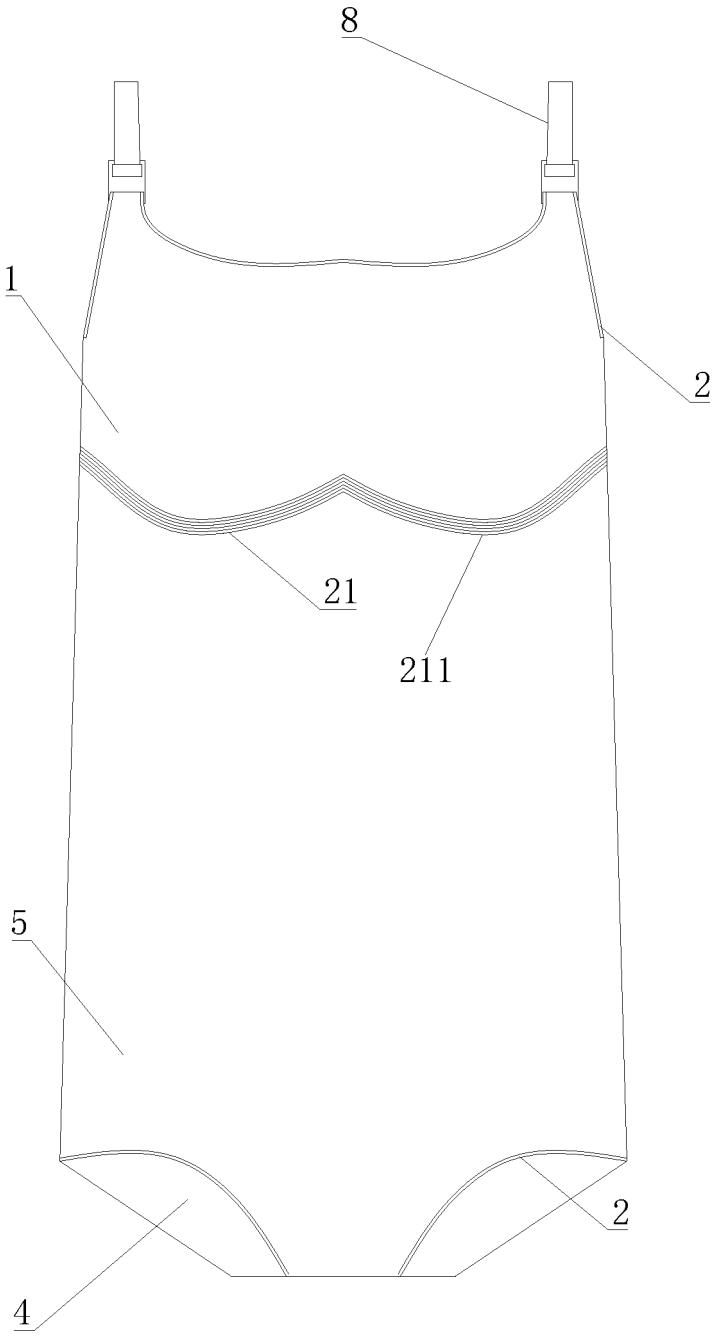


Fig. 4

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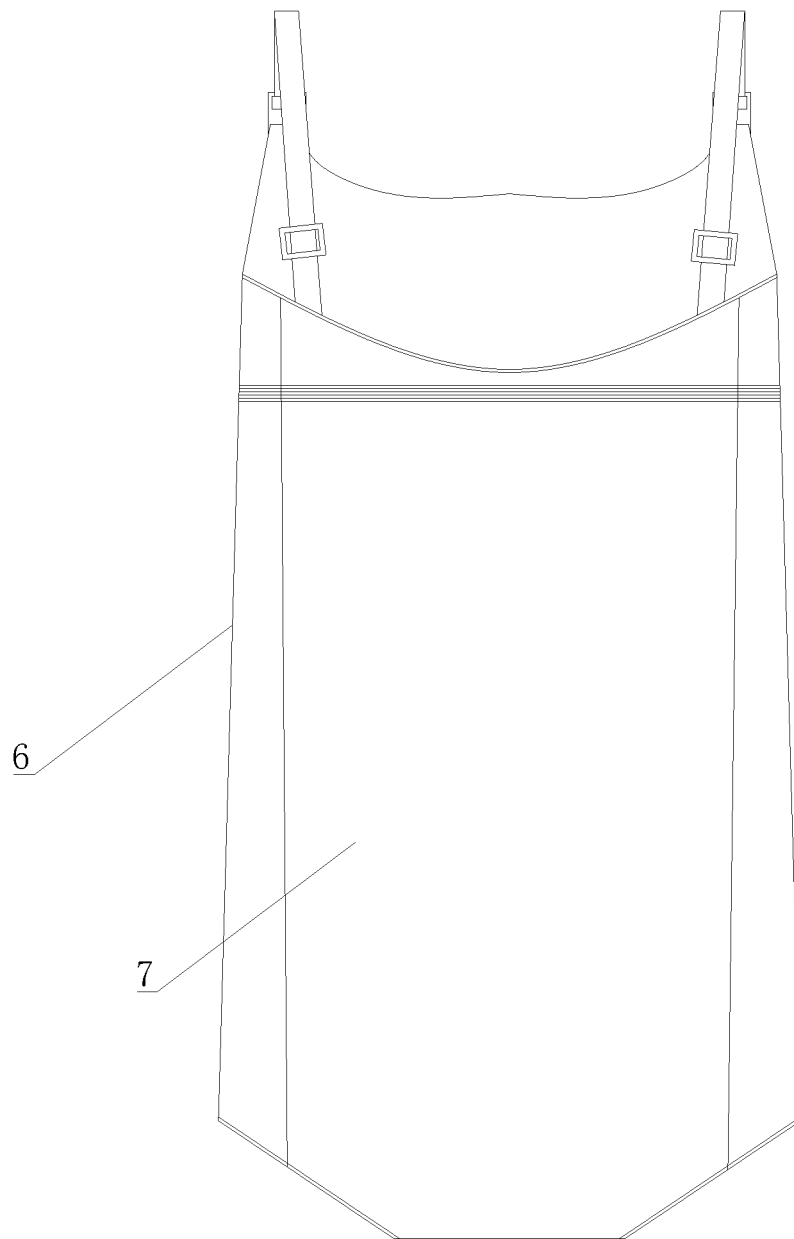


Fig. 5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2020/081430

A. CLASSIFICATION OF SUBJECT MATTER

A41C 1/06(2006.01)i; A41C 3/00(2006.01)i; A41C 1/12(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A41C; A41B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNPAT, CNKI, EPODOC, WPI: 上海咏姿时装有限公司, 郑涛, 鲍芳, 内衣, 文胸, 罩杯, 胶条, 边缘, 边沿, 底裤, 围带, 带, 一体成型, underwear+, bra+, brass+, cup+, glue, tape?, strip+, edge?, fringe?, border?, stick +, underpant?, brief?, belt+, unibody, all, in, one

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 206923693 U (DONGGUAN JINGRUI SILICONE TECHNOLOGY CO., LTD.) 26 January 2018 (2018-01-26) description, paragraphs [0004] and [0022], and figure 1	1, 9, 10
Y	CN 206923693 U (DONGGUAN JINGRUI SILICONE TECHNOLOGY CO., LTD.) 26 January 2018 (2018-01-26) description, paragraphs [0004] and [0022], and figure 1	2-8
X	CN 206612228 U (CAI, Xinqin) 07 November 2017 (2017-11-07) description, paragraphs [0005]-[0041], and figures 1-4	1, 9, 10
Y	CN 206612228 U (CAI, Xinqin) 07 November 2017 (2017-11-07) description, paragraphs [0005]-[0041], and figures 1-4	2-8
Y	CN 208259023 U (SHANGHAI PRESS INTIMATES CO., LTD.) 21 December 2018 (2018-12-21) description, paragraphs [0006]-[0034], and figures 1-4	2-8
X	CN 205597141 U (SHANGHAI PRESS INTIMATES CO., LTD.) 28 September 2016 (2016-09-28) description, paragraphs [0007]-[0030], and figures 1-3	1, 9, 10

☒ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

13 July 2020

Date of mailing of the international search report

29 July 2020

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Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2020/081430

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	CN 204994635 U (LIN, Xijian) 27 January 2016 (2016-01-27) entire document	1-10
A	JP 2003278005 A (DUCHESS K.K.) 02 October 2003 (2003-10-02) entire document	1-10

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2020/081430

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CN	206612228	U	07 November 2017	None	
CN	208259023	U	21 December 2018	None	
CN	205597141	U	28 September 2016	None	
CN	206560046	U	17 October 2017	None	
CN	204994635	U	27 January 2016	None	
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REFERENCES CITED IN THE DESCRIPTION

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