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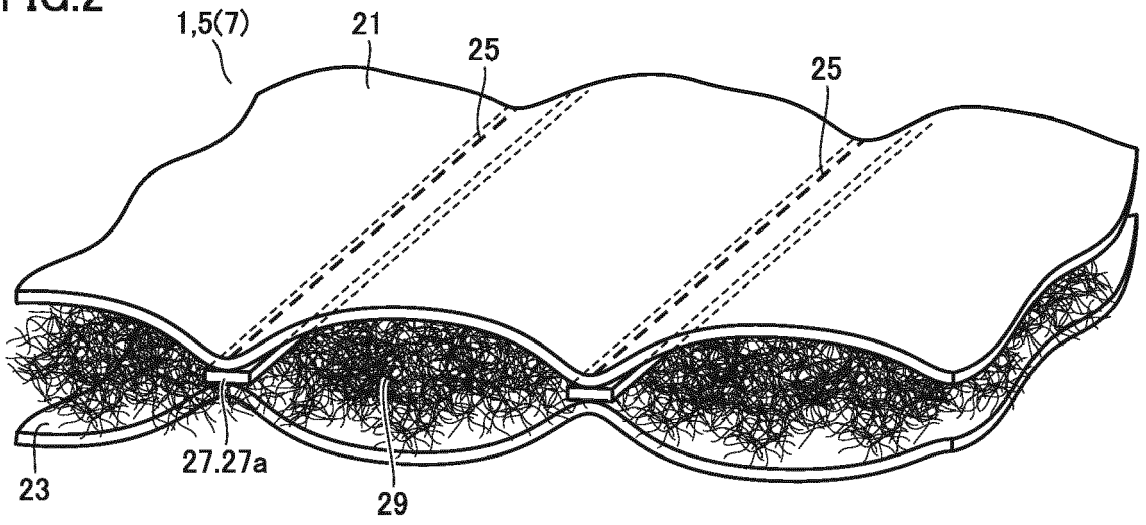
(54) FEATHER PADDED PRODUCT AND METHOD FOR MANUFACTURING THE SAME

(57) A down jacket 1 has a face side fabric (21), a lining (23) and feathers (29), and in addition, a strip of tape (27). The strip of tape (27) extends between the face side fabric (21) and the lining (23) along a seam portion (25) and is sewn together with the face side fabric (21) and the lining (23). The strip of tape (27) has a teaseled portion (27a) projecting from a surface of the strip of tape (27) as a trap portion for trapping the feathers (29) accommodated. The teaseled portion (27a) is formed on both a side of the strip of tape (27) facing the face side fabric (21) and a side of the strip of tape (27) facing the lining (23).

FIG.2



EP 3 865 018 A1

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a feather padded product and a method for manufacturing the same, and more specifically to a feather padded product which prevents feathers from escaping from a seam and a method for manufacturing such a feather padded product.

Description of the Background Art

[0002] Conventionally, there are down jackets, down duvets, boots and similar feather padded products comprising a face side fabric, a lining, and down, feathers or the like accommodated between the face side fabric and the lining. Such a feather padded product may have feathers escaping to a surface of the face side fabric or that of the lining through a needle hole of a seam by which the face side fabric and the lining are sewn together. Various proposals have been made to prevent feathers from escaping (see Japanese Patent Laid-Open No. 2019 -118801 and Japanese Utility Model Laid-Open No. 01-072170).

SUMMARY OF THE INVENTION

[0003] As has been discussed above, various approaches have conventionally been taken to prevent feather padded products from having feathers escaping therefrom.

[0004] The present invention proposes a further improvement in preventing a feather padded product from having feathers escaping therefrom, and one object thereof is to provide a feather padded product which more reliably prevents feathers from escaping therefrom, and another object thereof is to provide a method for manufacturing such a feather padded product.

[0005] A feather padded product according to the present invention includes a first fabric, a second fabric, feathers, and a strip of tape. The second fabric is disposed to face the first fabric and sewn to the first fabric at a seam portion. The feathers are accommodated between the first fabric and the second fabric in one region and another region with the seam portion interposed. The strip of tape extends between the first fabric and the second fabric along the seam portion and is sewn together with the first fabric and the second fabric. The strip of tape has a trap portion to trap the accommodated feathers. The trap portion is formed on both a side of the strip of tape facing the first fabric and a side of the strip of tape facing the second fabric.

[0006] More specifically, the strip of tape preferably has as the trap portion a teaseled portion projecting from a surface of the strip of tape. Further, the strip of tape includes fibers extending in two directions and configuring a mesh, and the strip of tape may have as the trap portion a bias portion having the fibers to extend with the two directions each intersecting a direction in which the strip of tape extends.

[0007] A method for manufacturing a feather padded product according to the present invention comprises: preparing a first fabric and a second fabric; preparing a strip of tape to be sandwiched between the first fabric and the second fabric; disposing the strip of tape on the first fabric along a seam portion at which the first fabric and the second fabric are sewn together; disposing the second fabric on the first fabric so as to cover the strip of tape; sewing the first fabric and the second fabric together with the strip of tape along the seam portion; and accommodating feathers between the first fabric and the second fabric in one region and another region with the seam portion interposed. The preparing the strip of tape includes preparing the strip of tape to include on both a side thereof facing the first fabric and a side thereof facing the second fabric a trap portion to trap the feathers accommodated in the regions between the first fabric and the second fabric.

[0008] More specifically, the preparing the strip of tape preferably includes preparing the strip of tape to have a teaseled portion projecting from a surface thereof as the trap portion. Further, the preparing the strip of tape may include preparing the strip of tape to include fibers extending in two directions and configuring a mesh and have as the trap portion a bias portion having the fibers to extend with the two directions each intersecting a direction in which the strip of tape extends. Further, the preparing the strip of tape may include preparing the strip of tape to have a knitted mesh portion as the trap portion.

[0009] The feather padded product according to the present invention can have a strip of tape that has a trap portion to trap feathers sewn together at a seam portion of first and second fabrics to more reliably prevent the feathers from escaping through the seam portion.

[0010] The method for manufacturing a feather padded product according to the present invention allows a strip of tape that has a trap portion to trap feathers to be sewn together at a seam portion of first and second fabrics to more reliably prevent the feathers from escaping through the seam portion.

[0011] The foregoing and other objects, features, aspects and advantages of the present invention will become more apparent from the following detailed description of the present invention when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

Fig. 1 schematically shows a configuration of a down jacket as an example of a feather padded product according to an embodiment.

Fig. 2 is a partial perspective view in cross section taken along a line II-II indicated in Fig. 1 in the same embodiment.

Fig. 3 is a partial enlarged perspective view schematically showing a structure of a strip of tape in the same embodiment.

Fig. 4 is a perspective view showing a step of a method for manufacturing a down jacket in the same embodiment.

Fig. 5 is a perspective view showing a step performed after the step shown in Fig. 4 in the same embodiment.

Fig. 6 is a perspective view showing a step performed after the step shown in Fig. 5 in the same embodiment.

Fig. 7 is a partial perspective view in cross section showing a step performed after the step shown in Fig. 6 in the same embodiment.

Fig. 8 is a partial perspective view in cross section of a down jacket according to a comparative example.

Fig. 9 is a partial enlarged perspective view in cross section for illustrating a problem with the down jacket according to the comparative example.

Fig. 10 is a partial enlarged perspective view in cross section for illustrating a function and effect of the down jacket in the same embodiment.

Fig. 11 is a partial enlarged perspective view schematically showing a structure of a strip of tape according to a variation of the same embodiment.

Fig. 12 is a partial enlarged perspective view schematically showing a structure of a strip of tape according to another variation of the same embodiment.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0013] A feather padded product and a method for manufacturing the same according to an embodiment will be described. Initially, a down jacket will be described as an example of the feather padded product. As shown in Fig. 1, down jacket 1 mainly includes a jacket body 3 and sleeves 5 and 7 sewn to jacket body 3. Jacket body 3 is mainly composed of a right front bodice 9, a left front bodice 11, and a back bodice (not shown). Right front bodice 9, left front bodice 11, and the back bodice are each sewn at a prescribed portion thereof.

[0014] Down jacket 1 accommodates down, feathers, and the like in jacket body 3, sleeves 5 and 7, and the like. Herein, as an example of a structure of a portion in which feathers are accommodated, a structure of sleeves 5 and 7 will be described.

[0015] As shown in Fig. 2, sleeve 5 (and sleeve 7, and down jacket 1) has a face side fabric 21 (a second fabric), a lining 23 (a first fabric) and feathers 29, and in addition, a strip of tape 27. Face side fabric 21 and lining 23 are disposed to face each other and sewn together at a seam portion 25. Feathers 29 are accommodated between face side fabric 21 and lining 23 in one region and another region with seam portion 25 interposed.

[0016] At seam portion 25, strip of tape 27 extends between face side fabric 21 and lining 23 along seam portion 25. Strip of tape 27 thus sandwiched between face side fabric 21 and lining 23 is sewn together with face side fabric 21 and lining 23. As shown in Fig. 3, strip of tape 27 has a teaseled portion 27a projecting from a surface of strip of tape 27 as a trap portion for trapping feathers 29 accommodated.

[0017] Teaseled portion 27a may project for example in such a manner that fibers or the like may project linearly from the surface of strip of tape 27. Further, such fibers or the like may each have a tip formed in a hook. Further, strip of tape 27 may have fibers projecting from the surface and again connected to strip of tape 27 to form a loop, and there is no particular limitation insofar as, as teaseled portion 27a (or the trap portion), it can trap feathers 29 while it is sandwiched between face side fabric 21 and lining 23.

[0018] As shown in Fig. 2, strip of tape 27 has a side facing face side fabric 21 and having teaseled portion 27a, and a side facing lining 23 and having teaseled portion 27a. If necessary, for example, the side facing face side fabric 21 may have teaseled portion 27a with a larger amount of teaseled fibers than the side facing lining 23 does. The side facing face side fabric 21 and the side facing lining 23 may have their respective teaseled portions 27a with the same amount of teaseled fibers. Further, the side facing face side fabric 21 may have teaseled portion 27a with teaseled fibers projecting in a manner whereas the side facing lining 23 may have teaseled portion 27a with teaseled fibers projecting in a manner different than or the same manner as face side fabric 21. Strip of tape 27 is disposed not only in sleeves 5 and 7 but also in jacket body 3 and the like. The down jacket as the feather padded product according to the embodiment is configured as described above.

[0019] Hereinafter, an example of a method for manufacturing down jacket 1 will be described. Herein, a method for manufacturing the portion of a sleeve will representatively be described.

[0020] Initially, lining 23 and face side fabric 21 each cut into a pattern to be a sleeve are prepared (see Fig. 4). Subsequently, as shown in Fig. 4, lining 23 and face side fabric 21 are each placed on a pattern seamer 4 at a prescribed position and thus attached thereto.

[0021] Subsequently, as shown in Fig. 5, for example, on lining 23, strip of tape 27 is disposed along a seam portion at which lining 23 and face side fabric 21 are to be sewn together. Strip of tape 27 has teaseled portion 27a formed on both the side facing face side fabric 21 and the side facing lining 23 (see Fig. 3). Subsequently, the pattern seamer is folded at the center of the pattern seamer to dispose face side fabric 21 on lining 23 so that face side fabric 21 faces lining 23.

[0022] Subsequently, as shown in Fig. 6, face side fabric 21 and lining 23 with strip of tape 27 therebetween

are sewn to sew strip of tape 27 together with face side fabric 21 and lining 23. In this case, by sewing face side fabric 21 and lining 23 in a lateral direction, a seam portion is formed in the lateral direction. Further, by similar sewing, a plurality of seam portions extending in the lateral direction are formed at intervals in a longitudinal direction.

[0023] Subsequently, as shown in Fig. 7, feathers 29 are accommodated between face side fabric 21 and lining 23 in one region and another region with one seam portion 25 interposed. Subsequently, face side fabric 21 and lining 23 have their respective longitudinal ends sewn together to complete the portions of sleeves 5 and 7 as parts (see Fig. 1).

[0024] Jacket body 3 (see Fig. 1) is also manufactured in substantially the same process as the process of manufacturing sleeves 5 and 7, except that the pattern for jacket body 3 is different from that for face side fabric 21 and lining 23 serving as a sleeve. Once jacket body 3 has been completed as a part, sleeves 5 and 7 are sewn to jacket body 3 to complete down jacket 1 shown in Fig. 1.

[0025] In down jacket 1 described above, strip of tape 27 having teaseled portion 27a can be sewn to seam portion 25 of face side fabric 21 and lining 23 to prevent feathers 29 from escaping through seam portion 25. This will be described in comparison with a down jacket according to a comparative example. Any member of the down jacket according to the comparative example that is identical in configuration to the down jacket according to the embodiment is identically denoted and will not be described repeatedly unless necessary.

[0026] As shown in Fig. 8, according to a comparative example, a down jacket 101, at seam portion 25 having face side fabric 21 and lining 23 disposed so as to face each other and sewn together, has face side fabric 21 and lining 23 in direct contact with each other. Feathers 29 are accommodated between face side fabric 21 and lining 23 in one region and another region with seam portion 25 interposed.

[0027] Thus, at seam portion 25 of down jacket 101 according to the comparative example, face side fabric 21 and lining 23 are sewn together in direct contact with each other. Therefore, as shown in Fig. 9, a part of feathers 29 accommodated in the regions between face side fabric 21 and lining 23 (that is, feathers 29a) easily escapes through a needle hole 33 of seam portion 25 formed in sewing. Fig. 9 shows feathers 29a exaggerated.

[0028] In contrast to down jacket 101 according to the comparative example, as shown in Fig. 10, at seam portion 25 of down jacket 1 according to the embodiment, face side fabric 21 and lining 23 are sewn together with strip of tape 27 interposed. Strip of tape 27 has a side facing face side fabric 21 and a side facing lining 23, with each side having fibers teaseled to form teaseled portion 27a (see Fig. 3). As a result, feathers 29 accommodated in the regions between face side fabric 21 and lining 23 can be trapped by teaseled portion 27a and thus prevented from escaping through needle hole 33 of seam portion 25.

[0029] The present inventors have conducted a fills escape test according to the Boken method to examine escape of feathers. The fills escape test is a test method in conformity with the testing methods for pilling of woven fabrics and knitted fabrics (JIS L 1076). This test method is a method in which an ICI type pilling tester is used to evaluate how a test material stuffed with fills (feathers) has the fills (feathers) escaping therefrom.

[0030] The test method will be described. Initially, a test material to be tested was prepared as follows: Two pieces of a cover fabric (size: 11.5 cm x 13.5 cm) were prepared, and placed one on the other and had their respective three sides (two longer sides and one shorter side) sewn together (with a seam allowance of 0.7 cm). The two pieces of the cover fabric having their respective three sides sewn together were turned inside out, and feathers (3 g) were introduced therein and the pieces' respective, remaining one sides had their respective ends folded inside and sewn together. In the test material, the strip of tape was interposed between those portions of the two pieces of the cover fabric which were sewn together.

[0031] Two such test materials were prepared and placed in a rotary box of the ICI type pilling tester together with four special rubber tubes. The rotary box was rotated for 1 hour at a rate of 60 revolutions per minute. After this operation, the test materials (or cover fabric) were evaluated for how the feathers escaped therefrom. As a result, it has been found that there was no feather observed to have escaped from the test materials (or cover fabric). This evaluation result demonstrates that teaseled portion 27a provided on strip of tape 27 can trap feathers 29 to reliably prevent feathers 29 from escaping through seam portion 25.

[0032] Note that as the trap portion of strip of tape 27, teaseled portion 27a projecting from a surface has been described as an example. The trap portion of strip of tape 27 is not limited to teaseled portion 27a insofar as it can trap and hold feathers.

[0033] As shown in Fig. 11, the trap portion may for example be a bias portion 27b that includes fibers extending in two directions and configuring a mesh, with the two directions intersecting a direction in which strip of tape 27 extends. Strip of tape 27 having bias portion 27b as described above can trap feathers 29 between the fibers configuring bias portion 27b and thus prevent feathers 29 from escaping through seam portion 25 (see Fig. 10).

[0034] Further, as shown in Fig. 12, the trap portion may for example be a knitted mesh portion 27c. Strip of tape 27 having mesh portion 27c can trap feathers 29 by mesh portion 27c and thus prevent feathers 29 from escaping through seam portion 25 (see Fig. 10).

[0035] In the embodiment, a down jacket has been described as an example of a feather padded product. The

feather padded product is not limited to the down jacket, and is widely applicable for example to down duvets, boots and similar products accommodating feathers between one fabric and the other fabric. Furthermore, according to the present specification, as feathers for the feather padded product, natural feathers, and in addition, for example, natural cotton (cotton flower) or natural wool processed to be fluffy or the like are also applicable. Furthermore, the feathers of the feather padded product include not only natural materials but also a substitute for feathers. Examples of the substitute for feathers include short-fiber polyester, cupro fiber, polytrimethylene terephthalate (PTT) fiber, acrylic short fiber, or the like. In order to take in air using such a substitute for feathers, a material processed to be fluffy or the like is also applicable for example.

[0036] The present invention is effectively applicable to feather padded products that accommodate feathers therein.

[0037] Although the present invention has been described and illustrated in detail, it is clearly understood that the same is by way of illustration and example only and is not to be taken by way of limitation, the scope of the present invention being interpreted by the terms of the appended claims.

Claims

1. A feather padded product comprising:

a first fabric (23);
a second fabric (21) disposed to face the first fabric (23) and sewn to the first fabric (23) at a seam portion (25);
feathers (29) accommodated between the first fabric (23) and the second fabric (21) in one region and another region with the seam portion (25) interposed; and
a strip of tape (27) extending between the first fabric (23) and the second fabric (21) along the seam portion (25) and sewn together with the first fabric (23) and the second fabric (21),
the strip of tape (27) having a trap portion (27a, 27b, 27c) to trap the accommodated feathers (29),
the trap portion (27a, 27b, 27c) being formed on both a side of the strip of tape (27) facing the first fabric (23) and a side of the strip of tape (27) facing the second fabric (21).

2. The feather padded product according to claim 1, wherein the strip of tape (27) has a teaseled portion (27a) projecting from a surface thereof as the trap portion (27a, 27b, 27c).

3. The feather padded product according to claim 1, wherein
the strip of tape (27) includes fibers extending in two directions and configuring a mesh, and
the strip of tape (27) has as the trap portion (27a, 27b, 27c) a bias portion (27b) having the fibers to extend with the two directions each intersecting a direction in which the strip of tape (27) extends.

4. The feather padded product according to claim 1, wherein the strip of tape (27) has a knitted mesh portion (27c) as the trap portion (27a, 27b, 27c).

5. A method for manufacturing a feather padded product, comprising:

preparing a first fabric (23) and a second fabric (21);
preparing a strip of tape (27) to be sandwiched between the first fabric (23) and the second fabric (21);
disposing the strip of tape (27) on the first fabric (23) along a seam portion (25) at which the first fabric (23) and the second fabric (21) are sewn together;
disposing the second fabric (21) on the first fabric (23) so as to cover the strip of tape (27);
sewing the first fabric (23) and the second fabric (21) together with the strip of tape (27) along the seam portion (25); and
accommodating feathers (29) between the first fabric (23) and the second fabric (21) in one region and another region with the seam portion (25) interposed,
the preparing the strip of tape (27) including preparing the strip of tape (27) to include on both a side thereof facing the first fabric (23) and a side thereof facing the second fabric (21) a trap portion (27a, 27b, 27c) to trap the feathers (29) accommodated in the regions between the first fabric (23) and the second fabric (21).

6. The method for manufacturing a feather padded product according to claim 5, wherein the preparing the strip of tape (27) includes preparing the strip of tape (27) to have a teaseled portion (27a) projecting from a surface thereof as the trap portion (27a, 27b, 27c).

7. The method for manufacturing a feather padded product according to claim 5, wherein the preparing the strip of tape (27) includes preparing the strip of tape (27) to include fibers extending in two directions and configuring a mesh and have as the trap portion (27a, 27b, 27c) a bias portion (27b) having the fibers to extend with the two directions each intersecting a direction in which the strip of tape (27) extends.

8. The method for manufacturing a feather padded product according to claim 5, wherein the preparing

the strip of tape (27) includes preparing the strip of tape (27) to have a knitted mesh portion (27c) as the trap portion (27a, 27b, 27c).

FIG.1

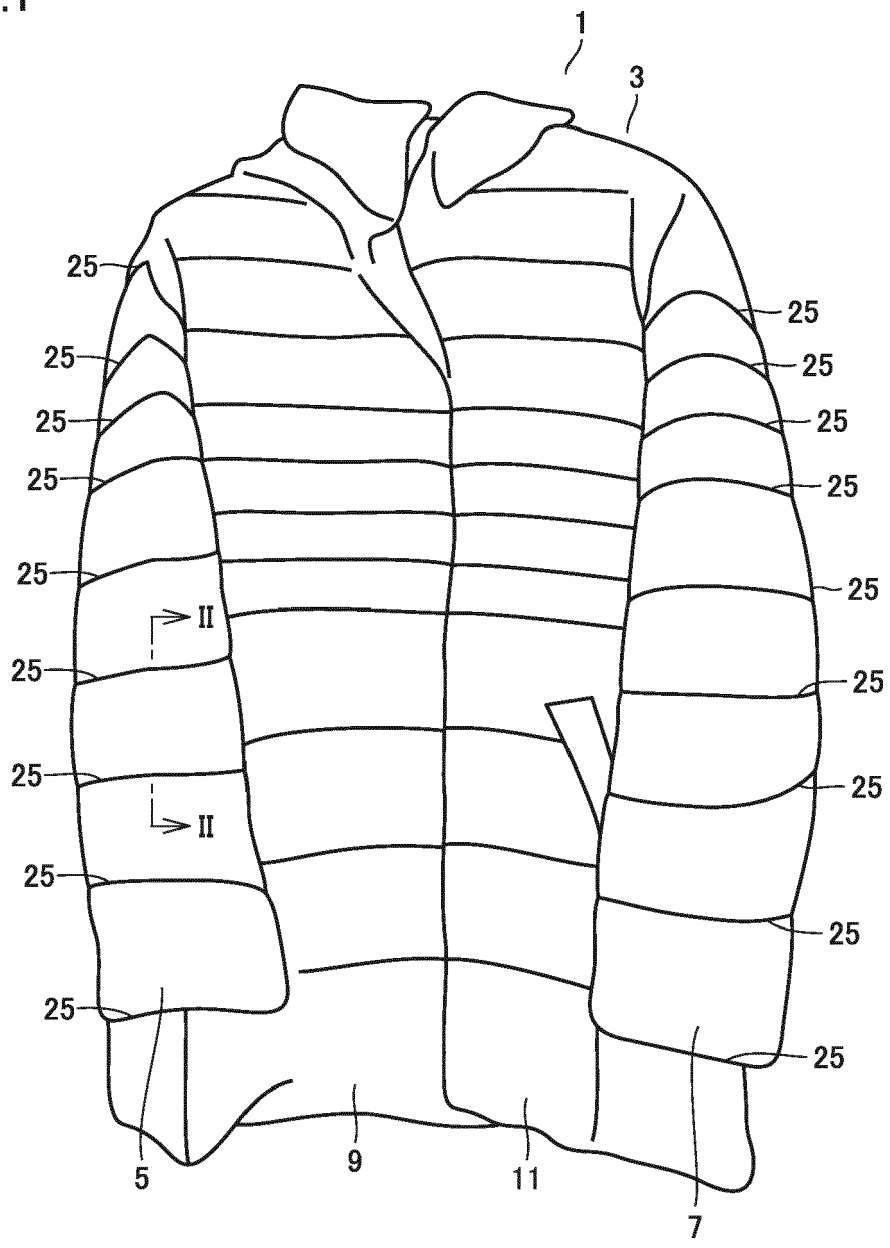


FIG.2

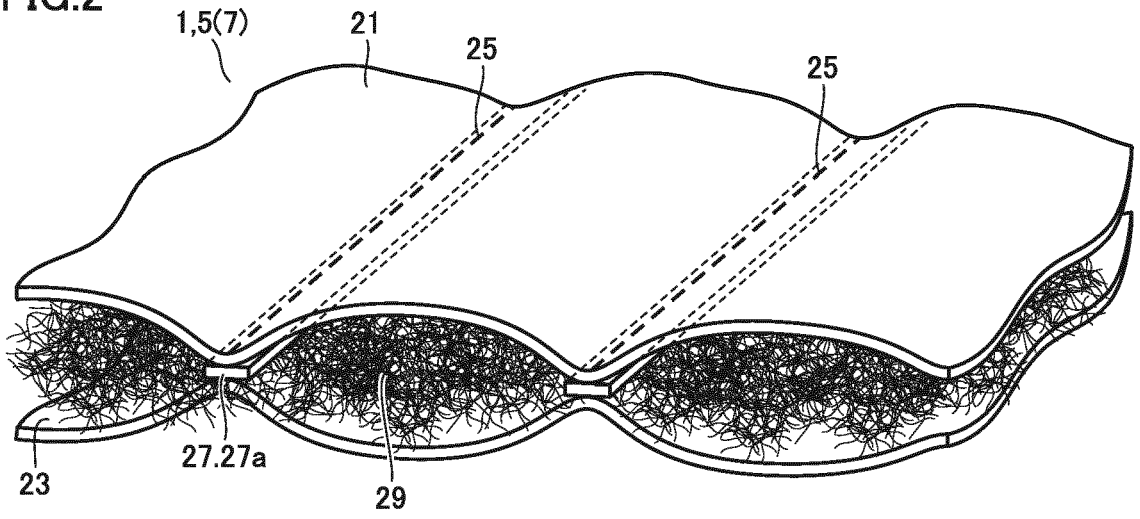


FIG.3

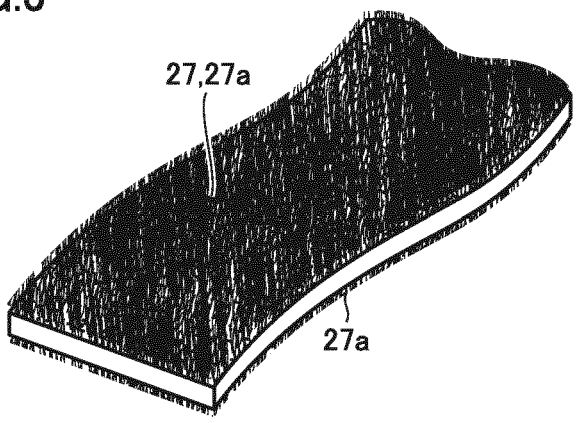


FIG.4

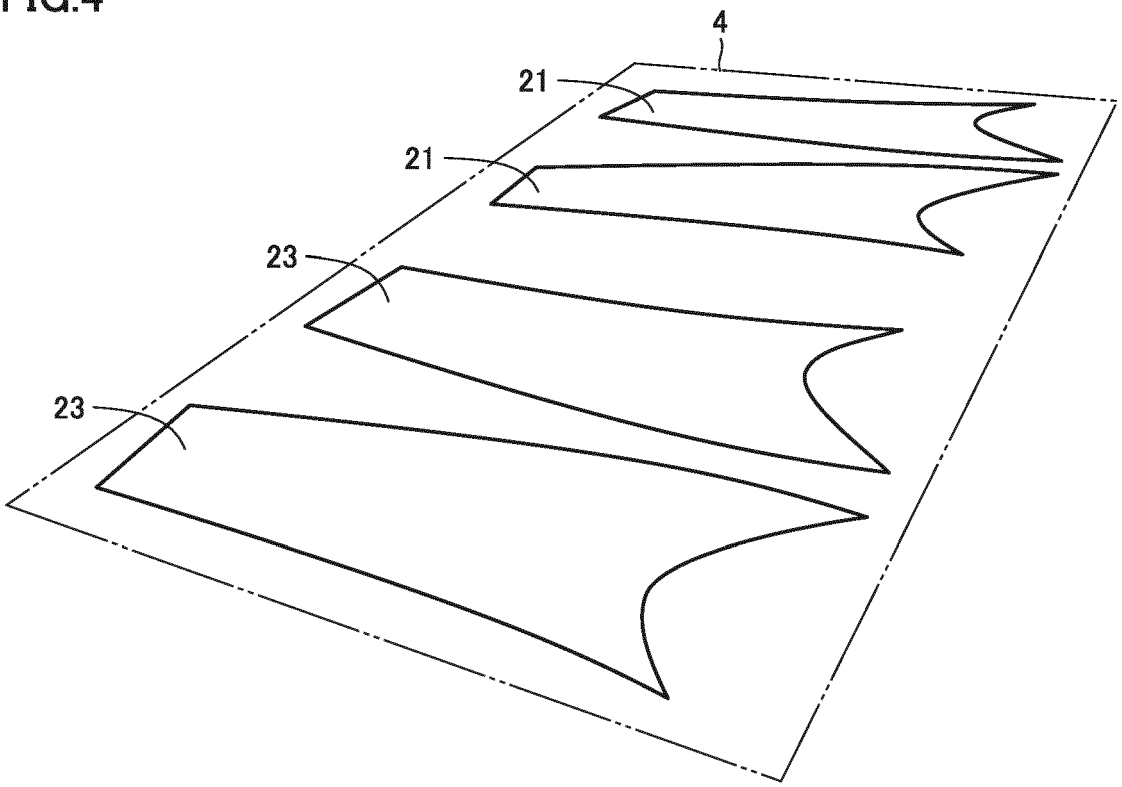


FIG.5

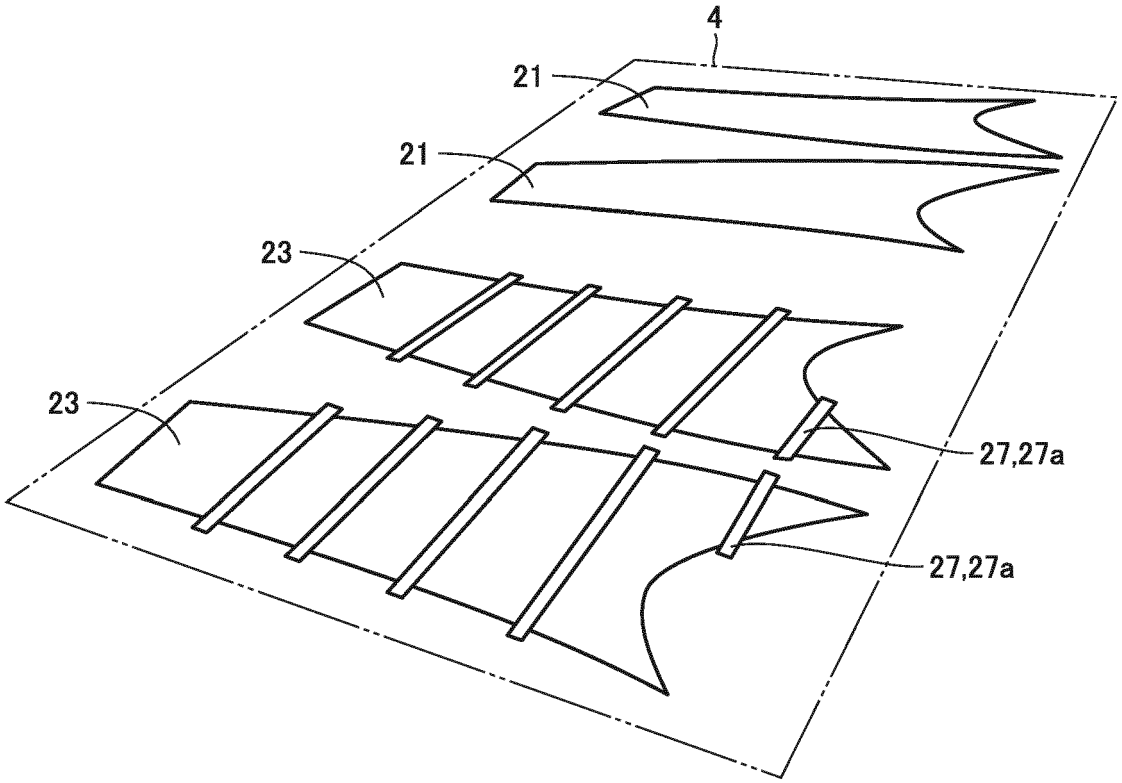


FIG.6

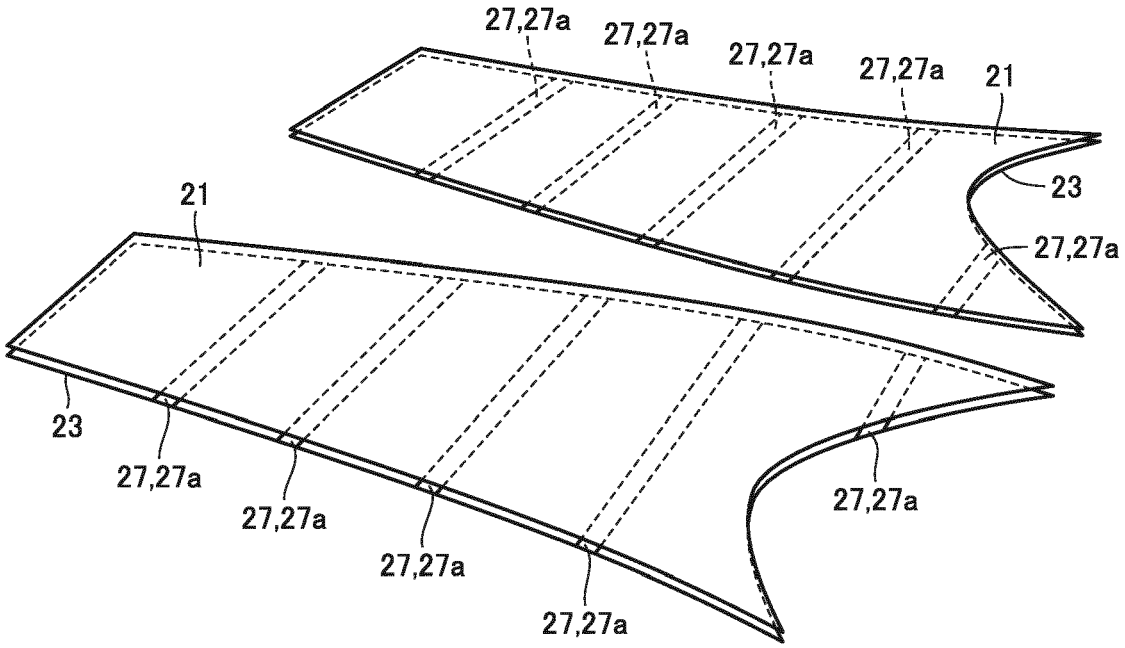

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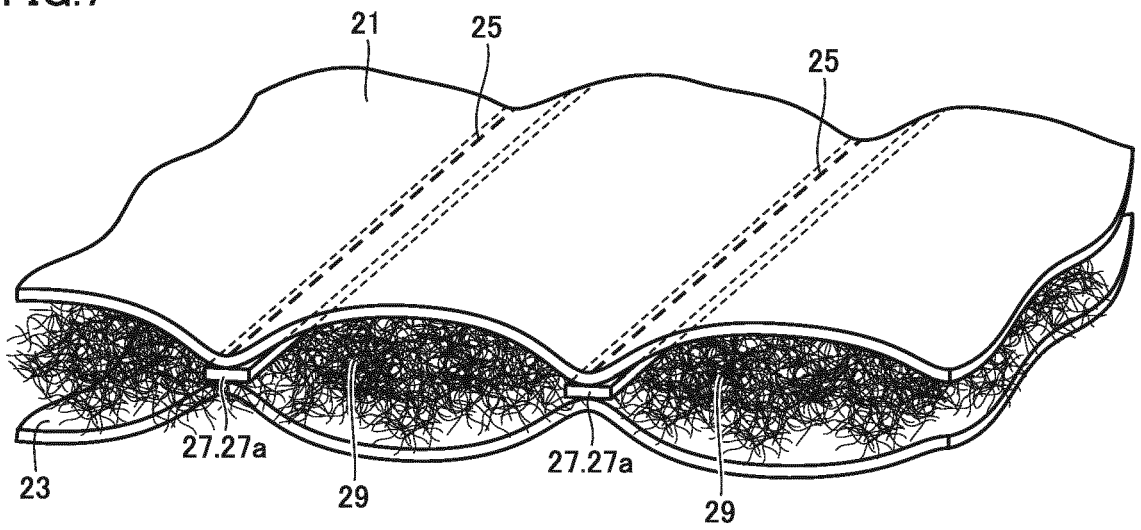
FIG.7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23
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29

FIG.8

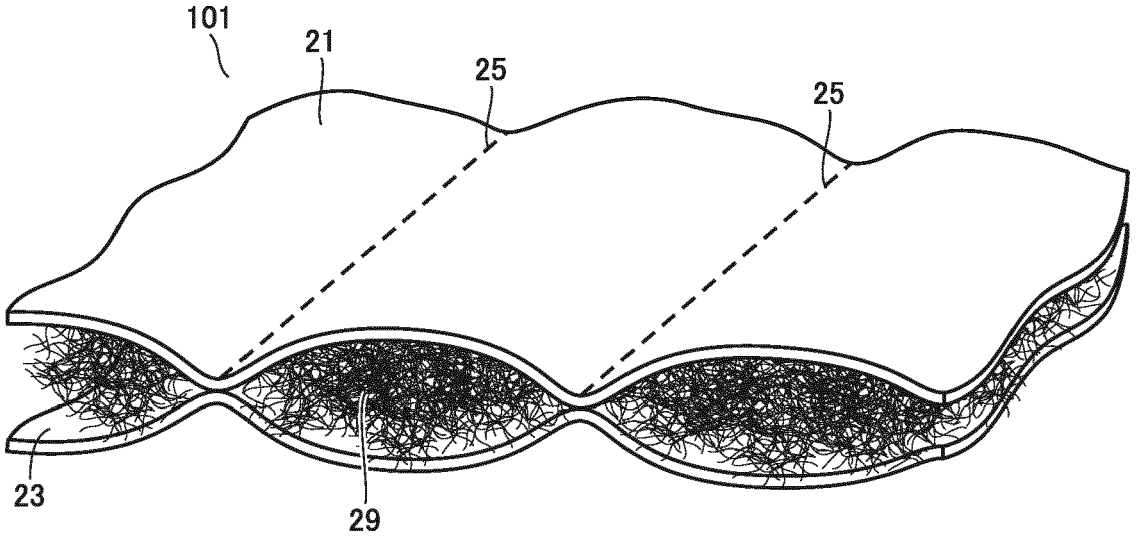


FIG.9

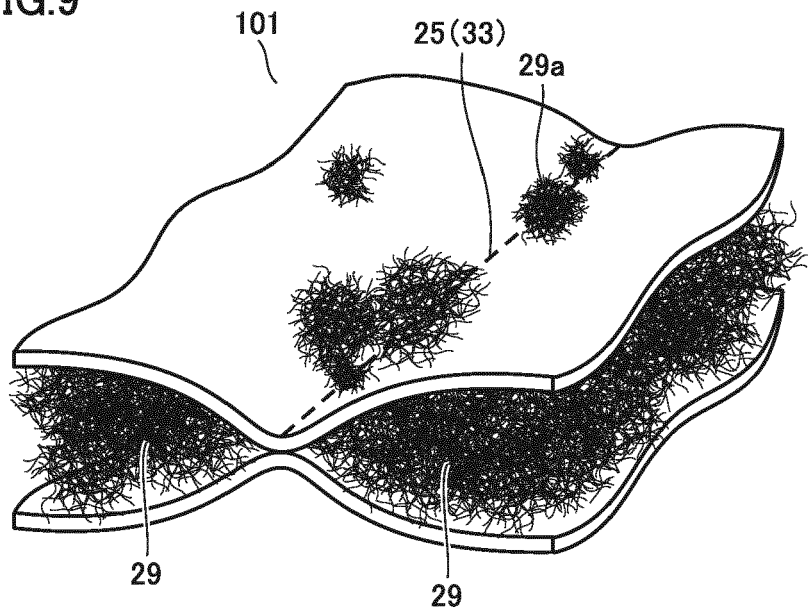


FIG.10

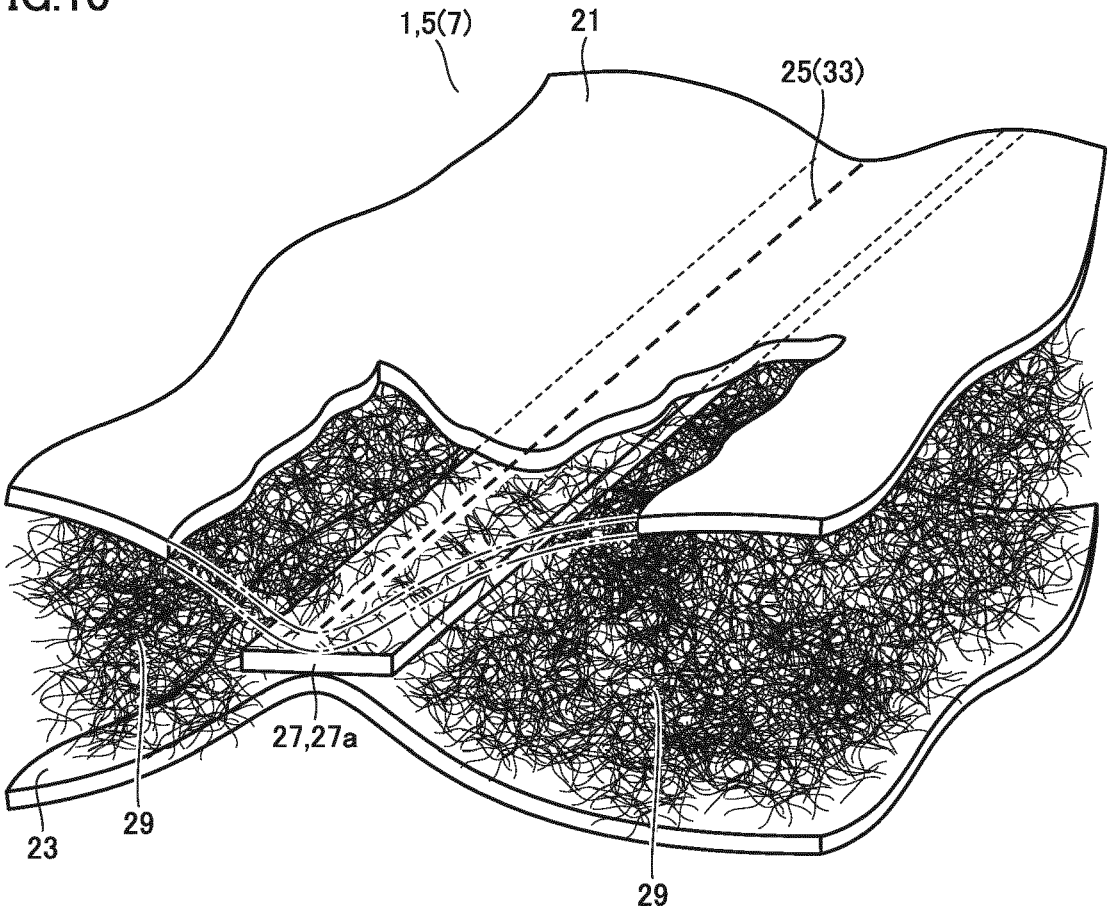


FIG.11

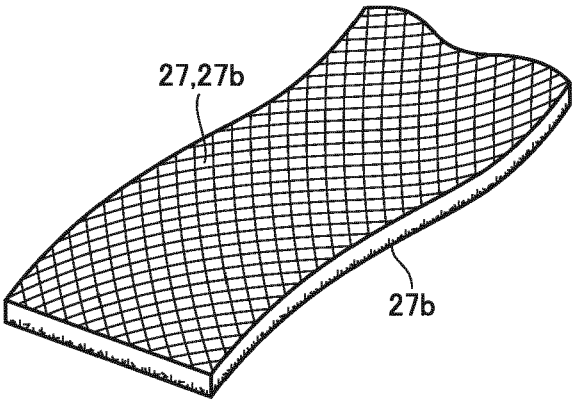
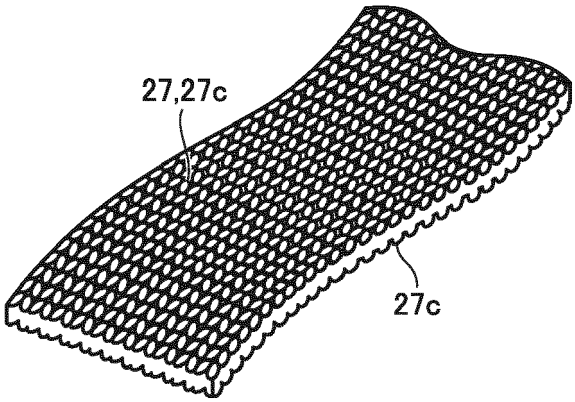


FIG.12



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EUROPEAN SEARCH REPORT

Application Number
EP 21 15 5549

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	KR 100 897 520 B1 (IREH FASHION CO LTD [KR]) 15 May 2009 (2009-05-15) * the whole document *	1,4,5,8	INV. A47G9/02 A41D3/00 A41D31/06
X	KR 2010 0105069 A (LEE DONG JIN [KR]) 29 September 2010 (2010-09-29) * the whole document *	1-3,5-7	A41D27/24
X	KR 100 925 003 B1 (WON JEON CORP [KR]) 4 November 2009 (2009-11-04) * figures *	1,5	
X	JP S57 126861 U (-) 7 August 1982 (1982-08-07) * figures 5,6 *	1,5	

TECHNICAL FIELDS SEARCHED (IPC)

A47G
A41D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	28 June 2021	Debard, Michel

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 21 15 5549

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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28-06-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 100897520 B1	15-05-2009	NONE	
KR 20100105069 A	29-09-2010	NONE	
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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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