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(54) **FRILLED WOVEN FABRIC**

(57) A skirt having a fine frill, a blouse having a frill and the like can be easily manufactured at a low cost.

A base cloth portion 1, a frill cloth portion 2 in number of tiers required to have a overlapping relationship with the base cloth portion 1 provided on the front side of the base cloth portion 1, a binding portion 3 binding the base cloth portion 1 and the frill cloth portion 2 by folded-weaving, and a connection portion 4 fabricated only by warps and provided so as to penetrate the base cloth portion 1 from the tip end on the side opposite to the binding portion 3 of the frill cloth portion 2 and to connect to one end of the binding portion 3 are woven continuously and integrally, where the connection portion 4 is cut and the frill cloth portion 2 is lifted up, and only by applying work such as merrow lock stitch or the like for preventing fraying of the tip end of the frill cloth portion 2, a fine frill can be created easily.

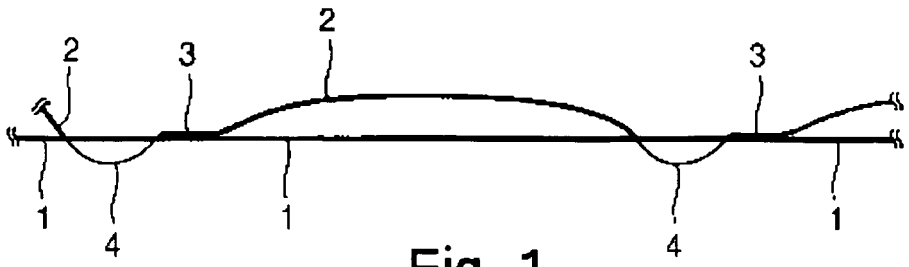

Fig. 1

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Description

Technical Field

[0001] The present invention relates to a woven fabric having a frill used for manufacture of a skirt having a frill, blouse having a frill and the like.

Background Art

[0002] If a skirt having a frill, a blouse having a frill and the like are to be manufactured in the clothing field, end-portion processing and sewing of a frill are accomplished mostly by sewing using a sewing machine.

[0003] Conventionally, if a skirt having three tiers of frills is to be manufactured, for example, three frill cloths are made by cutting a desired fabric into a desired width and they are subjected to processing for preventing fraying at an end portion of each frill cloth. If the frill is to be gathered, an upper-end side portion of each frill cloth is sewn into a shorter length so as to equally gather each frill. Then, by sewing the three frill cloths in order from the lower tier to a skirt cloth fabricated separately from the frill, a skirt having a frill is completed (See Non-Patent Literature 1, for example).

Citation List

Non-Patent Literature

[0004] NPL 1: "Skirt having beautiful silhouette despite linear sewing" by Sato Watanabe, Kawade Shobo Shinsha, issued on May 30, 2006, page 41)

Summary of Invention

Technical Problem

[0005] However, the above-described prior-art technology has problems described below.

[0006] In the prior-art technology, a cutting work of a fabric for fabricating the above-described three frill cloths requires 4 processes. The processing methods for preventing fraying at end portions of the three frill cloths include a merrow lock stitch, three rolled, zigzag three rolled sewing and the like, and so the processing on both end portions of the three frill cloths requires 6 processes as a work. When the frill is gathered, the upper-end portion of each frill cloth is sewn shorter as described above, and processing is needed to be performed for three cloths, so that three processes of work are required. When the three frill cloths are sewn to the skirt cloth in the order from the lower tier, a procedure such that a position where the frill is to be sewn is marked with a line and the frill cloth is sewn by a lock-stitch sewing machine at the position of the marked line is used in order to make clean finishing, but this work needs 6 processes, and moreover, the sewn position is sewn inside by using a cover-stitch sewing machine in order to hide the sewn position of the frill cloth and a holding stitch is applied by the lock-stitch sewing machine, which makes 6 processes in total, is required.

[0007] As described above, with the prior-art technology, since the work of 25 processes at the minimum is required even for fabricating three tiers of frills and sewing them to the skirt cloth, the manufacture needs enormous time and labor and has a problem of a high manufacturing cost.

[0008] The present invention has an object to solve such problems.

Solution to Problem

[0009] In order to solve such problems, a woven fabric having a frill of the present invention is characterized by having a base cloth portion, a frill cloth portion in number of tiers required to have a overlapping relationship with this base cloth portion provided on a front side of the base cloth portion, a binding portion where the base cloth portion and one end of the frill cloth portion are bound by folded-weaving, and a connection portion fabricated only by a warp and provided so as to penetrate the base cloth portion from a tip end of the frill cloth portion on the side opposite to the binding portion and to connect to one end of the binding portion.

Advantageous Effects of Invention

[0010] According to the present invention, after the connection portion is cut and the tip end of the frill cloth portion is separated from the base cloth portion 1, a fine frill can be made easily only by applying work such as merrow lock stitch and the like for preventing fraying at the tip end thereof and thus, the frill can be completed only with 1/3 to 1/4 of the conventional processes. Moreover, since the present invention does not require difficult sewing artifice requiring skills, a skirt or blouse having a fine frill and the like can be manufactured easily at a low cost advantageously.

Brief Description of Drawings

[0011]

Fig. 1 is a side view of an essential part illustrating a first embodiment.

Fig. 2 is a perspective view of the essential part illustrating the first embodiment.

Fig. 3 is a partial perspective view of a connection portion in the first embodiment.

Fig. 4 is a side view of the essential part illustrating a process of completing a frill in the first embodiment.

Fig. 5 is a perspective view of the essential part illustrating a process of completing a frill in the first embodiment.

Fig. 6 is a side view of an essential part illustrating

a second embodiment.

Fig. 7 is a perspective view of the essential part illustrating the second embodiment.

Fig. 8 is a side view of the essential part illustrating a process of completing a frill in the second embodiment.

Fig. 9 is a perspective view of the essential part illustrating a process of completing a frill in the second embodiment.

Description of Embodiments

[0012] An embodiment of a woven fabric having a frill according to the present invention will be described below by referring to the attached drawings.

Embodiment 1

[0013] Fig. 1 is a side view of an essential part illustrating a first embodiment and Fig. 2 is a perspective view of the essential part illustrating the first embodiment, in which reference numeral 1 denotes a base cloth portion, reference numeral 2 denotes a frill cloth portion, reference numeral 3 denotes a binding portion, and reference numeral 4 denotes a connection portion. The base cloth portion 1, the frill cloth portion 2, the binding portion 3, and the connection portion 4 are woven continuously and integrally by a Jacquard loom.

[0014] Here, the base cloth portion 1 is a cloth portion which becomes a base for a skirt, a blouse and the like, and the frill cloth portion 2 is a cloth portion which becomes a decoration frill, and this frill cloth portion 2 in number corresponding to tiers (frill cloths) required to have a overlapping relationship with the base cloth portion 1 is provided on the front side of the base cloth portion 1. The binding portion 3 is a portion where the base cloth portion 1 and the frill cloth portion 2 are folded and woven, and one end of the frill cloth portion 2 is bound to the base cloth portion 1 by this binding portion 3. Moreover, in the binding portion 3, a urethane yarn is used as a weft yarn having contractility. As this urethane yarn, a yarn stretched and solidified by glue is used, and after being woven as a weft yarn, the glue is washed off, and the binding portion 3 is contracted so that a gather 5 is created in a portion on the binding portion 3 side of the base cloth portion 1 and the frill cloth portion 2 at equal intervals.

[0015] Fig. 3 is a partial perspective view of the connection portion 4. The connection portion 4 is a portion created only by warps and is provided so as to penetrate the base cloth portion 1 from an end portion (hereinafter referred to as a tip end) on the side opposite to the binding portion 3 of the frill cloth portion 2 and to connect to one end of the binding portion 3. The connection portion 4 is also created such that looseness is given on the back side of the base cloth portion 1 and a cutting tool such as scissors can be inserted therein.

[0016] Fig. 4 is a side view of an essential part illustrating a process of completing a frill, and Fig. 5 is a perspective view of the essential part, in which the connection portion 4 of the woven fabric having a frill woven as above is cut by inserting a cutting tool such as scissors into the portion given looseness on the back side of the base cloth portion 1. After the cutting, by lifting up the frill cloth portion 2, the tip end of the frill cloth portion 2 is separated from the base cloth portion 1 as illustrated in Figs. 4 and 5 and then, by applying work such as merrow lock stitch or the like in order to prevent fraying at the tip end of the frill cloth portion 2, the frill is completed. The warp of the connection portion 4 remains on the binding portion 3 side, but since the binding portion 3 is firmly woven by folded-weaving, there is no concern that the binding portion 3 frays.

[0017] The woven fabric having a frill completed as above can be used for easily manufacturing a skirt having a frill by sewing and can be also used for manufacturing clothes such as a blouse having a frill on a body part or a sleeve by using this woven fabric having a frill and can be further used for manufacture of decorations, accessories and the like having frills.

[0018] As described above, since the woven fabric having a frill according to the first embodiment is composed of the base cloth portion 1, the frill cloth portion 2 in number of tiers (frill cloths) required to have a overlapping relationship with this base cloth portion 1 provided on the front side of the base cloth portion 1, the binding portion 3 binding the base cloth portion 1 and the frill cloth portion 2 by folded-weaving, and the connection portion 4 fabricated only by warps and provided so as to penetrate the base cloth portion 1 from the tip end on the side opposite to the binding portion 3 of the frill cloth portion 2 and to connect to one end of the binding portion 3 are woven continuously and integrally, after the connection portion 4 is cut off and the frill cloth portion 2 is lifted up and separated from the base cloth portion 1, only by applying working process such as merrow lock stitch or the like for preventing fraying of the tip end of the frill cloth portion 2, a fine frill can be created easily.

[0019] Since the urethane yarn made by being stretched and solidified with glue is woven as a weft yarn for the binding portion 3, by washing off the glue and making the binding portion 3 contract, the gather 5 can be created at equal intervals on a portion on the binding portion 3 side of the base cloth portion 1 and each frill cloth portion 2. Moreover, if a skirt is to be manufactured, for example, the frill cloth portion 2, the binding portion 3, and the connection portion 4 can be woven with the base cloth portion 1 in a series of processes for weaving the base cloth portion 1 from a waist to a hem of the skirt by Jacquard weaving, so that the manufacture is extremely easy.

[0020] As described above, in the woven fabric having a frill according to the first embodiment, a process to completion of a frill is made shorter than a conventional frill work by sewing, and if processes of making a three-tiered frill is compared, for example, the conventional frill work

by sewing requires at least 25 processes, while the first embodiment needs only 6 processes in total, that is, 3 processes for cutting of the connection portion 4 and 3 processes for work of merrow lock stitch or the like for preventing fraying at the tip end of the frill cloth portion 2. Thus, with the first embodiment, the three-tiered frill can be completed with processes substantially 1/4 of the conventional processes and moreover, since a difficult sewing artifice requiring skills is not needed, a skirt or blouse having a fine frill and the like can be manufactured easily at a low cost advantageously.

Embodiment 2

[0021] Fig. 6 is a side view of an essential part illustrating a second embodiment, and Fig. 7 is a perspective view of the essential part illustrating the second embodiment, and in this second embodiment, a ribbon frill is used as a frill. In this second embodiment, the connection portion 4 in the first embodiment is omitted, the frill cloth portion 2 in number of tiers (frill cloths) required to have a overlapping relationship with the base cloth portion 1 is provided on the front side of the base cloth portion 1, both ends of the frill cloth portion 2 are folded and woven with the base cloth portion 1 so as to create the binding portion 3 so that the frill cloth portion 2 is bound to the base cloth portion 1 by the binding portion 3. Moreover, a weft yarn in color different from that of the frill cloth portion 2 is woven in a desired portion, such as at the center part of each frill cloth 2, so that a cut line (line for cutting) 6 is provided.

[0022] In this second embodiment, too, the base cloth portion 1, the frill cloth portion 2, and the binding portion 3 are woven by a Jacquard loom continuously and integrally. A urethane yarn as a yarn having contractility formed by being stretched and solidified by glue is woven as a weft yarn in the binding portion 3, and by washing off the glue so as to have the binding portion 3 contract, the gathers 5 are created at equal intervals on a portion on the binding portion 3 side of the base cloth portion 1 and each frill cloth portion 2.

[0023] Fig. 8 is a side view of an essential part illustrating a process of completing a ribbon frill, Fig. 5 is a perspective view of the essential part, and the frill cloth portion 2 of a woven fabric having a frill woven as above is cut by a cutting tool such as scissors in accordance with the cut line 6. As a result, the frill cloth portion 2 is divided into two parts between the binding portions 3, and by applying work such as merrow lock stitch or the like for preventing fraying of the tip end of each of the divided part, the ribbon frill is completed.

[0024] The woven fabric having a frill in which the ribbon frill is completed as above can be used for easily manufacturing a skirt having a ribbon frill by sewing and can be also used for manufacturing clothes such as a blouse having a ribbon frill on a body part or a sleeve by using this woven fabric having a frill and can be further used for manufacture of decorations, accessories and the like having ribbon frills.

[0025] As described above, in the woven fabric having a frill according to the second embodiment, the frill cloth portion 2 in number of tiers (frill cloths) required to have a overlapping relationship with the base cloth portion 1 is provided on the front side of the base cloth portion 1, and the both ends of the frill cloth portion 2 are folded and woven with the base cloth portion 1 so as to create the binding portion 3, thereby the weft yarn in color different from that of the frill cloth portion 2 is woven in a desired portion, such as the center part of each frill cloth 2, so as to provide the cut line 6. In accordance with the cut line 6, the frill cloth portion 2 is cut by a cutting tool such as scissors or the like, so as to divide the frill cloth portion 2 between the binding portions 3 and by applying work such as merrow lock stitch or the like for preventing fraying of the tip end of each of the divided parts, a fine ribbon frill can be created easily.

[0026] Since the urethane yarn made by being stretched and solidified with glue is woven as a weft yarn for the binding portion 3, by washing off the glue and by having the binding portion 3 contract, the gathers 5 can be created at equal intervals on the portion on the binding portion 3 side of the base cloth portion 1 and each frill cloth portion 2. Moreover, if a skirt is to be manufactured, for example, the frill cloth portion 2 and the binding portion 34 can be woven with the base cloth portion 1 in a series of processes for weaving the base cloth portion 1 from a waist to a hem of the skirt by Jacquard weaving, so that the manufacture is extremely easy.

[0027] As described above, in the woven fabric having a frill according to the first embodiment, a process to completion of a ribbon frill is made shorter than a conventional frill work by sewing, and if processes of creating a three-tiered ribbon frill is compared, for example, the conventional frill work by sewing requires at least 28 processes, while the first embodiment needs only 9 processes in total, that is, 3 processes for cutting of the connection portion 4 and 6 processes for work of merrow lock stitch or the like for preventing fraying at the tip end of the frill cloth portion 2, and thus, the three-tiered ribbon frill can be completed with processes substantially 1/3 to 1/4 of the conventional processes. Moreover, since the present invention does not require difficult sewing artifice requiring skills, a skirt or blouse having a fine ribbon frill and the like can be manufactured easily at a low cost advantageously.

[0028] In the above-described first and second embodiments, the entirety is assumed to be woven by Jacquard but may be woven by dobby or the like.

Reference Signs List

[0029]

1 base cloth portion
2 frill cloth portion
3 binding portion

4 connection portion
5 gather
6 cut line

Claims

1. A woven fabric having a frill, **characterized by** having a base cloth portion, a frill cloth portion in number of tiers required to have a overlapping relationship with this base cloth portion provided on a front side of the base cloth portion, a binding portion where the base cloth portion and one end of the frill cloth portion are bound by folded-weaving, and a connection portion fabricated only by a warp and provided so as to penetrate the base cloth portion from a tip end of the frill cloth portion on the side opposite to the binding portion and to connect to one end of the binding portion.

2. A woven fabric having a frill, **characterized by** having a frill cloth portion, a frill cloth portion in number of tiers required to have a overlapping relationship with the base cloth portion provided on a front side of the base cloth portion, a binding portion where the base cloth portion and both ends of the frill cloth portion are bound by folded-weaving, and a cut line provided by weaving a weft yarn in color different from that of the frill cloth portion in the frill cloth portion.

3. The woven fabric having a frill according to claim 1 or 2, wherein
a yarn formed by being stretched and solidified by glue and having contractility is woven as a weft yarn in the binding portion 3, and a gather formed by washing off the glue and making binding portion contract is provided on the base cloth portion and each frill cloth portion.

4. The woven fabric having a frill according to any one of claims 1 to 3, wherein
the entirety is fabricated by Jacquard or dobby.

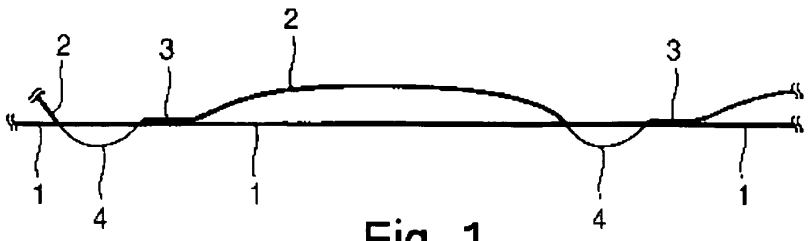

Fig. 1

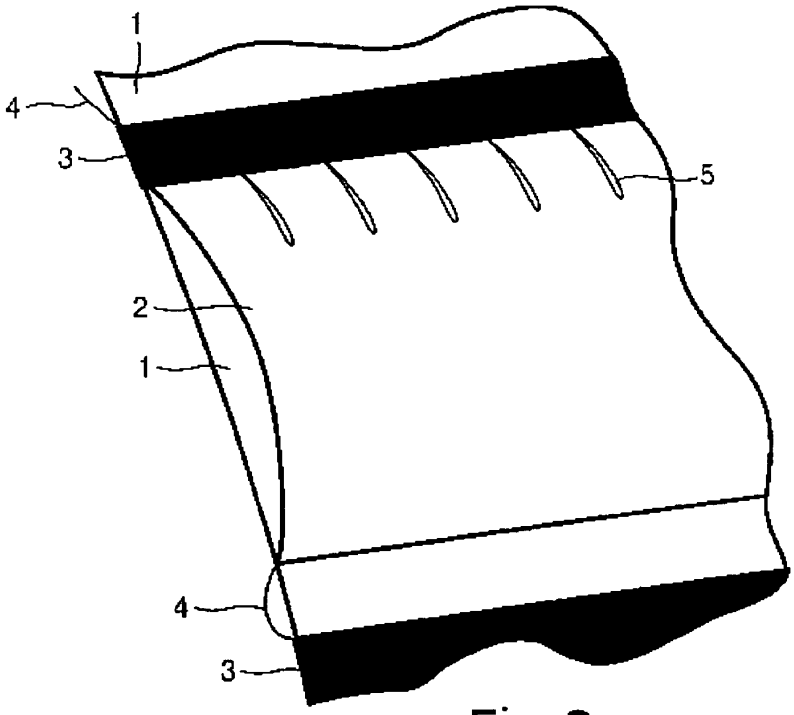

Fig. 2

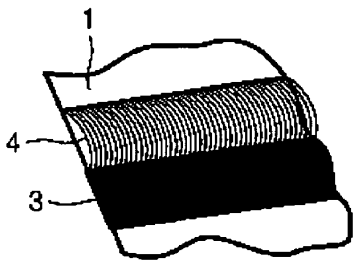

Fig. 3

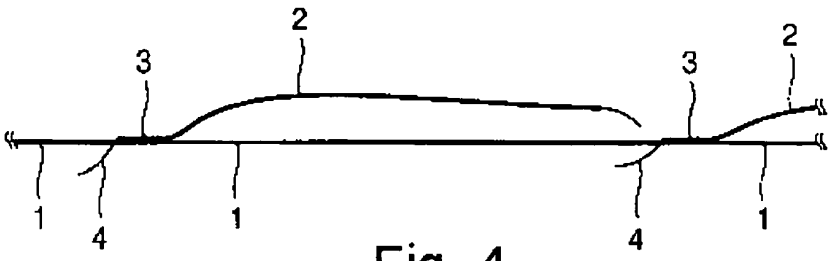

Fig. 4

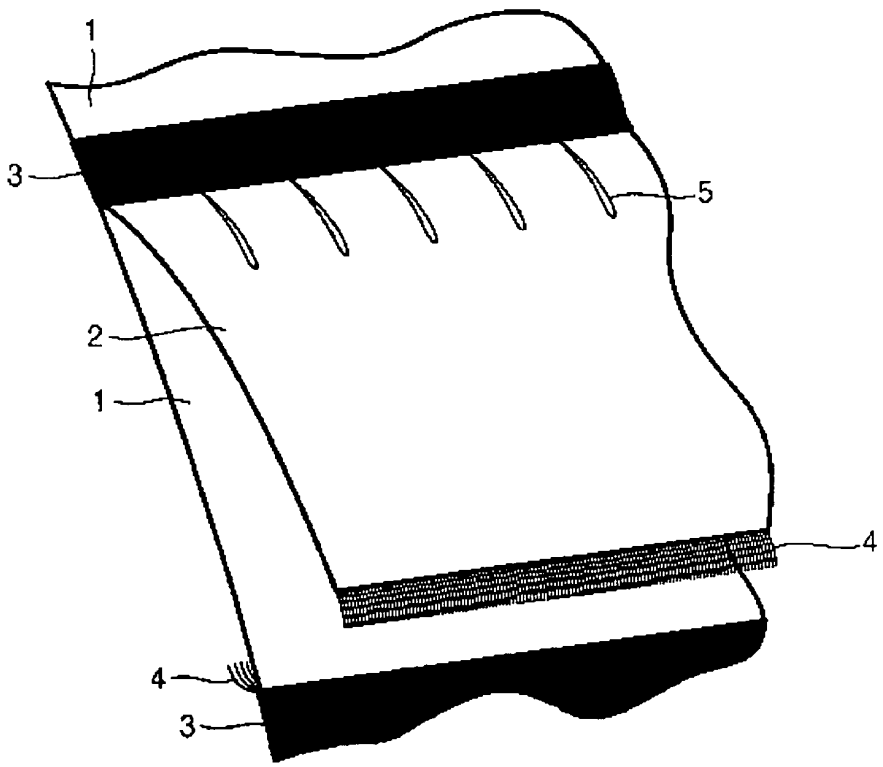

Fig. 5

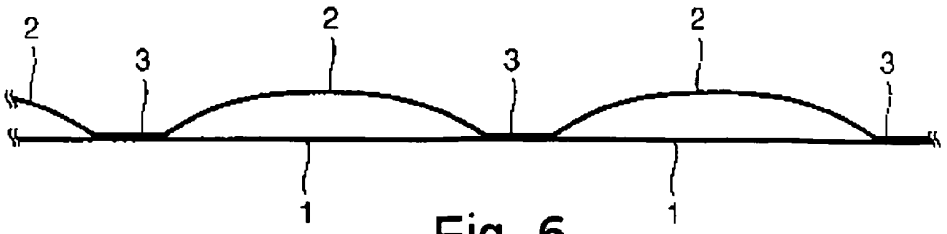

Fig. 6

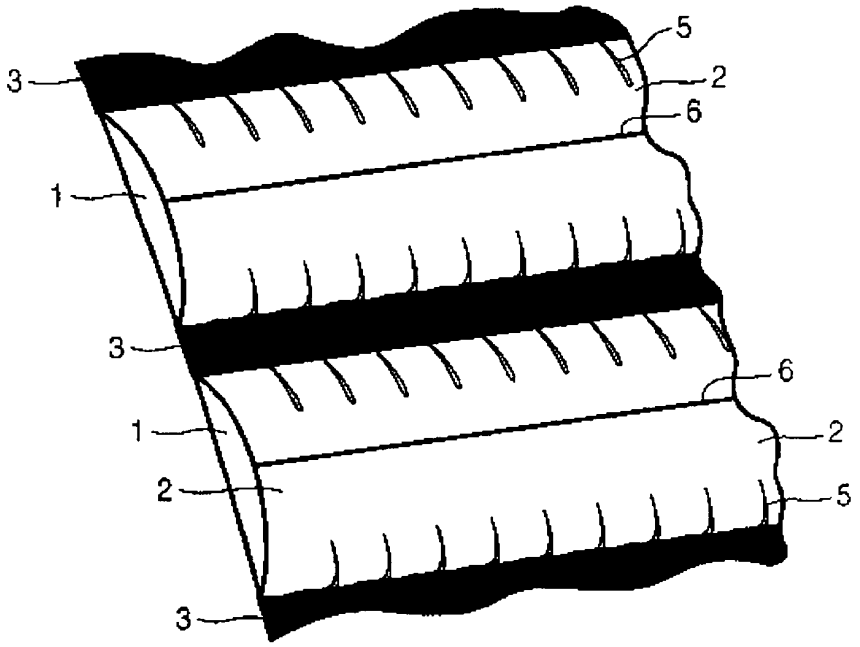

Fig. 7

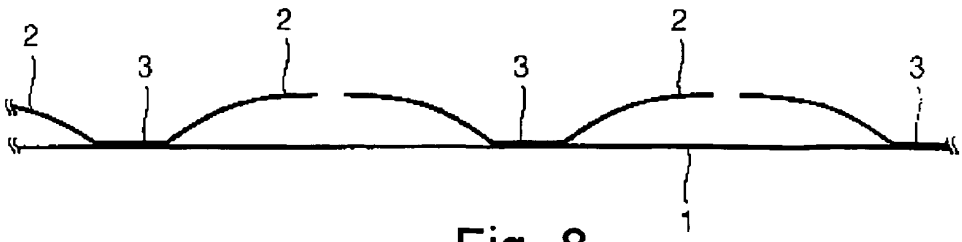

Fig. 8

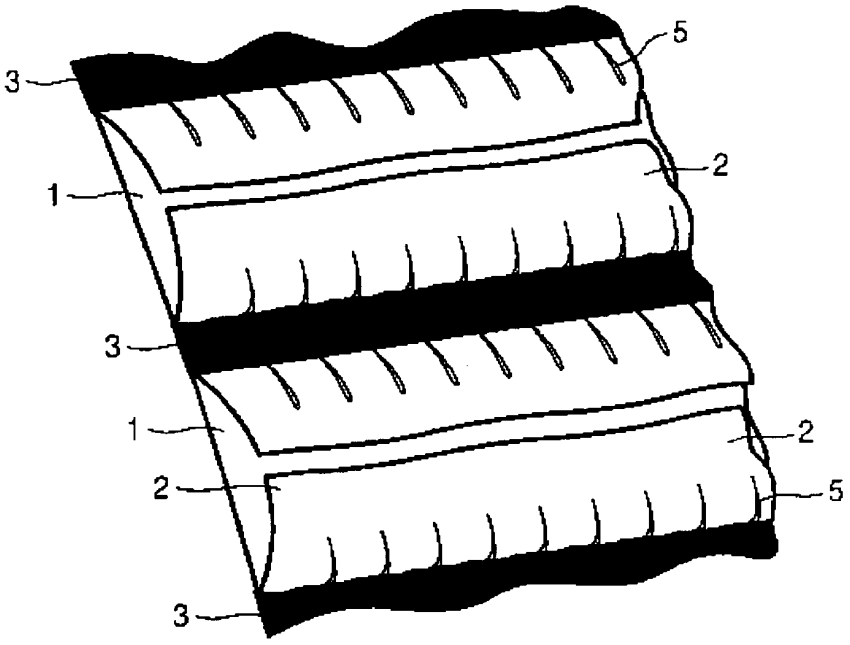

Fig. 9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2010/058234

A. CLASSIFICATION OF SUBJECT MATTER
D03D11/00(2006.01)i, *A41D27/08*(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)
A41D27/00-27/28, D03D1/00-27/18, D04D1/00-11/00, D06Q1/00-1/14

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

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2010
Kokai Jitsuyo Shinan Koho	1971-2010	Toroku Jitsuyo Shinan Koho	1994-2010

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 45-28620 Y1 (Gunji AOKI), 04 November 1970 (04.11.1970), entire text (Family: none)	1-4
A	JP 47-18527 Y1 (Kaneka Sengyo Kabushiki Kaisha), 26 June 1972 (26.06.1972), entire text (Family: none)	1-4

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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"O" document referring to an oral disclosure, use, exhibition or other means
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"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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 June, 2010 (15.06.10)	22 June, 2010 (22.06.10)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

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Non-patent literature cited in the description

- **SATO WATANABE.** Skirt having beautiful silhouette despite linear sewing. *Kawade Shobo Shinsha,* 30 May 2006, 41 **[0004]**