US 20250194716A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2025/0194716 A1

MIZOBATA et al. (43) Pub. Date: Jun. 19, 2025

(54) GARMENT MANUFACTURING METHOD

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(21) Appl. No.: **18/845,638**

(22) PCT Filed: **Mar. 16, 2023**

(86) PCT No.: **PCT/JP2023/010346**

§ 371 (c)(1),
(2) Date: **Sep. 10, 2024**

(30) **Foreign Application Priority Data**

Mar. 17, 2022 (JP) 2022-043096

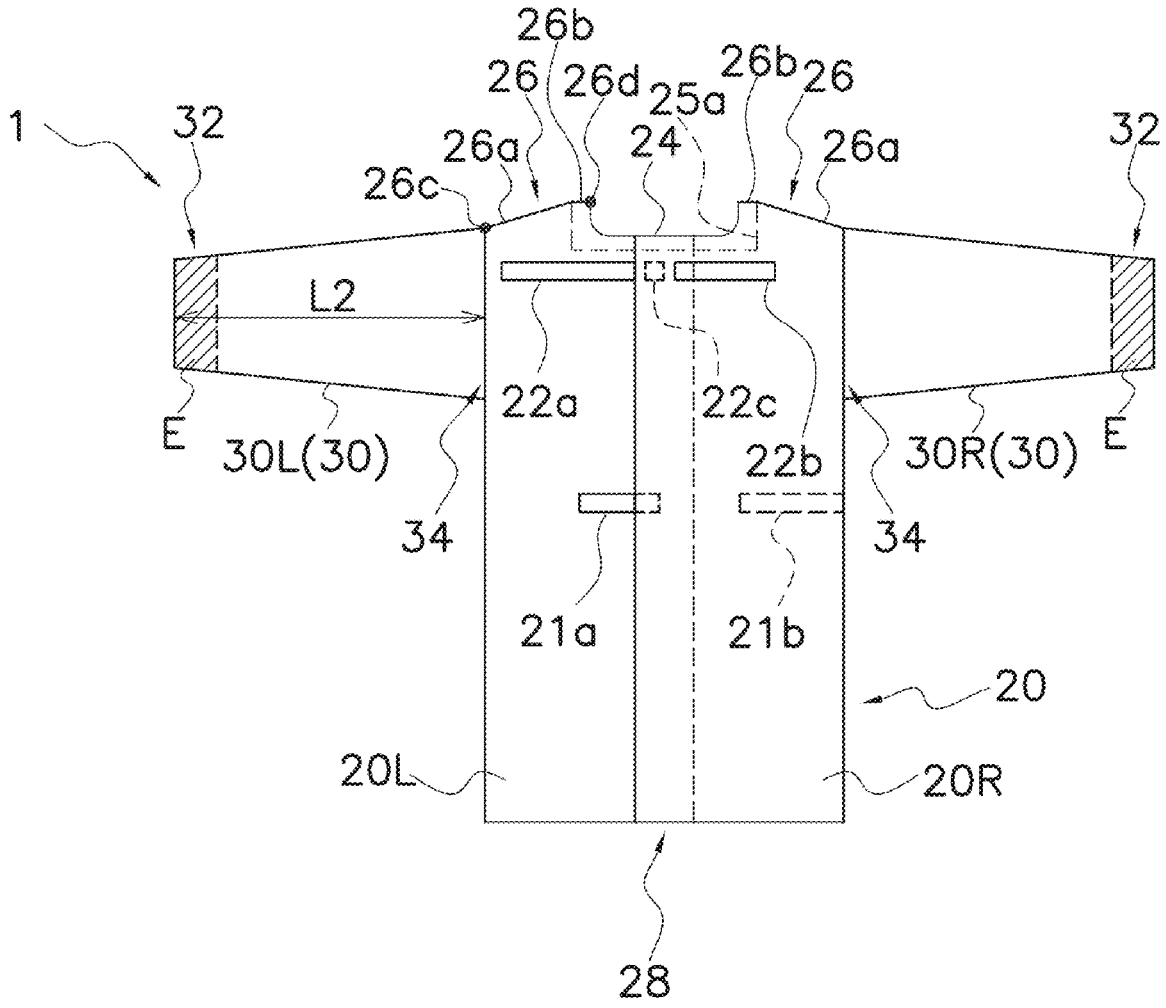
Publication Classification

(51) **Int. Cl.**
A41D 13/12 (2006.01)

(52) **U.S. Cl.**
CPC *A41D 13/1227* (2013.01)

(57) **ABSTRACT**

Provided is a method of manufacturing a garment that can be efficiently manufactured. A third sheet material and a fourth sheet material transported in a superimposed state are partially joined and cut in predetermined positions to form tubular sleeve members. The sleeve members are superimposed with a transported first sheet material for forming a front member. The transported first sheet material and a transported second sheet material are superimposed so that the sleeve members superimposed with the first sheet material are disposed between the first sheet material and the second sheet material. In a second formation process, the first sheet material and the second sheet material transported in the superimposed state are partially joined in conformity with the shape of the outer edge of a garment, and the first sheet material and the second sheet material transported in the superimposed state are partially cut in conformity with the shape of the outer edge of the garment. The garment that has been formed by the second formation process is separated from the first sheet material and the second sheet material.



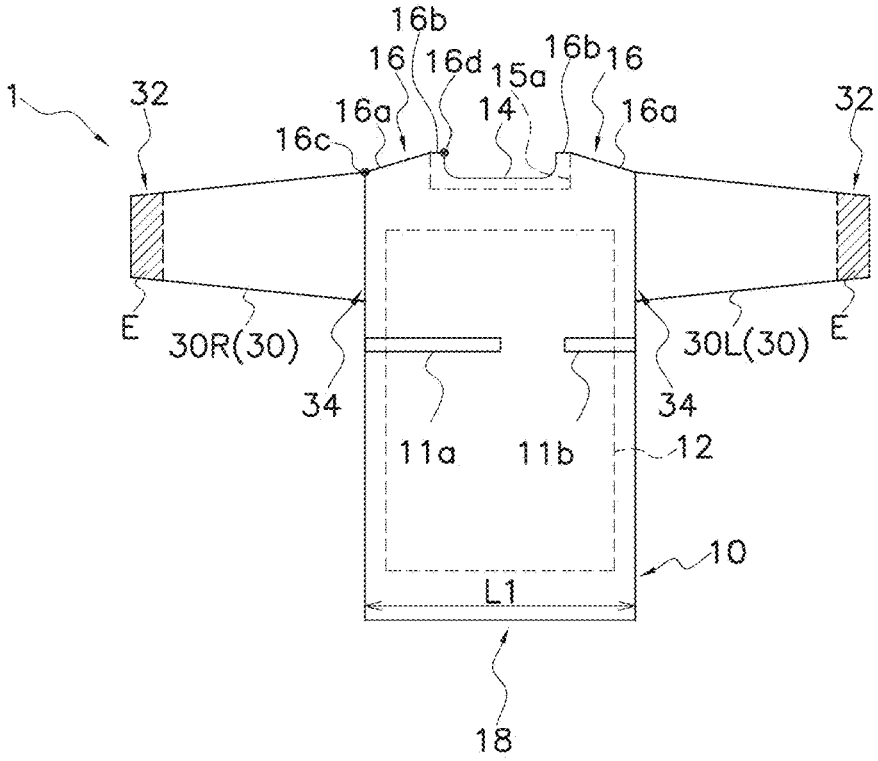

16b
16
16d
15a
16b
16
1
32
16a
14
16a
32
16c
E
30R(30)
30L(30)
E
34
34
11a
11b
12
10
L1
18

FIG. 1

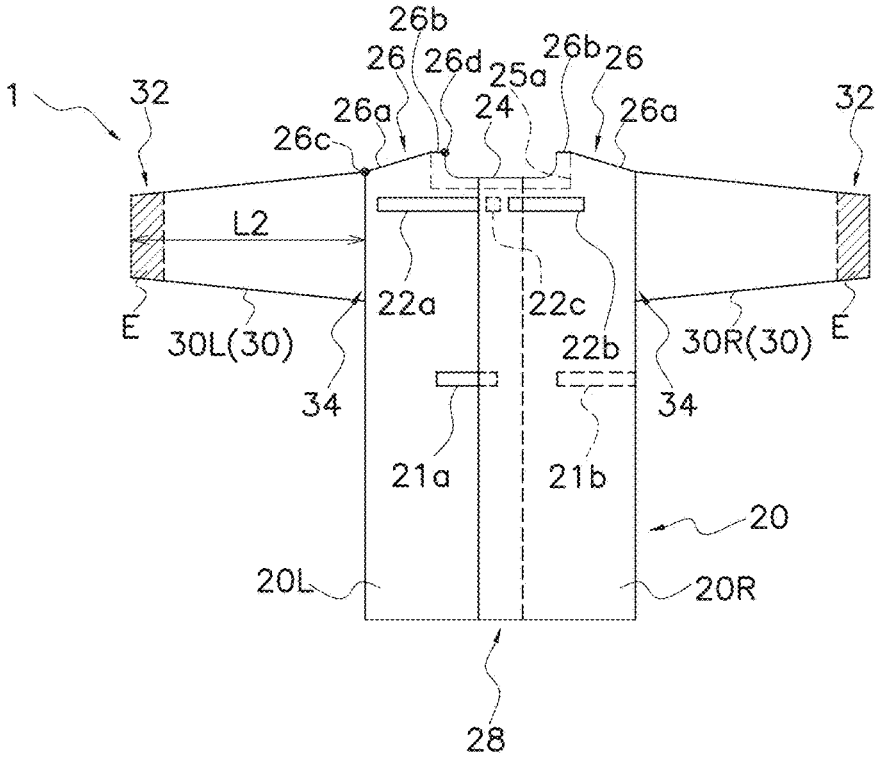

26b
26
26d
25a
26b
26
1
32
26a
24
26a
32
26c
L2
E
22a
22c
30L(30)
22b
30R(30)
E
34
34
21a
21b
20
20L
20R
28

FIG. 2

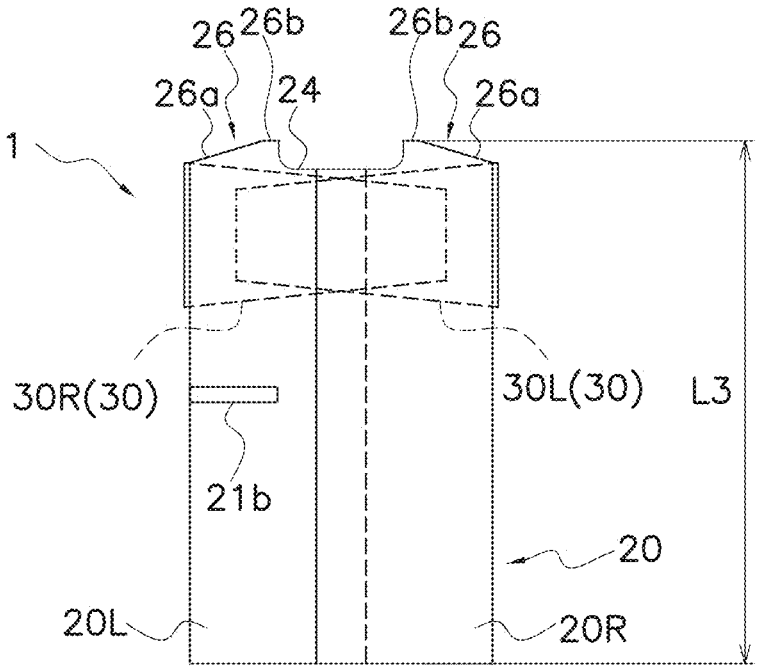


FIG. 3

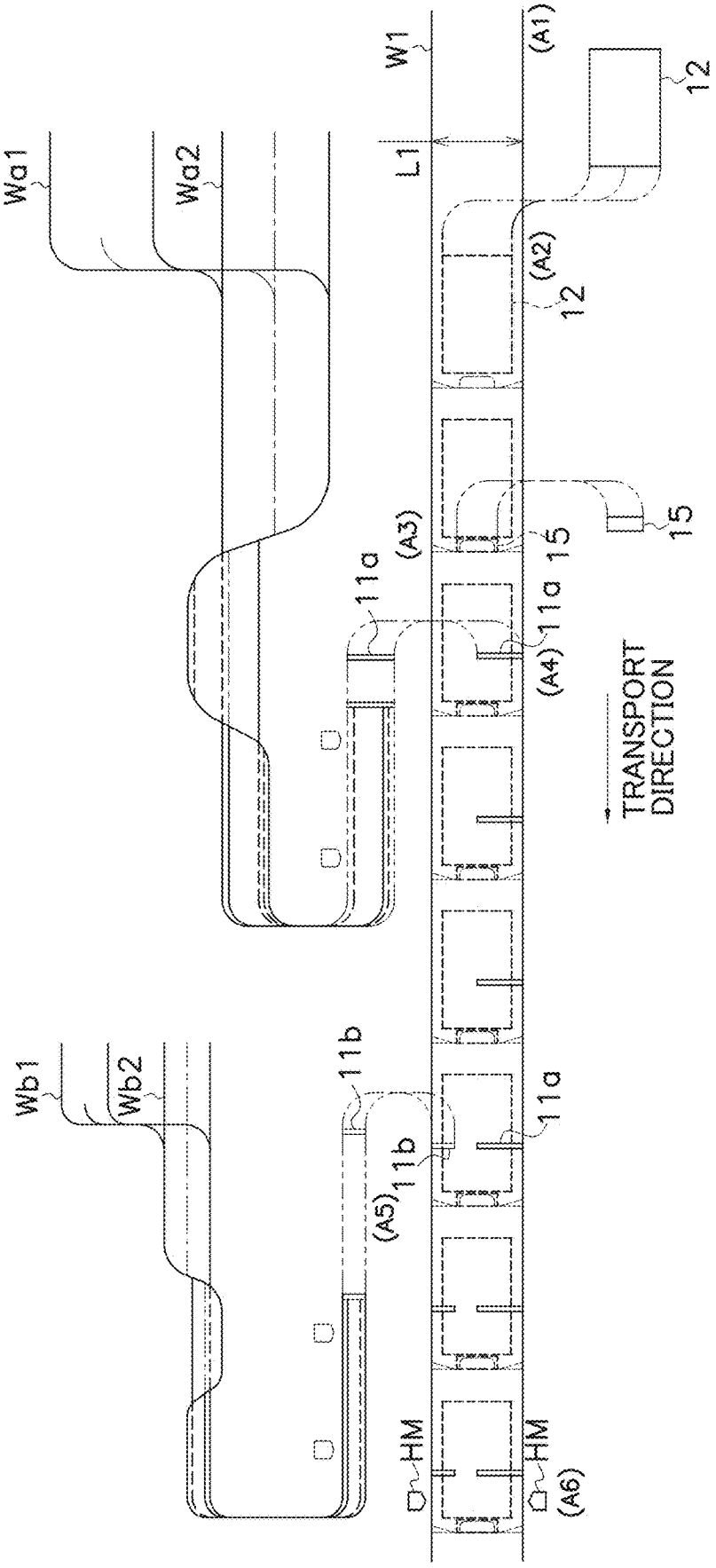

Wa1
Wa2
W1
L1
(A1)
12
(A2)
12
(A3)
11a
15
15
11a
(A4)
11a
TRANSPORT DIRECTION
Wb1
Wb2
11b
11b
(A5)
11a
HM
HM
(A6)

FIG. 4

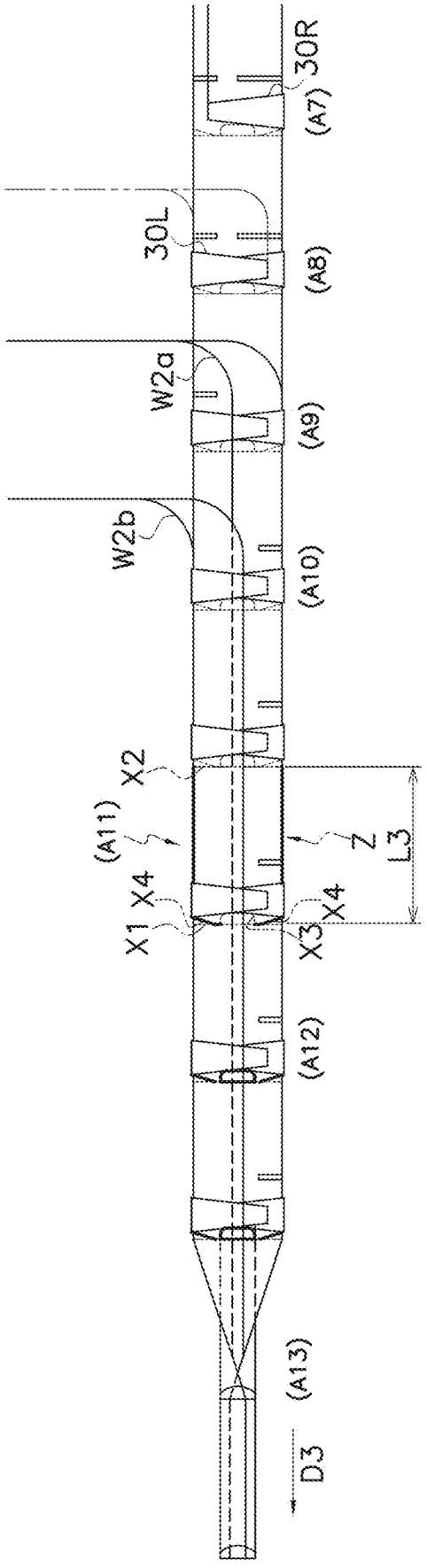


FIG. 5

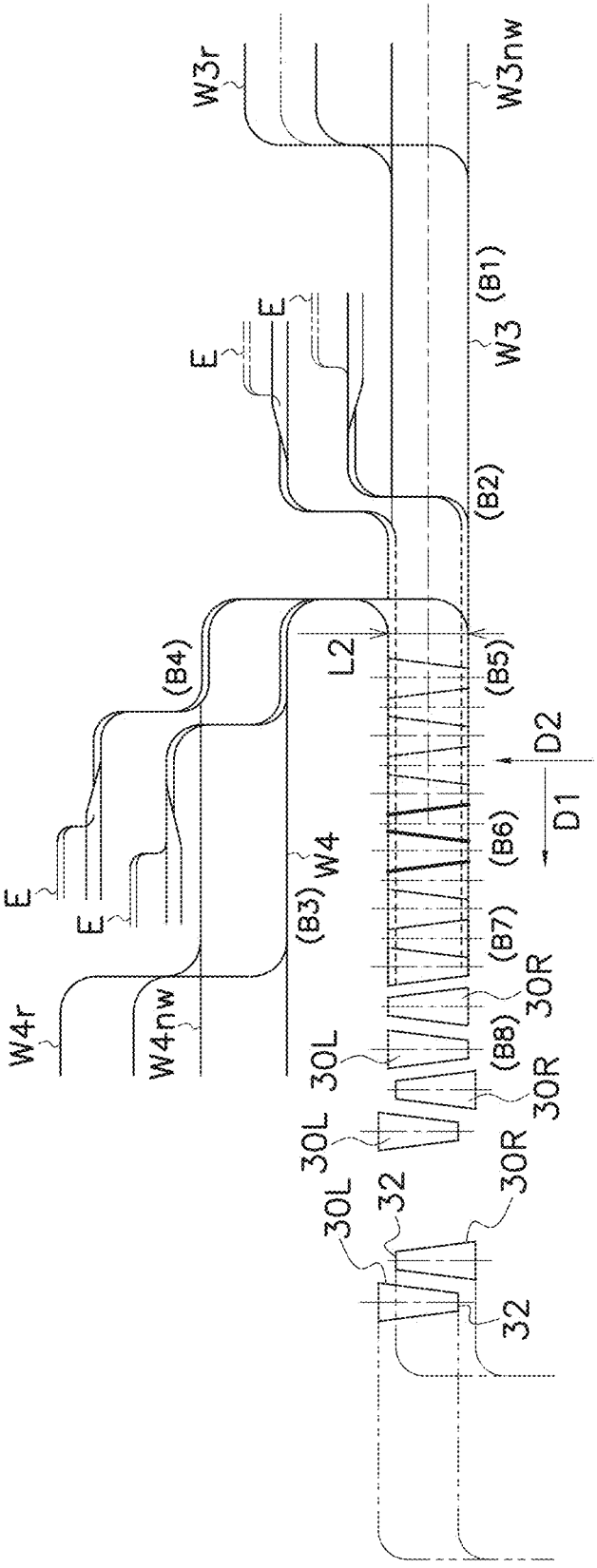

W3r
W3nw
E
E
E
E
W3
(B1)
(B2)
(B4)
L2
(B5)
D2
D1
W4
(B6)
(B3)
(B7)
30R
W4r
W4nw
30L
(B8)
30R
30L
30R
30L
32
32

FIG. 6

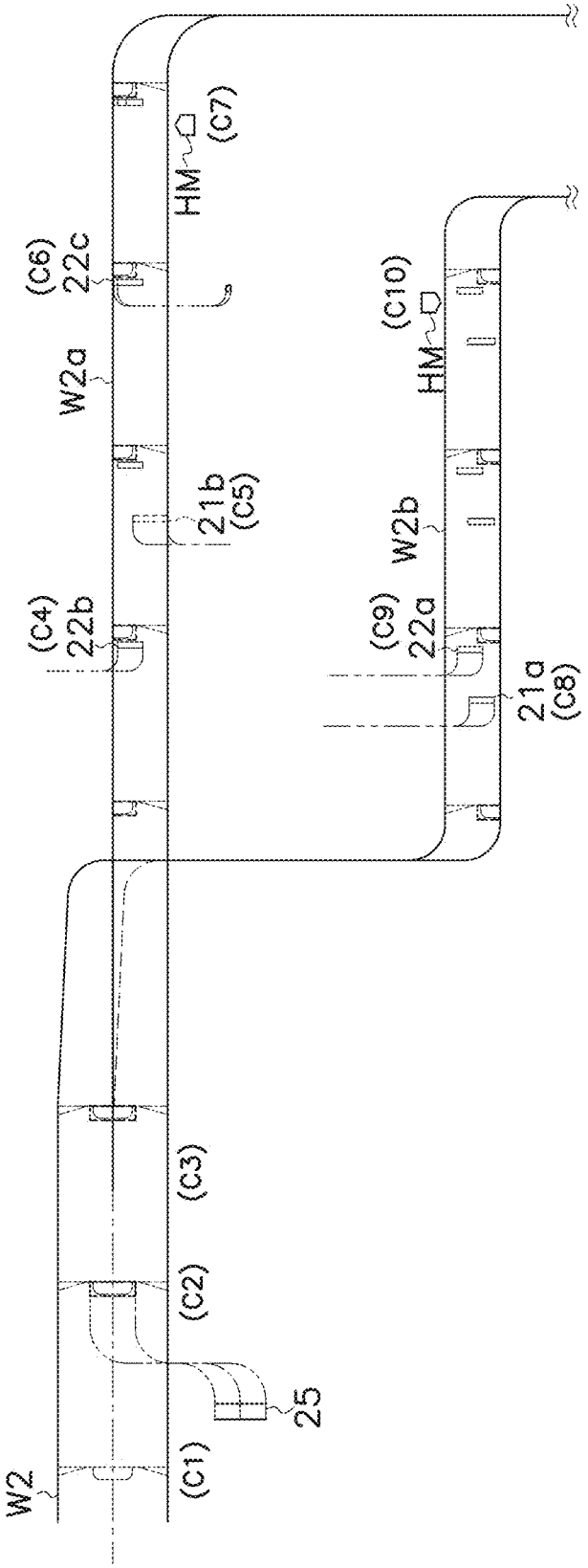

W2
(C1)
(C2)
(C3)
25
(C4)
22b
(C5)
21b
W2a
(C6)
22c
HM
(C7)
(C8)
21a
(C9)
22a
W2b
(C10)
HM

FIG. 7

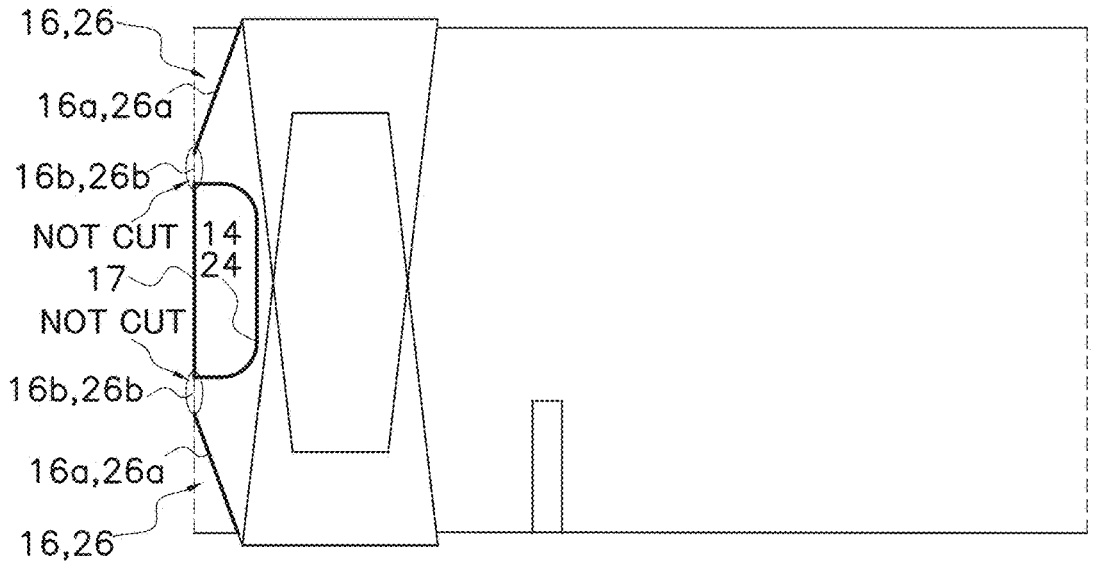

16,26
16a,26a
16b,26b
NOT CUT
14
24
17
NOT CUT
16b,26b
16a,26a
16,26

FIG. 8

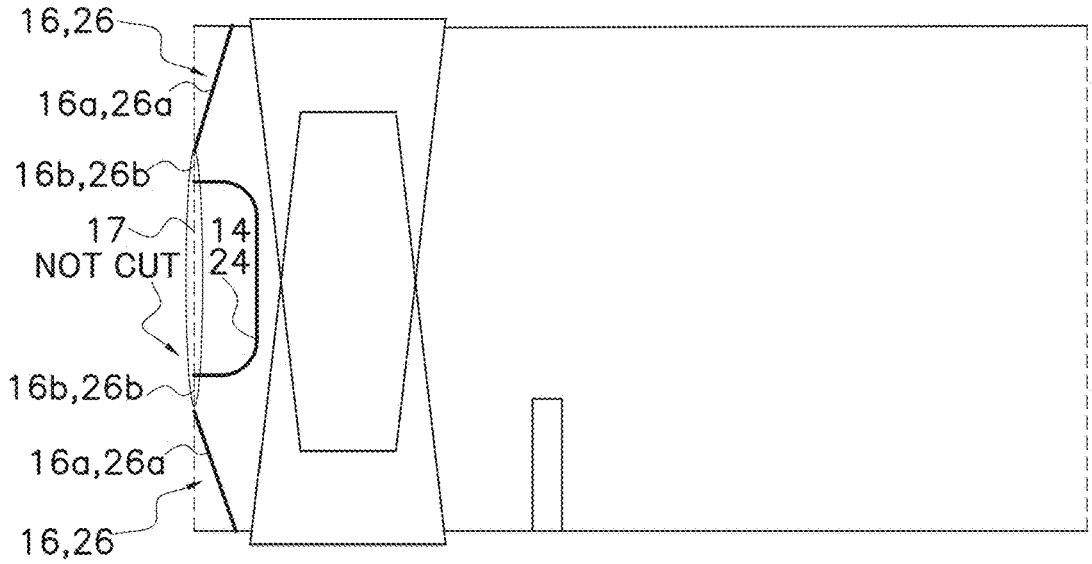

16,26
16a,26a
16b,26b
17
NOT CUT
14
24
16b,26b
16a,26a
16,26

FIG. 9

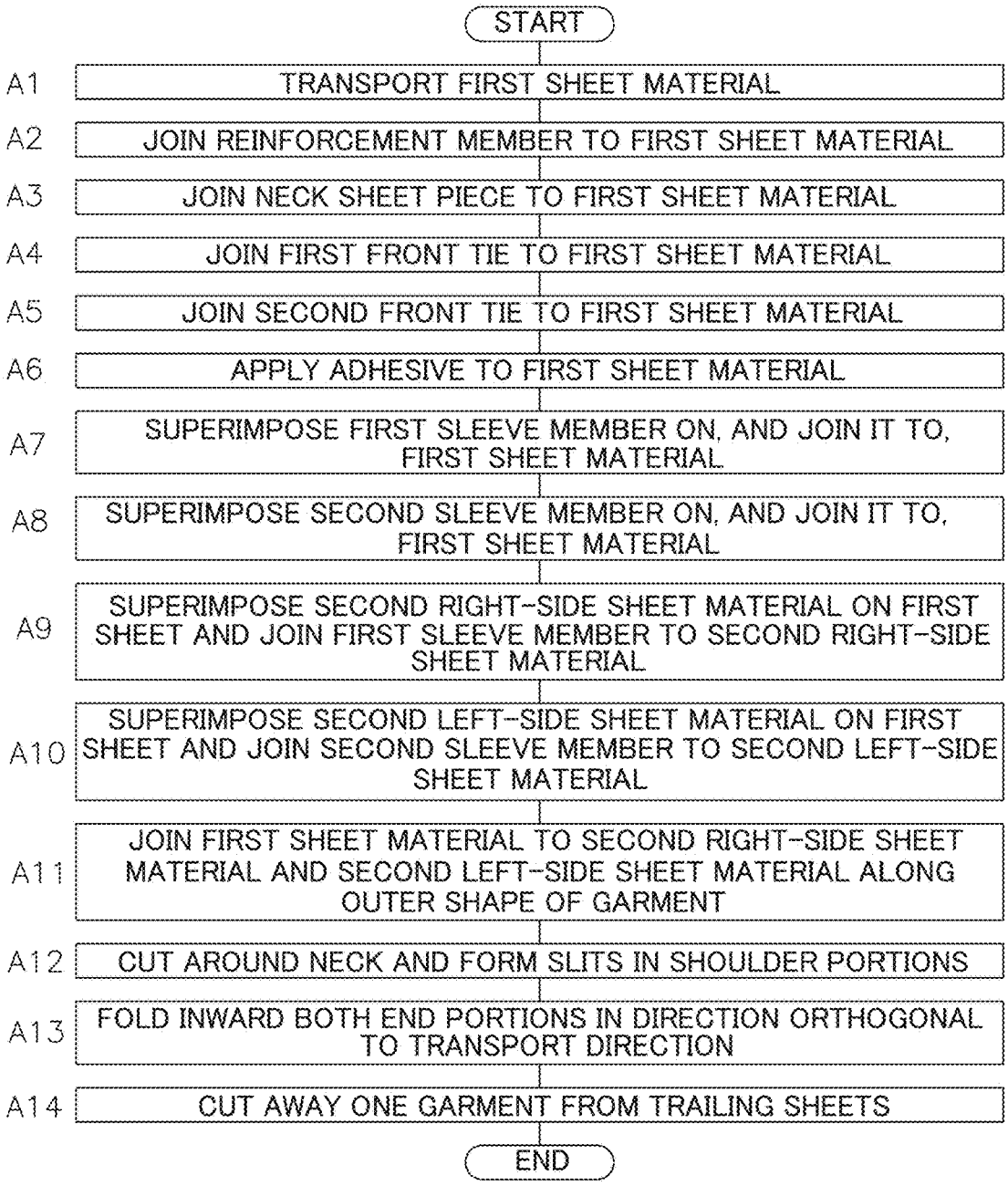

START
A1
TRANSPORT FIRST SHEET MATERIAL
A2
JOIN REINFORCEMENT MEMBER TO FIRST SHEET MATERIAL
A3
JOIN NECK SHEET PIECE TO FIRST SHEET MATERIAL
A4
JOIN FIRST FRONT TIE TO FIRST SHEET MATERIAL
A5
JOIN SECOND FRONT TIE TO FIRST SHEET MATERIAL
A6
APPLY ADHESIVE TO FIRST SHEET MATERIAL
A7
SUPERIMPOSE FIRST SLEEVE MEMBER ON, AND JOIN IT TO, FIRST SHEET MATERIAL
A8
SUPERIMPOSE SECOND SLEEVE MEMBER ON, AND JOIN IT TO, FIRST SHEET MATERIAL
A9
SUPERIMPOSE SECOND RIGHT-SIDE SHEET MATERIAL ON FIRST SHEET AND JOIN FIRST SLEEVE MEMBER TO SECOND RIGHT-SIDE SHEET MATERIAL
A10
SUPERIMPOSE SECOND LEFT-SIDE SHEET MATERIAL ON FIRST SHEET AND JOIN SECOND SLEEVE MEMBER TO SECOND LEFT-SIDE SHEET MATERIAL
A11
JOIN FIRST SHEET MATERIAL TO SECOND RIGHT-SIDE SHEET MATERIAL AND SECOND LEFT-SIDE SHEET MATERIAL ALONG OUTER SHAPE OF GARMENT
A12
CUT AROUND NECK AND FORM SLITS IN SHOULDER PORTIONS
A13
FOLD INWARD BOTH END PORTIONS IN DIRECTION ORTHOGONAL TO TRANSPORT DIRECTION
A14
CUT AWAY ONE GARMENT FROM TRAILING SHEETS
END

FIG. 10

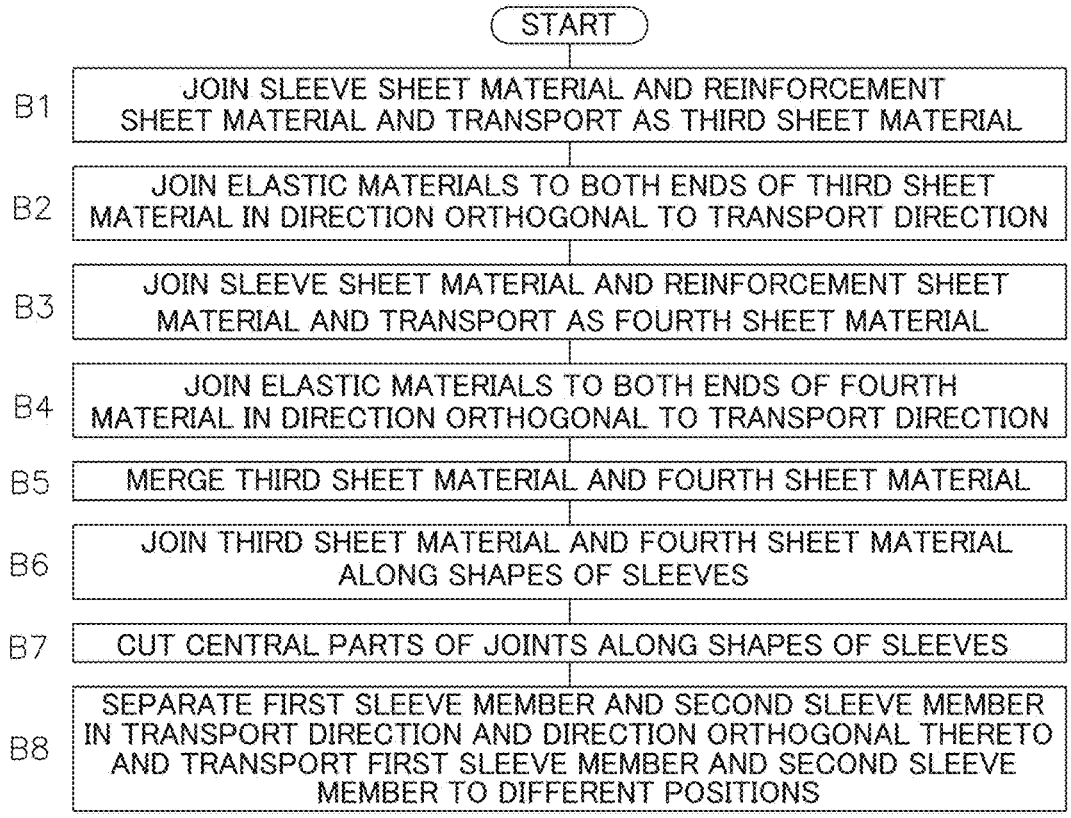

START
B1
JOIN SLEEVE SHEET MATERIAL AND REINFORCEMENT SHEET MATERIAL AND TRANSPORT AS THIRD SHEET MATERIAL
B2
JOIN ELASTIC MATERIALS TO BOTH ENDS OF THIRD SHEET MATERIAL IN DIRECTION ORTHOGONAL TO TRANSPORT DIRECTION
B3
JOIN SLEEVE SHEET MATERIAL AND REINFORCEMENT SHEET MATERIAL AND TRANSPORT AS FOURTH SHEET MATERIAL
B4
JOIN ELASTIC MATERIALS TO BOTH ENDS OF FOURTH MATERIAL IN DIRECTION ORTHOGONAL TO TRANSPORT DIRECTION
B5
MERGE THIRD SHEET MATERIAL AND FOURTH SHEET MATERIAL
B6
JOIN THIRD SHEET MATERIAL AND FOURTH SHEET MATERIAL ALONG SHAPES OF SLEEVES
B7
CUT CENTRAL PARTS OF JOINTS ALONG SHAPES OF SLEEVES
B8
SEPARATE FIRST SLEEVE MEMBER AND SECOND SLEEVE MEMBER IN TRANSPORT DIRECTION AND DIRECTION ORTHOGONAL THERETO AND TRANSPORT FIRST SLEEVE MEMBER AND SECOND SLEEVE MEMBER TO DIFFERENT POSITIONS

FIG. 11

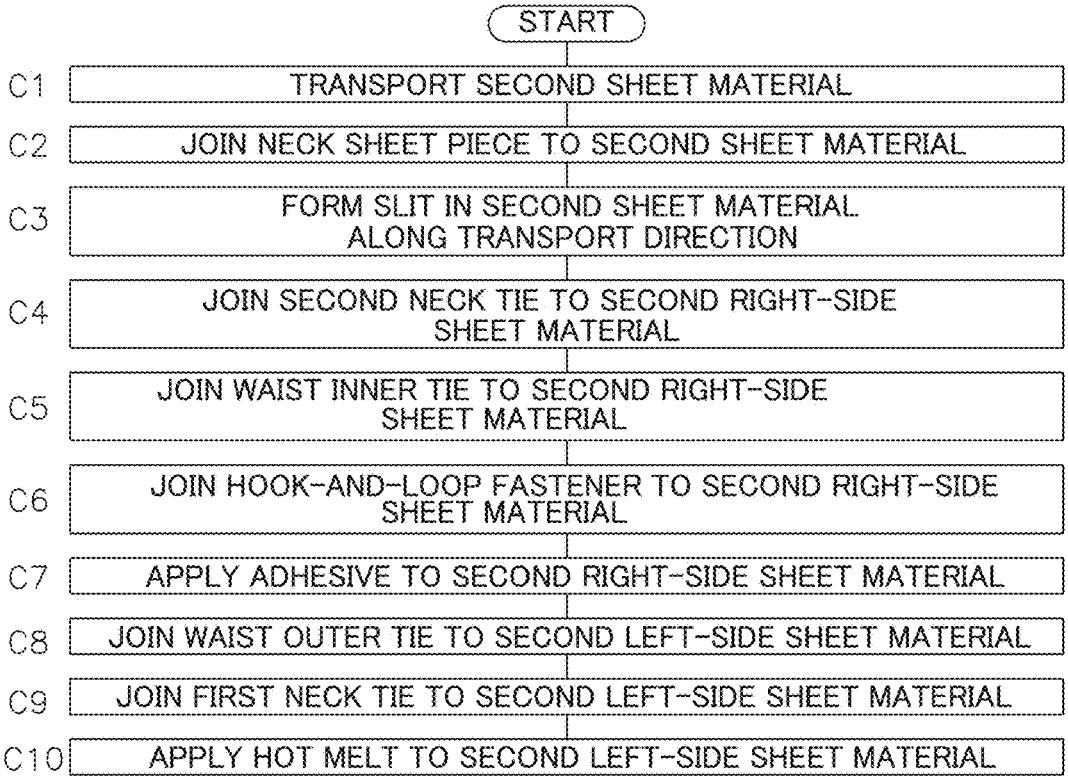

START
C1
TRANSPORT SECOND SHEET MATERIAL
C2
JOIN NECK SHEET PIECE TO SECOND SHEET MATERIAL
C3
FORM SLIT IN SECOND SHEET MATERIAL ALONG TRANSPORT DIRECTION
C4
JOIN SECOND NECK TIE TO SECOND RIGHT-SIDE SHEET MATERIAL
C5
JOIN WAIST INNER TIE TO SECOND RIGHT-SIDE SHEET MATERIAL
C6
JOIN HOOK-AND-LOOP FASTENER TO SECOND RIGHT-SIDE SHEET MATERIAL
C7
APPLY ADHESIVE TO SECOND RIGHT-SIDE SHEET MATERIAL
C8
JOIN WAIST OUTER TIE TO SECOND LEFT-SIDE SHEET MATERIAL
C9
JOIN FIRST NECK TIE TO SECOND LEFT-SIDE SHEET MATERIAL
C10
APPLY HOT MELT TO SECOND LEFT-SIDE SHEET MATERIAL

FIG. 12

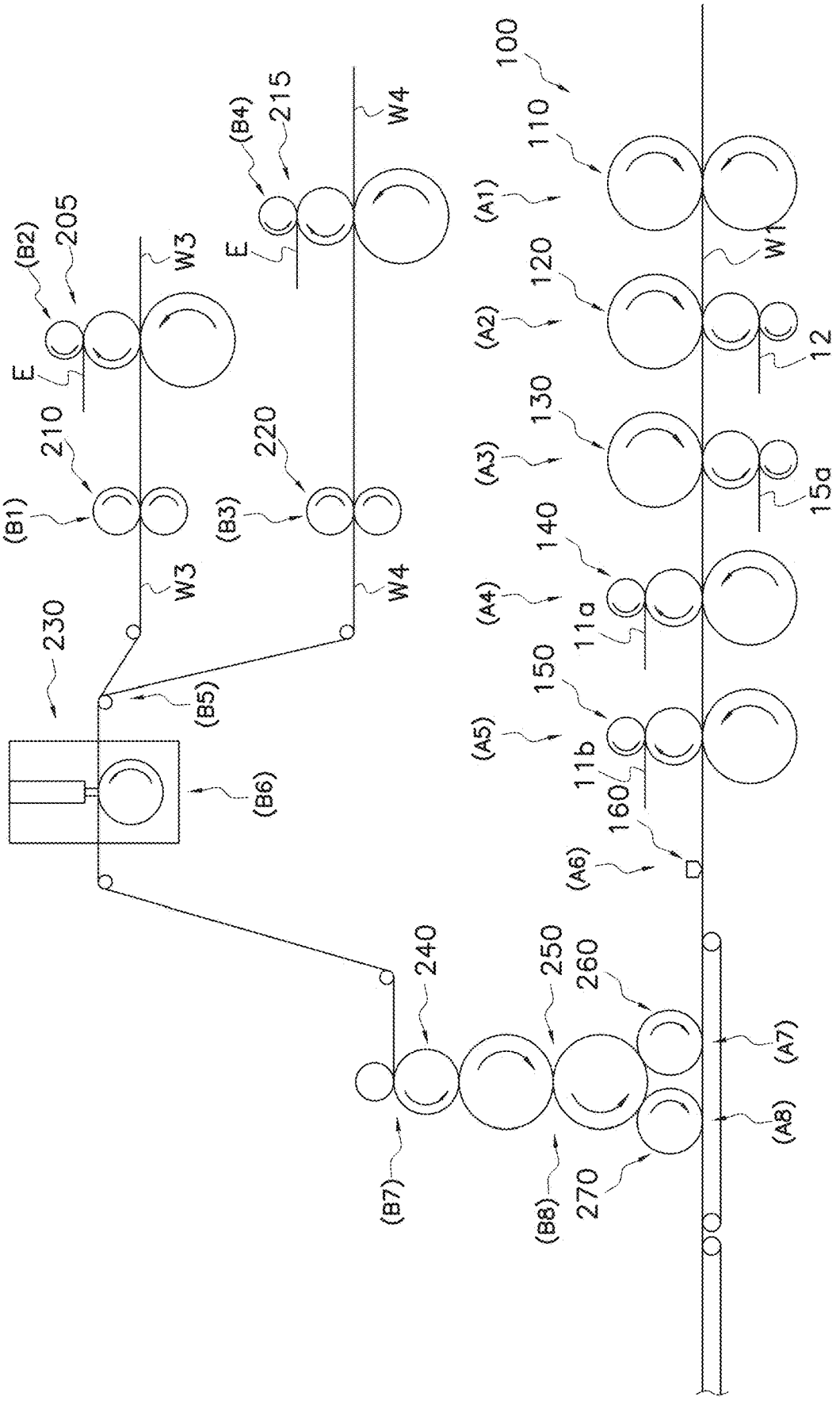

100
110
(A1)
W1
120
(A2)
12
130
(A3)
15a
140
(A4)
11a
150
(A5)
11b
160
(A6)
(A7)
(A8)
(B1)
210
(B2)
205
E
W3
(B3)
220
(B4)
215
E
W4
230
(B5)
(B6)
240
(B7)
250
260
(B8)
270

FIG. 13

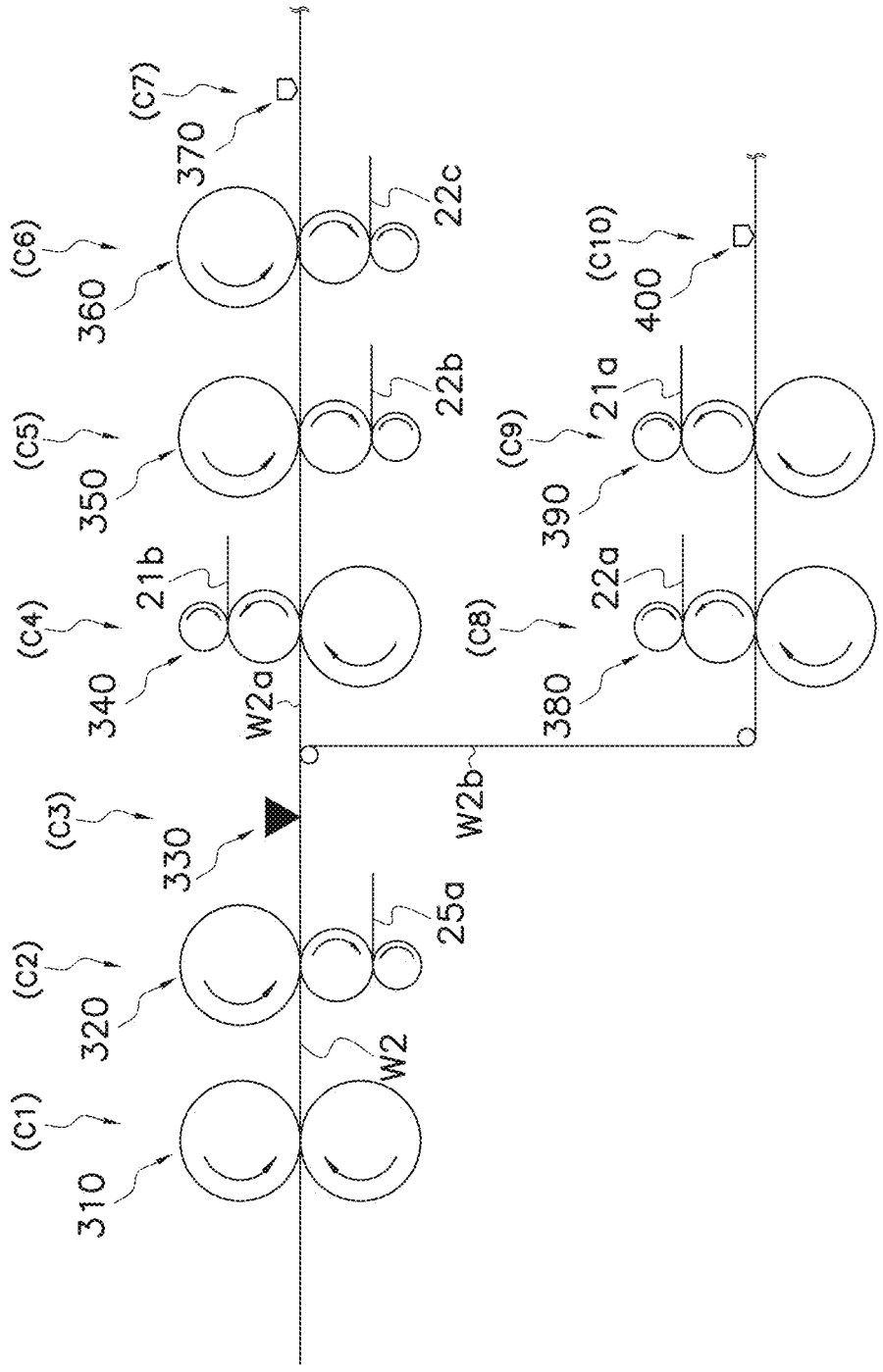

(C1)
310
(C2)
320
(C3)
330
(C4)
340
21b
W2a
(C5)
350
22b
(C6)
360
(C7)
370
22c
25a
W2
W2b
(C8)
380
22a
(C9)
390
21a
(C10)
400

FIG. 14

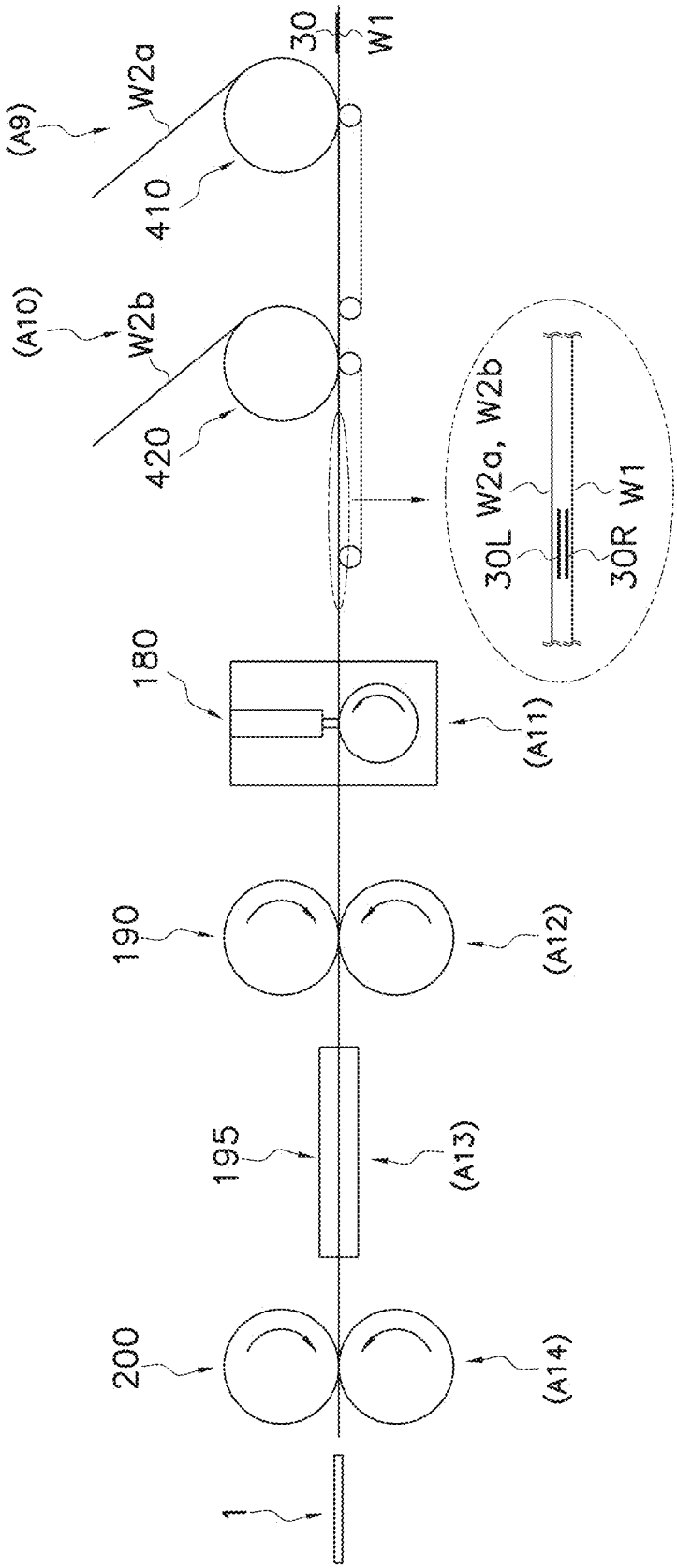

30
W1
(A9)
W2a
410
(A10)
W2b
420
30L W2a, W2b
30R W1
180
(A11)
190
(A12)
195
(A13)
200
(A14)
1

FIG. 15

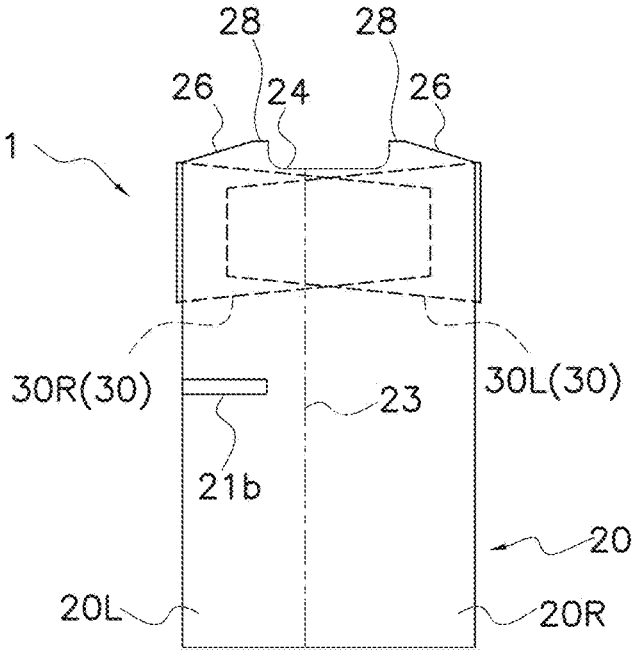


FIG. 16

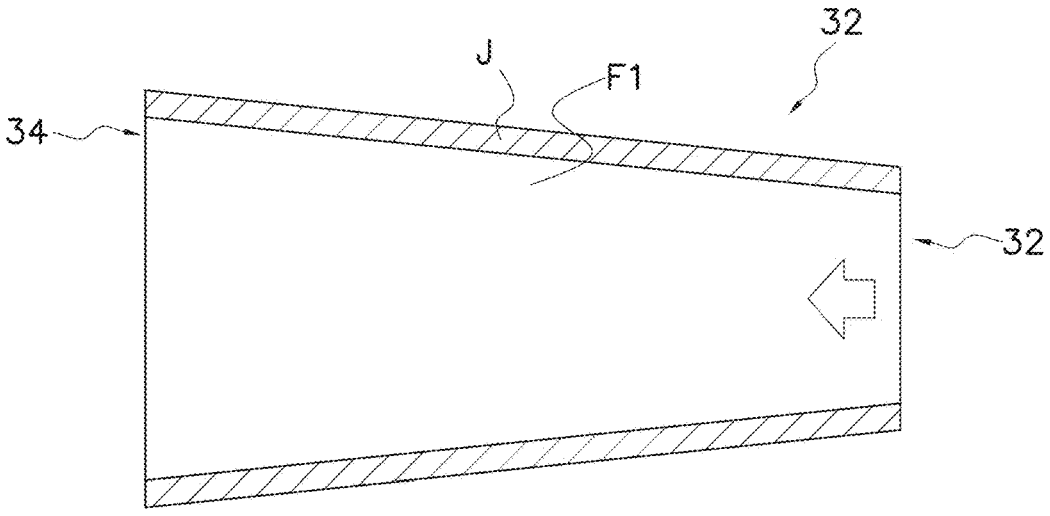


FIG. 17

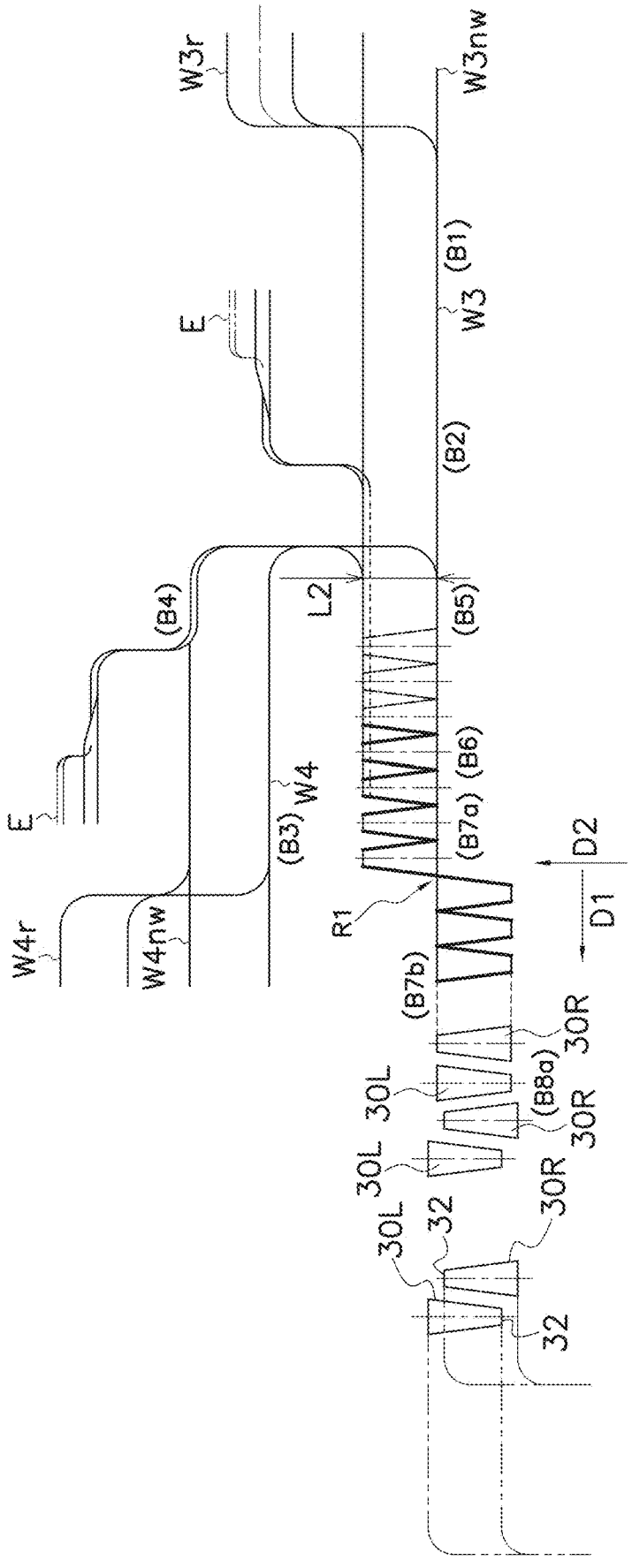

W3r
W3nw
E
W3
(B1)
(B2)
L2
(B4)
(B5)
E
W4
(B3)
(B6)
(B7a)
D2
D1
R1
W4r
W4nw
(B7b)
30R
30L
(B8a)
30R
30L
30R
30L
32
32

FIG. 18

GARMENT MANUFACTURING METHOD

TECHNICAL FIELD

[0001] The present invention relates to a garment manufacturing method.

BACKGROUND ART

[0002] Conventionally, as a method of manufacturing a garment such as a protective apparel cover or a surgical gown, a manufacturing method such as described in Patent Document 1 (Japanese Patent No. 6,762,991) has been known.

CITATION LIST

Patent Literature

[0003] Patent Document 1: Japanese Patent No. 6,762,991

SUMMARY OF INVENTION

Technical Problem

[0004] The garment disclosed in Patent Document 1 (Japanese Patent No. 6,762,991) is manufactured by curvilinearly sewing plural members such as a front panel, two rear panels, a collar, sleeves, and cuffs. For that reason, the method of manufacturing the garment disclosed in Patent Document 1 (Japanese Patent No. 6,762,991) is complicated and unsuitable for mass production.

[0005] It is an object of the present invention to provide a method of manufacturing a garment whose manufacturing method is relatively simple and which can be efficiently manufactured.

Solution to Problem

[0006] A method of manufacturing a garment of the present invention includes a first transport process, a second transport process, a first formation process, a first superimposition process, a second superimposition process, a second formation process, and a separation process. In the first transport process, a first sheet material for forming a first member that is one of a front body and a back body is transported. In the second transport process, a second sheet material for forming a second member that is the other of the front body and the back body is transported. In the first formation process, tubular sleeve members are formed by superimposing a transported third sheet material and a transported fourth sheet material, partially joining the third sheet material and the fourth sheet material transported in the superimposed state, and cutting them in predetermined positions. In the first superimposition process, the transported first sheet material and the sleeve members are superimposed. In the second superimposition process, the transported first sheet material and the transported second sheet material are superimposed so that the sleeve members superimposed with the first sheet material are disposed between the first sheet material and the second sheet material. In the second formation process, the first sheet material and the second sheet material transported in the superimposed state are partially joined in conformity with the shape of the outer edge of the garment. Furthermore, in the second formation process, the first sheet material and the second sheet material transported in the superimposed state are partially cut in conformity with the shape of the outer edge of the garment. In the separation process, the garment that has been formed by the second formation process is separated from the first sheet material and the second sheet material.

Advantageous Effects of Invention

[0007] In the method of manufacturing the garment pertaining to the present invention, the garment can be manufactured by a relatively simply process, and the garment can be efficiently manufactured.

[0008] Furthermore, in the method of manufacturing the garment pertaining to the present invention, the sleeve members are disposed between the first sheet material for forming the first member and the second sheet material for forming the second member, so the sleeve members and the part that becomes the outer surface (front surface) of the front body can be covered by the back body. For that reason, in the method of manufacturing the garment pertaining to the present invention, a hygienically excellent garment, capable of reducing the occurrence of a situation where the sleeve members and the outer surface of the front body of the manufactured garment are touched by a person's hands for example and become contaminated, can be manufactured.

BRIEF DESCRIPTION OF DRAWINGS

[0009] FIG. **1** is a schematic view, seen from the front, of a garment manufactured by the garment manufacturing method of the present invention in a state when the garment has been donned.

[0010] FIG. **2** is a schematic view, seen from the back, of the garment manufactured by the garment manufacturing method of the present invention in a state when the garment has been donned.

[0011] FIG. **3** is a schematic view of the garment manufactured by the garment manufacturing method of the present invention in a state before the garment is donned, seen from the side that is made to face outward (the side that does not oppose the person) when the wearer dons the garment.

[0012] FIG. **4** schematically depicts an example of processing performed on a first sheet material in the garment manufacturing method of the present invention.

[0013] FIG. **5** is a continuation of FIG. **4** and schematically depicts an example of processing performed on the first sheet material and on sleeve members and a second sheet material that merge with the first sheet material in the garment manufacturing method of the present invention.

[0014] FIG. **6** schematically depicts an example of processing to form the sleeve members from a third sheet material and a fourth sheet material in the garment manufacturing method of the present invention.

[0015] FIG. **7** schematic depicts an example of processing performed on the second sheet material in the garment manufacturing method of the present invention.

[0016] FIG. **8** is a drawing for describing an example of positions at which the first sheet material and the second sheet material are cut in a second formation process of the garment manufacturing method of the present invention.

[0017] FIG. **9** is a drawing for describing another example of positions at which the first sheet material and the second

sheet material are cut in the second formation process of the method of manufacturing the garment of the present invention.

[0018] FIG. **10** is a flowchart schematically showing an example of a flow of the processing performed on the first sheet material and on the sleeve members and the second sheet material that merge with the first sheet material in FIG. **4** and FIG. **5**.

[0019] FIG. **11** is a flowchart schematically showing an example of a flow of the processing to form the sleeve members from the third sheet material and the fourth sheet material in FIG. **6**.

[0020] FIG. **12** is a flowchart schematically showing an example of a flow of the processing performed on the second sheet material in FIG. **7**.

[0021] FIG. **13** is a drawing schematically depicting some of the main parts of a garment manufacturing system, and mainly depicts devices that perform processing on the first sheet material and devices that form the sleeve members.

[0022] FIG. **14** is a drawing schematically depicting some of the main parts of the garment manufacturing system, and mainly depicts devices that perform processing on the second sheet material.

[0023] FIG. **15** is a drawing schematically depicting some of the main parts of the garment manufacturing system, and mainly depicts devices that cause the second sheet material to merge with the first sheet material and the sleeve members to form the garment.

[0024] FIG. **16** is a schematic view of the garment pertaining to another example manufactured by the garment manufacturing method of the present invention in a state before the garment is donned, seen from the side that is made to face outward (the side that does not oppose the person) when the wearer dons the garment.

[0025] FIG. **17** is a schematic view of a sleeve member formed by joining the third sheet material and the fourth sheet material and then cutting the joints in central parts thereof.

[0026] FIG. **18** schematically depicts an example of processing to form the sleeve members from the third sheet material and the fourth sheet material in the garment manufacturing method of example modification J.

DESCRIPTION OF EMBODIMENTS

[0027] An embodiment of the garment manufacturing method pertaining to the present invention will be described below with reference to the drawings.

[0028] It will be noted that the embodiment described below is merely an example of the present invention and is not intended to limit the scope of the present invention. It will be understood by persons skilled in the art that many changes may be made to the following embodiment without departing from the spirit and scope of the present invention as set forth in the claims.

(1) Garment

(1-1) Overview

[0029] A garment **1** manufactured using the garment manufacturing method pertaining to the present invention will now be described with reference to FIG. **1** to FIG. **3**. FIG. **1** is a schematic view, seen from the front, of the garment **1** in a state when the garment **1** has been donned by a wearer. FIG. **2** is a schematic view, seen from the back, of the garment **1** in a state when the garment **1** has been donned by the wearer. FIG. **3** is a schematic view of the garment **1** in a state before the garment **1** is donned, seen from the side that is made to face outward (the side that does not oppose the person) when the wearer dons the garment. In FIG. **3**, depiction of members not directly visible except for a left rear member **20**L and sleeve members **30** is omitted from the standpoint of drawing legibility.

[0030] It will be noted that FIG. **1** and FIG. **2** depict a state in which later-described ties for bringing the garment **1** into close contact with the body are not tied. Furthermore, FIG. **3** depicts a state in which not the garment at the point in time when a later-described garment manufacturing system **100** has finished manufacturing the garment **1** but the garment **1** that had been folded by the garment manufacturing system **100** to make the garment **1** compact has been unfolded in order to don the garment **1**.

[0031] When describing hereinafter the garment **1** and members configuring the garment **1**, terms such as "upper", "lower", "front (front side)", "rear (back side)", "right", and "left" may be used to indicate directions and orientations. Unless other specified, these expressions mean "upper", "lower", "front", "rear", "right", and "left" in a state in which the garment **1** has been donned. Specifically, upper side of the garment **1** means the side corresponding to the head of the wearer in a state in which the garment **1** has been normally donned, front side of the garment **1** means the side corresponding to the chest (front side) of the wearer in a state in which the garment **1** has been normally donned, and right side of the garment **1** means the side corresponding to the right arm of the wearer in a state in which the garment **1** has been normally donned. The same also applies to other expressions.

[0032] Furthermore, when describing hereinafter the garment **1** or members configuring the garment **1**, terms such as "outer surface" and "inner surface" may be used, and unless otherwise specified, these expressions mean "outer surface" and "inner surface" in a state in which the garment **1** has been donned. Specifically, inner surface means the surface on the side opposing the wearer in a state in which the garment **1** has been normally donned, and outer surface means the surface on the side not opposing the wearer in a state in which the garment **1** has been normally donned.

[0033] The garment **1** manufactured by the manufacturing method of the present invention can be utilized for example as a surgical gown or a protective cover used during work, though this is not intended to limit its applications. The garment **1** is for example a disposable garment that is discarded after use, though this is not intended to limit the number of times it is used. The garment **1** covers the upper half of the wearer's body and also the lower half of the wearer's body from the waist area to the vicinity of the ankles.

[0034] The garment **1** includes as main members a front member **10** (front body) that is an example of a first member, a rear member **20** (back body) that is an example of a second member, a first sleeve member **30**R (right sleeve), and a second sleeve member **30**L (left sleeve). It will be noted that the difference between the first sleeve member **30**R and the second sleeve member **30**L is which side they are disposed on relative to the members **10**, **20** (which of the wearer's arms is inserted into them), and their shape and structure are the same. Hereinafter, when there is no particular need to

distinguish between the first sleeve member **30**R and the second sleeve member **30**L, they may be called by the single name of sleeve members **30** without calling them by their separate names of first sleeve member **30**R and second sleeve member **30**L.

[0035] The first member **10**, the rear member **20**, and the sleeve members **30** configure the garment **1** as a result of the front member **10** and the sleeve members **30** being joined in predetermined places, the rear member **20** and the sleeve member **30** being joined in predetermined places, and the front member **10** and the rear member **20** being joined in predetermined places. The joining of the front member **10** and the sleeve members **30**, the joining of the rear member **20** and the sleeve members **30**, and the joining of the front member **10** and the rear member **20** will be described later.

[0036] The material of the front member **10** and the rear member **20** is for example a film comprising a thermoplastic resin or a nonwoven fabric, though this is not intended to be limiting. For example, the material of the front member **10** and the rear member **20** may be a polyolefin resin such as polyethylene or polypropylene, polyethylene terephthalate, or nylon. Using such a raw material allows the front member **10** and the rear member **20** to be heat-welded. It will be noted that the front member **10** and the rear member **20** do not need to be manufactured using a single type of raw material and may be manufactured using a raw material comprising plural materials in which plural raw materials are laminated.

[0037] Furthermore, another member may be partially adhered to the front member **10** and the rear member **20** for the purpose of reinforcement and/or improving wearer comfort. Though this is not intended to be limiting, in the present embodiment, a reinforcement member **12** of a raw material different from that of the front member **10** is adhered to the inner surface of the front member **10** (see FIG. **1**). The reinforcement member **12** is disposed in a region from the chest area to near a bottom **18** of the front member **10** across roughly the entire front member **10** in the left-right direction. Furthermore, a neck member **15***a* (nonwoven fabric) is adhered to the inner surface of the front member **10** around a neckline **14** on the front side of the garment **1** as in FIG. **1**. Furthermore, in the present embodiment, a neck member **25***a* (nonwoven fabric) is adhered to the inner surface of the rear member **20** around a neckline **24** on the rear side of the garment **1** as in FIG. **1**.

[0038] The front member **10**, the rear member **20**, and the sleeve members **30** will now be described in greater detail.

(1-2) Details of Each Member

(1-2-1) Front Member

[0039] The front member **10** is, as in FIG. **1**, a substantially rectangular sheet-like member. However, in the upper portion of the front member **10**, a substantially C-shaped neckline **14** is formed so as to be recessed downward for the wearer's head to pass through. It will be noted that the shape of the neckline **14** is optional; for example, the shape of the neckline **14** may be substantially V-shaped. Furthermore, shoulder parts **16** of the front member **10** that cover the wearer's shoulders include sloping portions **16***a* that extend obliquely downward from the neckline **14** side toward the sleeve member **30** sides as in FIG. **1** so as to fit the wearer's body. Furthermore, the shoulder parts **16** of the front member **10** include, as in FIG. **1**, horizontal portions **16***b* that extend between the neckline **14** and the sloping portions **16***a*. Because the shoulder parts **16** have such a configuration, end portions **16***c* on the sleeve member **30** sides of the shoulder parts **16** are disposed closer to the bottom of the garment **1** (the bottom **18** of the front member **10**) than are end portions **16***d* on the neckline **14** sides of the shoulder parts **16**.

[0040] A first front tie **11***a* and a second front tie **11***b* are attached as accessories to the outer surface of the front member **10** near the waist. In FIG. **1**, the first front tie **11***a* and the second front tie **11***b* are depicted in front of the front member **10**, but when the wearer has actually donned the garment **1** the first front tie **11***a* and the second front tie **11***b* are fastened on the back side of the wearer. By fastening the first front tie **11***a* and the second front tie **11***b* on the back side of the wearer, the garment **1** can be brought into close contact with the wearer's body in the vicinity of the wearer's waist.

(1-2-2) Rear Member

[0041] The rear member **20** includes a right rear member **20**R and a left rear member **20**L. The right rear member **20**R and the left rear member **20**L are each substantially rectangular sheet-like members. In the garment **1**, the right rear member **20**R and the left rear member **20**L are disposed so as to overlap each other. Specifically, in the garment **1**, the part of the right rear member **20**R near the left end thereof is disposed so as to lie on top of the part of the left rear member **20**L near the right end thereof. In FIG. **2**, the part of the right rear member **20**R near the left end thereof is disposed in back of the part of the left rear member **20**L near the right end thereof, but the shape of the garment **1** is not limited to this kind of shape and may be modified in design so that the part of the left rear member **20**L near the right end thereof is disposed in back of the part of the right rear member **20**R near the left end thereof.

[0042] Hereinafter, rather than describing the shapes of each of the right rear member **20**R and the left rear member **20**L, the right rear member **20**R and the left rear member **20**L will be regarded as an integrated rear member **20** and its shape will be described.

[0043] The rear member **20** has the same outer shape as that of the front member **10**. The rear member **20** is, as in FIG. **2**, a substantially rectangular sheet-like member. However, in the upper portion of the rear member **20**, a substantially C-shaped neckline **24** is formed so as to be recessed downward for the wearer's head to pass through. It will be noted that the shape of the neckline **24** is optional; for example, the shape of the neckline **24** may be substantially V-shaped. Furthermore, shoulder parts **26** of the rear member **20** that cover the wearer's shoulders include sloping portions **26***a* that extend obliquely downward from the neckline **24** side toward the sleeve member **30** sides as in FIG. **2** so as to fit the wearer's body. Furthermore, the shoulder parts **26** of the rear member **20** include, as in FIG. **2**, horizontal portions **26***b* that extend between the neckline **24** and the sloping portions **26***a*. Because the shoulder parts **26** have such a configuration, end portions **26***c* on the sleeve member **30** sides of the shoulder parts **26** are disposed closer to the bottom of the garment **1** (a bottom **28** of the rear member **20**) than are end portions **26***d* on the neckline **24** sides of the shoulder parts **26**.

[0044] The front member **10** and the rear member **20** are joined at the following parts and integrated. The shoulder

parts **26** of the rear member **20** are joined to the shoulder parts **16** of the front member **10**. Furthermore, the right and left outer edges of the rear member **20** and the front member **10** are entirely joined to each other from the parts (underarm parts) where the front member **10** and the rear member **20** are joined to the lower end portions of the sleeve members **30** to the bottoms **18**, **28** of the front member **10** and the rear member **20**.

[0045] It will be noted that the neckline **24** of the rear member **20** and the neckline **14** of the front member **10** are not joined to each other because the wearer needs to put his/her head through them. Furthermore, the bottom **28** of the rear member **20** and the bottom **18** of the front member **10** are not joined to each other because the wearer needs to put his/her feet through them.

[0046] A first neck tie **22***a* and a second neck tie **22***b* are attached as accessories to the outer surface of the rear member **20** near the neckline **24**. The first neck tie **22***a* is attached to the left rear member **20**L, and the second neck tie **22***b* is attached to the right rear member **20**R. When the wearer has donned the garment **1**, the first neck tie **22***a* and the second neck tie **22***b* are fastened on the back side of the wearer. By fastening the first neck tie **22***a* and the second neck tie **22***b* on the back side of the wearer, the garment **1** can be brought into close contact with the wearer's body around the wearer's neck.

[0047] Furthermore, a waist outer tie **21***a* and a waist inner tie **21***b* are attached as accessories to the rear member **20** near the waist. The waist outer tie **21***a* is attached to the outer surface of the left rear member **20**L. The waist inner tie **21***b* is attached to the inner surface of the right rear member **20**R. When the wearer has actually donned the garment **1**, the waist outer tie **21***a* and the waist inner tie **21***b* are fastened on the back side of the wearer. By fastening the waist outer tie **21***a* and the waist inner tie **21***b* on the back side of the wearer, the right rear member **20**R and the left rear member **20**L can be inhibited from becoming separated from each other.

[0048] Furthermore, a hook-and-loop fastener **22***c* (a hook portion) is provided as an accessory on the inner surface of the right rear member **20**R that opposes the outer surface of the left rear member **20**L. When the wearer has actually donned the garment **1**, the hook-and-loop fastener **22***c* sticks to fibers (a loop portion) on the outer surface of the left rear member **20**L and is used to bring the garment **1** into close contact with the wearer's body around the wearer's neck.

(1-2-3) Sleeve Members

[0049] The sleeve members **30** are parts through which the wearer of the garment **1** passes his/her arms.

[0050] The sleeve members **30** are cylindrical members. One end side of each sleeve member **30** is provided with a cuff **32** through which the wearer of the garment **1** puts his/her hands. The other end side of each sleeve member **30** is provided with an armhole **34** through which the wearer of the garment **1** inserts his/her arms.

[0051] The sleeve members **30** are joined to the front member **10** and the rear member **20** at the end portions thereof on the armhole **34** sides. Specifically, the outer edge of the end portion of the front surface of the first sleeve member **30**R on the armhole **34** side is joined, along the entire length thereof in the up-down direction, to the right-side outer edge of the outer surface of the front member **10**. Furthermore, the outer edge of the end portion of the rear surface of the first sleeve member **30**R on the armhole **34** side is joined, along the entire length thereof in the up-down direction, to the right-side outer edge of the outer surface of the rear member **20** (the right rear member **20**R). Furthermore, the outer edge of the end portion of the front surface of the second sleeve member **30**L on the armhole **34** side is joined, along the entire length thereof in the up-down direction, to the left-side outer edge of the outer surface of the front member **10**. Furthermore, the outer edge of the end portion of the rear surface of the second sleeve member **30**L on the armhole **34** side is joined, along the entire length thereof in the up-down direction, to the left-side outer edge of the outer surface of the rear member **20** (the left rear member **20**L).

[0052] In the sleeve members **30** of the present embodiment, the dimension of the openings of the cuffs **32** is formed smaller than the dimension of the openings of the armholes **34** of the sleeve members **30**. By forming the cuffs **32** of the sleeve members **30** small (by reducing the dimension of the openings of the cuffs **32**), it is unlikely that an excessive amount of the cuffs **32** of the sleeve members **30** will interfere with work. At the same time, by relatively increasing the dimension of the opening of the armholes **34** of the sleeve members **30**, it is easy for the wearer of the garment **1** to freely move his/her arms.

[0053] It will be noted that elastic materials E are disposed in (attached to) the cuffs **32** of the sleeve members **30**. The elastic materials E are, for example, sheet-like members with a high elasticity or rubber threads. The cuffs **32** are tightened by the elastic materials E in the cuffs **32** of the sleeve members **30**, whereby the cuffs **32** are less likely to interfere with work and foreign matter is less likely to get inside the garment **1** through the cuffs **32**.

(1-3) Method of Donning Garment

[0054] The method of donning the garment **1** will now be described.

[0055] First, before describing the method of donning the garment **1**, the shape of the garment **1** before being donned by the wearer will be described. It will be noted that the garment manufacturing system **100** that manufactures the garment **1** manufactures the garment **1** in a folded state as described later to make the manufactured garment **1** compact. However, here, it is not the shape of the garment **1** in the folded state but the shape of the garment **1** after the garment **1** in the folded state manufactured by the garment manufacturing system **100** has been unfolded that is called the shape of the garment **1** before being donned by the wearer.

[0056] After the garment **1** has been donned, the outer surface of the front member **10** becomes disposed in front of the wearer and the outer surface of the rear member **20** becomes disposed in back of the wearer. Furthermore, after the garment **1** has been donned, the inner surface of the front member **10** opposes the front of the wearer and the inner surface of the rear member **20** opposes the back of the wearer.

[0057] By contrast, in the garment **1** before being donned by the wearer, the inner surface of the front member **10** (the surface that opposes the wearer after donning the garment **1**) is disposed on the outside and the inner surface of the rear member **20** (the surface that opposes the wearer after donning the garment **1**) is disposed on the outside. In other words, in the garment **1** before being donned by the wearer,

the outer surface of the front member **10** (the surface that does not oppose the wearer after donning the garment **1**) is disposed on the inside and the outer surface of the rear member **20** (the surface that does not oppose the wearer after donning the garment **1**) is disposed on the inside. In short, in the garment **1** before being donned by the wearer, the surfaces that become disposed on the outside after the wearer dons the garment **1** are not exposed to the outside. Additionally, in the garment **1** before being donned by the wearer, the sleeve members **30** are disposed between the outer surface of the front member **10** and the outer surface of the rear member **20**. It will be noted that the armholes **34** of the sleeve members **30** disposed between the front member **10** and the rear member **20** are open at the side surfaces of the garment **1**. In other words, in the garment **1** before being donned by the wearer, the wearer is able to insert his/her arms into the armholes **34** of the sleeve members **30**.

[0058] When the wearer dons the garment **1**, the wearer brings the inner surface (the surface that opposes the wearer after donning the garment **1**) of the front member **10** of the garment **1** having a shape such as in FIG. **3** into opposition with the front of the wearer. Then, the wearer inserts his/her right arm through the armhole **34** of the first sleeve member **30**R and pushes his/her right wrist through the cuff **32** of the first sleeve member **30**R. Furthermore, the wearer inserts his/her left arm through the armhole **34** of the second sleeve member **30**L and pushes his/her left wrist through the cuff **32** of the second sleeve member **30**L.

[0059] In this state, for example, an assistant assisting the wearer in donning the garment **1** covers the back of the wearer with the right rear member **20**R and the left rear member **20**L so that the inner surface of the rear member **20** (the inner surface of the right rear member **20**R and the inner surface of the left rear member **20**L) that had been disposed in front of the wearer opposes the back of the wearer. Then, the assistant sticks the hook-and-loop fastener **22***c* provided on the inner surface of the right rear member **20**R to the fibers (loops) on the outer surface of the left rear member **20**L. Moreover, the assistant fastens the first neck tie **22***a* and the second neck tie **22***b* on the back side of the wearer and fastens the waist outer tie **21***a* and the waist inner tie **21***b* on the back side of the wearer. Next, the assistant or the wearer fastens the first front tie **11***a* and the second front tie **11***b* on the back side of the wearer. In the manner described above, the wearer can don the garment **1**.

(2) Garment Manufacturing Method and Manufacturing System

[0060] An embodiment of the method of manufacturing the garment **1** of the present invention and an example of the garment manufacturing system **100** that manufactures the garment **1** using this manufacturing method will now be described with reference to FIG. **4** to FIG. **15**.

[0061] FIG. **4** schematically depicts an example of processing performed on a first sheet material W**1**. FIG. **5** is a continuation of FIG. **4** and schematically depicts an example of processing performed on the first sheet material W**1** and on the sleeve members **30** and a second sheet material W**2** that merge with the first sheet material W**1**. FIG. **6** schematically depicts an example of processing to form the sleeve members **30** from a third sheet material W**3** and a fourth sheet material W**4**. FIG. **7** schematic depicts an example of processing performed on the second sheet material W**2**.

[0062] It will be noted that in FIG. **4**, FIG. **5**, and FIG. **7** the dash-dotted lines representing the necklines and shoulder parts of the garment and the dash-dotted lines representing boundaries of regions of the sheet materials used to manufacture one garment **1** (dash-dotted lines depicted in a position corresponding to the bottom of the garment **1**) are depicted from the standpoint of facilitating understanding, and it is not the case that perforations or the like are physically provided. Furthermore, the long dashed double-short dashed lines depicted on the sheet materials transported in FIG. **6** indicate that joining of the third sheet material and the fourth sheet material and cutting of the third sheet material and the fourth sheet material are performed in those positions in processes thereafter, and it is not the case that perforations or the like are physically provided. Furthermore, in FIG. **4** and FIG. **7** members not directly visible are indicated by dashed lines, while in FIG. **5** illustration of members not directly visible is omitted to keep the drawings from becoming complicated.

[0063] FIG. **8** is a drawing for describing an example of positions at which the first sheet material W**1** and the second sheet material W**2** are cut in a second formation process of the method of manufacturing the garment **1**. FIG. **9** is a drawing for describing another example of positions at which the first sheet material W**1** and the second sheet material W**2** transported in a superimposed state are cut in the second formation process of the method of manufacturing the garment **1**.

[0064] FIG. **10** corresponds to FIG. **4** and FIG. **5** and is a flowchart schematically showing an example of a flow of the processing performed on the first sheet material W**1** and on the sleeve members **30** and the second sheet material W**2** that merge with the first sheet material W**1**. FIG. **11** corresponds to FIG. **6** and is a flowchart schematically showing an example of a flow of the processing to form the sleeve members **30** from the third sheet material W**3** and the fourth sheet material W**4**. FIG. **12** corresponds to FIG. **7** and is a flowchart schematically showing an example of a flow of the processing performed on the second sheet material W**2**.

[0065] FIG. **13** is a drawing schematically depicting some of the main parts of the garment manufacturing system **100**, and mainly depicts devices that perform processing on the first sheet material W**1** and devices that form the sleeve members **30**. FIG. **14** is a drawing schematically depicting some of the main parts of the garment manufacturing system **100**, and mainly depicts devices that perform processing on the second sheet material W**2**. FIG. **15** is a drawing schematically depicting some of the main parts of the garment manufacturing system **100**, and mainly depicts devices that cause the second sheet material W**2** to merge with the first sheet material W**1** and the sleeve members **30** to form the garment **1**.

(2-1) Materials used to Manufacture Front Member and Rear Member

[0066] In the manufacture of the garment **1**, a first sheet material W**1** for manufacturing the front member **10**, a second sheet material W**2** for manufacturing the rear member **20**, and a third sheet material W**3** and a fourth sheet material W**4** for manufacturing the sleeve members **30** are used as main materials. It will be noted that materials used in addition to the first sheet material W**1**, the second sheet

material W2, the third sheet material W3, and the fourth sheet material W4 will be described in the description of the method of manufacturing the garment 1.

[0067] The first sheet material W1 and the second sheet material W2 are for example thermoplastic resin sheets. The width of the first sheet material W1 (the length of the first sheet material W1 in a direction orthogonal to the transport direction thereof; see FIG. 4) is equal to a length L1 (see FIG. 1) of the right-left width of the front member 10 and the rear member 20 of the garment 1.

[0068] The third sheet material W3 and the fourth sheet material W4 are for example sheets in which a nonwoven fabric and a reinforcement material are laminated. The width of the third sheet material W3 and the fourth sheet material W4 (their length in a direction orthogonal to their transport direction; see FIG. 6) is equal to a length L2 (see FIG. 2) of the right-left width of the sleeve members 30.

[0069] The first sheet material W1 and the second sheet material W2 are paid out from original sheet rolls (not shown in the drawings).

[0070] The third sheet material W3 is manufactured by superimposing and joining a sleeve sheet material W3*nw* (nonwoven fabric) paid out from an original sheet roll and a reinforcement sheet material W3*r* of reinforcement material paid out from an original sheet roll. The fourth sheet material W4 is manufactured by superimposing and joining a sleeve sheet material W4*nw* (nonwoven fabric) paid out from an original sheet roll and a reinforcement sheet material W4*r* of reinforcement material paid out from an original sheet roll.

(2-2) Method of Manufacturing Garment

[0071] An example of the method of manufacturing the garment 1 of the present invention will now be described by describing the manufacture of the garment 1 by the garment manufacturing system 100.

[0072] The garment manufacturing system 100 includes, as devices that perform processing on the first sheet material W1 and on the sleeve members 30 and the second sheet material W2 that have merged with the first sheet material W1, mainly a first sheet material transporting device 110, a reinforcement member joining device 120, a sheet piece joining device 130, front tie joining devices 140, 150, an adhesive applying device 160, sleeve member superimposing devices 260, 270, second sheet material superimposing devices 410, 420, a body edge portion joining device 180, a body edge portion cutting device 190, a separating device 200, and a folding device 195 (see FIG. 13 and FIG. 15). The garment manufacturing system 100 includes, as devices that form the sleeve members 30, mainly a third sheet material forming and transporting device 210, a fourth sheet material forming and transporting device 220, elastic material joining devices 205, 215, a sleeve edge portion joining device 230, a sleeve edge portion cutting device 240, and position adjusting devices 245, 250 (see FIG. 13). Furthermore, the garment manufacturing system 100 includes, as devices that perform processing on the second sheet material W2, mainly a second sheet material transporting device 310, a sheet piece joining device 320, a slitting device 330, neck tie joining devices 340, 390, waist tie joining devices 350, 380, a hook-and-loop fastener joining device 360, and adhesive applying devices 370, 400 (see FIG. 14). The function of each device will be performed in conjunction with the description of the manufacturing method.

[0073] It will be noted that the flow of the manufacturing method described below is merely an example. For example, the order in which processes are implemented may be changed where not contradictory. Furthermore, for example, two or more processes may be executed simultaneously if there are no contradictions.

[0074] Furthermore, in the following description, expressions such as "B" is superimposed on "A" are sometimes used, but these expressions are not intended to limit positional relationships such that "B" is disposed on top of "A" and mean that "A" and "B" are in a superimposed state. In other words, the expression that "B" is superimposed on "A" shall also include, if there are no contradictions, an aspect where "A" is disposed on top of "B" and an aspect where "A" and "B" are arranged in the horizontal direction (are adjacent in the horizontal direction).

[0075] The first sheet material transporting device 110 (see FIG. 13) uses for example plural rollers to transport the first sheet material W1 paid out from an original sheet roll (not shown in the drawings) (step A1 in FIG. 10). The process of step A1 in FIG. 10 is an example of a first transport process of transporting the first sheet material W1 for forming the front member 10 that is one of a front body and a back body (here, the front body). It will be noted that although detailed description is omitted here, the first sheet material W1 may be a sheet material in which sheets are laminated in plural layers, and the manufacturing process of the garment 1 may include a process of manufacturing from plural sheets the first sheet material W1 in which plural layers are laminated.

[0076] The reinforcement member joining device 120 (see FIG. 13) joins to the first sheet material W1 transported by the first sheet material transporting device 110 the reinforcement member 12 which is cut out from a sheet material (not shown in the drawings) paid out from an original sheet roll (not shown in the drawings) (step A2 in FIG. 10). The joining method may be welding or adhesion and is selected as appropriate. The reinforcement member joining device 120 (see FIG. 13) joins the reinforcement member 12 to the transported first sheet material W1 so that the reinforcement member 12 is disposed in a predetermined position on the inner surface of the front member 10 in the manufactured garment 1. The shape of the reinforcement member 12 is determined as appropriate but is for example a rectangular shape.

[0077] The sheet piece joining device 130 (see FIG. 13) joins to the first sheet material W1 transported by the first sheet material transporting device 110 a neck sheet piece 15 which is cut out from a sheet material (not shown in the drawings) paid out from an original sheet roll (not shown in the drawings) (step A3 in FIG. 10). The joining method may be welding or adhesion using an adhesive and is selected as appropriate. It will be noted that the sheet piece joining device 130 joins the neck sheet piece 15 to the transported first sheet material W1 so that the neck member 15*a* (the member that remains on the front member 10 as a result of the neck sheet piece 15 being cut together with the first sheet material W1 in a downstream process) is disposed in a predetermined position around the neckline 14 on the inner surface of the front member 10 in the manufactured garment 1. The shape of the neck sheet piece 15 is decided as appropriate but is for example a rectangular shape.

[0078] The front tie joining device 140 (see FIG. 13) joins to the first sheet material W1 transported by the first sheet material transporting device 110 the first front tie 11*a* which

is obtained by superimposing a sheet material Wa**1** and a sheet material Wa**2** cut out from original sheet rolls (not shown in the drawings), folding the superimposed sheet materials one or more times in a direction orthogonal to the transport direction, joining them in a predetermined place, and then cutting them in a predetermined width in the transport direction (step A**4** in FIG. **10**). The front tie joining device **140** joins the first front tie **11***a* to the transported first sheet material W**1** so that the first front tie **11***a* is disposed in a predetermined position on the front member **10** in the manufactured garment **1**. The joining method may be welding or adhesion and is selected as appropriate.

[0079] The front tie joining device **150** (see FIG. **13**), in the same manner as the front tie joining device **140**, joins to the first sheet material W**1** transported by the first sheet material transporting device **110** the second front tie **11***b* which is formed from a sheet material Wb**1** and a sheet material Wb**2** (step A**5** in FIG. **10**). The front tie joining device **150** joins the second front tie **11***b* to the transported first sheet material W**1** so that the second front tie **11***b* is disposed in a predetermined position on the front member **10** in the manufactured garment **1**. The joining method may be welding or adhesion and is selected as appropriate.

[0080] The adhesive applying device **160** (see FIG. **13**) applies an adhesive to the outer surface of the first sheet material W**1** (the surface that becomes the outer surface of the front member **10** when the garment **1** is completed) transported by the first sheet material transporting device **110**, in positions thereof where the sleeve members **30** (the first sleeve member **30**R and the second sleeve member **30**L) are to be joined (step A**6** in FIG. **10**). Specifically, the adhesive applying device **160** applies an adhesive to the right-side edge portion of the outer surface of the first sheet material W**1** in a position thereof that the first sleeve member **30**R, which will be placed on the first sheet material W**1** in a downstream process, will contact. Furthermore, the adhesive applying device **160** applies an adhesive to the left-side edge portion of the outer surface of the first sheet material W**1** in a position thereof that the second sleeve member **30**L, which will be placed on the first sheet material W**1** in a downstream process, will contact. Though this is not intended to be limiting, the adhesive applied by the adhesive applying device **160** is a hot-melt adhesive.

[0081] Here, description of the processes performed on the first sheet material W**1** will be temporarily interrupted so that the process of forming the sleeve members **30** may be described with reference to FIG. **6**, FIG. **11**, and FIG. **13**.

[0082] The sleeve members **30** are mainly configured from the third sheet material W**3** and the fourth sheet material W**4**.

[0083] The third sheet material forming and transporting device **210** (see FIG. **13**) transports the third sheet material W**3**, which is manufactured by superimposing (see FIG. **6**) and joining the sleeve sheet material W**3***nw* of nonwoven fabric paid out from an original sheet roll (not shown in the drawings) and the reinforcement sheet material W**3***r* of reinforcement material paid out from an original sheet roll (not shown in the drawings) (step B**1** in FIG. **11**). It will be noted that in FIG. **13** illustration of mechanisms that merge and join the sleeve sheet material W**3***nw* and the reinforcement sheet material W**3***r* is omitted.

[0084] The elastic material joining device **205** places, with respect to the transported third sheet material W**3**, the elastic materials E on, and joins them to, both end portions thereof in a direction orthogonal to the direction in which the third sheet material W**3** is transported (step B**2** in FIG. **11**). The process of step B**2** in FIG. **11** is an example of a placement process.

[0085] The fourth sheet material forming and transporting device **220** (see FIG. **13**) transports the fourth sheet material W**4**, which is manufactured by superimposing and joining the sleeve sheet material W**4***nw* of nonwoven fabric paid out from an original sheet roll (not shown in the drawings) and the reinforcement sheet material W**4***r* of reinforcement material paid out from an original sheet roll (not shown in the drawings) (see FIG. **6**) (step B**3** in FIG. **11**). It will be noted that in FIG. **13** illustration of mechanisms that merge and join the sleeve sheet material W**4***nw* and the reinforcement sheet material W**4***r* is omitted.

[0086] It will be noted that although for convenience of illustration here step B**3** is described after step B**1** and step B**2**, this does not mean that step B**3** is executed after step B**1** and step B**2**. Step B**1** and step B**2** are preferably executed in parallel with step B**3** and later-described step B**4**.

[0087] The elastic material joining device **215** places, with respect to the transported fourth sheet material W**4**, the elastic materials E on, and joins them to, both end portions thereof in a direction orthogonal to the direction in which the fourth sheet material W**4** is transported (step B**4** in FIG. **11**). The process of step B**4** in FIG. **11** is an example of a placement process.

[0088] The third sheet material W**3** after attachment of the elastic materials E and the fourth sheet material W**4** after attachment of the elastic materials E are merged (step B**5** in FIG. **11**) and become superimposed. The third sheet material W**3** and the fourth sheet material W**4** in the superimposed state are transported in a first direction D**1** (see FIG. **13**).

[0089] The sleeve edge portion joining device **230** (see FIG. **13**) partially joins the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** (see FIG. **6**) in the superimposed state (step B**6** in FIG. **11**). Specifically, the sleeve edge portion joining device **230** joins, along directions intersecting the first direction D**1** and across the entire width direction of the third sheet material W**3** and the fourth sheet material W**4**, the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state (see the thick solid lines depicted above reference sign B**6** in FIG. **6**). More specifically, the sleeve edge portion joining device **230** joins, across the entire width direction of the third sheet material W**3** and the fourth sheet material W**4**, the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in a superimposed state so that, when seen from a direction perpendicular to the sheet surface of the third sheet material W**3** and the fourth sheet material W**4**, one joint and a joint adjacent to this joint in the first direction D**1** generally match the shapes of the upper edge and the lower edge in the outer shape of the sleeve member **30**. Because the sleeve edge portion joining device **230** joins the third sheet material W**3** and the fourth sheet material W**4** in this way, when the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state are seen from a direction perpendicular to the sheet surface of the third sheet material W**3** and the fourth sheet material W**4**, a sleeve member **30** where the cuff **32** is disposed on one end side in a second direction D**2** orthogonal to the first direction D**1** and a sleeve member **30** where the cuff **32** is disposed on the other end side in the

second direction D2 are alternately arranged (however, the sleeve members **30** are interconnected) (see FIG. **6**).

[0090] The method by which the sleeve edge portion joining device **230** joins the third sheet material W**3** and the fourth sheet material W**4** may be heat welding or ultrasonic welding. The method by which the sleeve edge portion joining device **230** joins the third sheet material W**3** and the fourth sheet material W**4** may be adhesion using an adhesive.

[0091] The sleeve edge portion cutting device **240** (see FIG. **13**) is disposed on the downstream side of the sleeve edge portion joining device **230** in the first direction D and cuts, along the direction in which the joints extend and in the central portions of the joints, each of the joints that were formed by the sleeve edge portion joining device **230** in the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state (step B**7**). In other words, the sleeve edge portion cutting device **240** cuts apart the sleeve members **30** in the mutually interconnected state on the transported third sheet material W**3** and the fourth sheet material W**4** to form sleeve members **30** independent of other sleeve members **30**.

[0092] Because the superimposing, joining, and cutting of the third sheet material W**3** and the fourth sheet material W**4** are performed in the above manner (because the processes of steps B**5** to B**7** serving as an example of a first formation process are performed), in the garment manufacturing system **100** the tubular first sleeve member **30**R where the cuff **32** is disposed on one end side in the second direction D**2** orthogonal to the first direction D**1** and the tubular second sleeve member **30**L where the cuff **32** is disposed on the other end side in the second direction D**2** are alternately formed from the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state. In the present embodiment, the first sleeve member **30**R is used as a right sleeve and the second sleeve member **30**L is used as a left sleeve. In this way, by alternately forming the first sleeve member **30**R and the second sleeve member **30**L from the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state, generation of leftover material can be inhibited even in the case of forming the sleeve members **30** where the openings on the cuff **32** sides are smaller than the openings on the armhole **34** sides (even in the case of forming the sleeve members **30** whose thickness is not uniform).

[0093] It will be noted that, in the sleeve members **30**, the elastic materials E in the cuffs **32** are useful because they can tighten the cuffs **32**. However, the elastic materials E on the armhole **34** sides are not particularly unnecessary, and it is preferred not to have them. Thus, for example, it is preferred that the method of manufacturing the garment **1** have a cutting process of cutting the elastic materials E that are attached to the parts of the sleeve members **30** that become the armholes **34** at the same time as, or before or after, the processes of step B**6** and step B**7**. Though this is not intended to be limiting, in the cutting process, for example, the elastic materials E are cut by heat by applying heat to the parts of the sleeve members **30** that become the armholes **34**.

[0094] The sleeve members **30** that have been formed as a result of the processes of steps B**5** to B**7** serving as an example of a first formation process being performed are transported by the position adjusting devices **245**, **250** to the sleeve member superimposing devices **260**, **270** that superimpose the sleeve members **30** on the first sheet material W**1** (step B**8**). It will be noted that the position adjusting devices **245**, **250** transport the first sleeve member **30**R to the sleeve member superimposing device **260** and transport the second sleeve member **30**L to the sleeve member superimposing device **270**. This will be specifically described.

[0095] The position adjusting device **245** transports the sleeve members **30** to the position adjusting device **250** and hands over the sleeve members **30** to the position adjusting device **250**. It will be noted that the position adjusting device **245** has the function of adjusting the distance between the adjacent sleeve members **30** in the transport direction of the sleeve members **30**. For example, the position adjusting device **245** has a roller and plural retention members provided on the outer periphery of the roller along the circumferential direction thereof (not shown in the drawings). The retention members are members that receive and retain the formed sleeve members **30**. When the position adjusting device **245** rotates the roller and thereby also rotates the retention members to transport the sleeve members **30**, it changes the relative positions of the retention members relative to the roller in the circumferential direction of the roller to thereby increase the distance between the adjacent sleeve members **30** in the transport direction of the sleeve members **30**.

[0096] Of the sleeve members **30** received from the position adjusting device **245**, the position adjusting device **250** transports the first sleeve member **30**R to the sleeve member superimposing device **260** and transports the second sleeve member **30**L to the sleeve member superimposing device **270**. The position adjusting device **250** has the function of adjusting the distance between the adjacent sleeve members **30** at least in a direction (the width direction) orthogonal to the transport direction. For example, the position adjusting device **250** has a roller and plural retention members provided on the outer periphery of the roller along the circumferential direction thereof (not shown in the drawings). The retention members are members that receive and retain the formed sleeve members **30**. When the position adjusting device **250** rotates the roller and thereby also rotates the retention members to transport the sleeve members **30**, it changes the relative positions of the retention members relative to the roller along the direction of the rotational axis of the roller to thereby increase the distance between the adjacent sleeve members **30** in the transport direction of the sleeve members **30**.

[0097] Because positional adjustment of the first sleeve member **30**R and the second sleeve member **30**L is performed by the position adjusting devices **245**, **250** in this way, the first sleeve member **30**R and the second sleeve member **30**L become transported on mutually different transport paths during transport and are transported to respectively different places. Specifically, the first sleeve member **30**R is transported to the sleeve member superimposing device **260**, and the second sleeve member **30**L is transported to the sleeve member superimposing device **270**.

[0098] To return to description of the processing performed on the first sheet material W**1**. Here, reference is made mainly to FIG. **5**, FIG. **10**, and FIG. **13**.

[0099] The sleeve member superimposing device **260** (see FIG. **13**) superimposes the transported first sheet material W**1** and the first sleeve member **30**R (step A**7** in FIG. **10**). Step A**7** in FIG. **10** is an example of a first superimposition process. The sleeve member superimposing device **260**

superimposes the first sleeve member **30**R on the transported first sheet material W**1** so that the first sleeve member **30**R is disposed in a predetermined position on the outer surface of the front member **10** in the manufactured garment **1**.

[0100] It will be noted that when superimposing the first sheet material W**1** and the first sleeve member **30**R, the sleeve member superimposing device **260** applies heat to the part of the right-side edge portion of the first sheet material W**1** where the adhesive applying device **160** applied the hot-melt adhesive. As a result, the first sheet material W**1** and the first sleeve member **30**R are joined. In other words, step A**7** of FIG. **10** is also part of a joining process of joining the first sheet material W**1** and the sleeve members **30**.

[0101] The sleeve member superimposing device **270** (see FIG. **13**) superimposes the transported first sheet material W**1** and the second sleeve member **30**L (step A**8** in FIG. **10**). Step A**8** of FIG. **10** is an example of a first superimposition process. The sleeve member superimposing device **260** superimposes the second sleeve member **30**L on the transported first sheet material W**1** so that the second sleeve member **30**L is disposed in a predetermined position on the outer surface of the front member **10** in the manufactured garment **1**.

[0102] It will be noted that when superimposing the first sheet material W**1** and the second sleeve member **30**L, the sleeve member superimposing device **260** applies heat to the part of the left-side edge portion of the first sheet material W**1** where the adhesive applying device **160** applied the hot-melt adhesive. As a result, the first sheet material W**1** and the second sleeve member **30**L are joined. In other words, step A**8** of FIG. **10** is also part of a joining process of joining the first sheet material W**1** and the sleeve members **30**.

[0103] Here, description of the processing performed on the first sheet material W**1** will again be interrupted. The processing performed on the second sheet material W**2** may be described with reference mainly to FIG. **7**, FIG. **12**, and FIG. **14**.

[0104] The second sheet material transporting device **310** (see FIG. **14**) uses for example plural rollers to transport the second sheet material W**2** which is paid out from an original sheet roll (not shown in the drawings) (step C**1** in FIG. **12**). The process of step C**1** in FIG. **12** is an example of a second transport process of transporting the second sheet material W**2** for forming the rear member **20** that is the other of the front body and the back body (here, the back body). It will be noted that although detailed description is omitted here, the second sheet material W**2** may be a sheet material in which sheets are laminated in plural layers, and the manufacturing process of the garment **1** may include a process of manufacturing from plural sheets the second sheet material W**2** in which plural layers are laminated.

[0105] The sheet piece joining device **320** (see FIG. **13**) joins to the second sheet material W**2** transported by the second sheet material transporting device **310** a neck sheet piece **25** which is cut out from a sheet material (not shown in the drawings) paid out from an original sheet roll (not shown in the drawings) (step C**2** in FIG. **12**). The joining method may be welding or adhesion using an adhesive and is selected as appropriate. It will be noted that the sheet piece joining device **320** joins the neck sheet piece **25** to the transported second sheet material W**2** so that the neck member **25***a* (the member that remains on the rear member **20** as a result of the neck sheet piece **25** being cut together with the second sheet material W**2** in a downstream process) is disposed in a predetermined position around the neckline **24** on the inner surface of the rear member **20** in the manufactured garment **1**. The shape of the neck sheet piece **25** is decided as appropriate but is for example a rectangular shape.

[0106] The slitting device **330** (see FIG. **14**) forms in the transported second sheet material W**2** a slit in the transport direction of the second sheet material W**2** in the middle part thereof in the width direction of the second sheet material W**2** (the direction orthogonal to the transport direction of the second sheet material W**2**) (step C**3** in FIG. **12**). The process of step C**3** in FIG. **12** is an example of a third formation process. The second sheet material W**2** in which the slit has been formed by the slitting device **330** is divided into a second right-side sheet material W**2***a* and a second left-side sheet material W**2***b* and transported.

[0107] On the second right-side sheet material W**2***a* is performed the following processing.

[0108] The neck tie joining device **340** joins the second neck tie **22***b* to the transported second right-side sheet material W**2***a* (step C**4** in FIG. **12**). The neck tie joining device **340** joins the second neck tie **22***b* to the transported second right-side sheet material W**2***a* so that the second neck tie **22***b* is disposed in a predetermined position on the outer surface of the rear member **20** in the manufactured garment **1**. It will be noted that the neck tie joining device **340** is functionally the same as the front tie joining devices **140**, **150**, with only the joining position of the tie and the length of the tie that is joined being different. Here, detailed description of the neck tie joining device **340** is omitted to avoid redundant description.

[0109] The waist tie joining device **350** joins the waist inner tie **21***b* to the transported second right-side sheet material W**2***a* (step C**5** in FIG. **12**). The waist tie joining device **350** joins the waist inner tie **21***b* to the transported second right-side sheet material W**2***a* so that the waist inner tie **21***b* is disposed in a predetermined position on the inner surface of the rear member **20** in the manufactured garment **1**. It will be noted that the waist tie joining device **350** is functionally the same as the front tie joining devices **140**, **150**, with only the joining position of the tie and the length of the tie that is joined being different. Here, detailed description of the neck tie joining device **340** is omitted to avoid redundant description.

[0110] The hook-and-loop fastener joining device **360** joins the hook-and-loop fastener **22***c* to the transported second right-side sheet material W**2***a* (step C**6** in FIG. **12**). The hook-and-loop fastener joining device **360** joins the hook-and-loop fastener **22***c* to the transported second right-side sheet material W**2***a* so that the hook-and-loop fastener **22***c* is disposed in a predetermined position on the inner surface of the rear member **20** in the manufactured garment **1**.

[0111] The adhesive applying device **370** (see FIG. **14**) applies an adhesive to the outer surface of the transported second right-side sheet material W**2***a* (the surface that becomes the outer surface of the front member **10** when the garment **1** is completed) in a position thereof where the first sleeve member **30**R will be joined (step C**7** in FIG. **12**). Specifically, the adhesive applying device **370** applies an adhesive to the right-side edge portion of the second right-side sheet material W**2***a* in a position thereof that the first sleeve member **30**R will contact in a downstream process.

Though this is not intended to be limiting, the adhesive applied by the adhesive applying device **370** is a hot-melt adhesive.

[0112] Next, processing performed on the second left-side sheet material W2*b* will be described. It will be noted that although for convenience of illustration here step C**8** to step C**10** are described after step C**4** to step C**7**, this does not mean that step C**8** to step C**10** are executed after step C**4** to step C**7**. Step C**4** to step C are preferably executed in parallel with step C**8** to step C**10**.

[0113] The waist tie joining device **380** joins the waist outer tie **21***a* to the transported second left-side sheet material W2*b* (step C**8** in FIG. **12**). The waist tie joining device **380** joins the waist outer tie **21***a* to the transported second left-side sheet material W2*b* so the waist outer tie **21***a* is disposed in a predetermined position on the outer surface of the rear member **20** in the manufactured garment **1**. It will be noted that the waist tie joining device **380** is functionally the same as the front tie joining devices **140**, **150**, with only the joining position of the tie and the length of the tie that is joined being different. Here, detailed description of the waist tie joining device **380** is omitted to avoid redundant description.

[0114] The neck tie joining device **390** joins the first neck tie **22***a* to the transported second left-side sheet material W2*b* (step C**9** in FIG. **12**). The neck tie joining device **390** joins the first neck tie **22***a* to the transported second left-side sheet material W2*b* so that the first neck tie **22***a* is disposed in a predetermined position on the outer surface of the rear member **20** in the manufactured garment **1**. It will be noted that the neck tie joining device **390** is functionally the same as the front tie joining devices **140**, **150**, with only the joining position of the tie and the length of the tie that is joined being different. Here, detailed description of the neck tie joining device **390** is omitted to avoid redundant description.

[0115] The adhesive applying device **400** (see FIG. **14**) applies an adhesive to the outer surface of the transported second left-side sheet material W2*b* (the surface that becomes the outer surface of the front member **10** when the garment **1** is completed) in a position thereof where the second sleeve member **30**L will be joined (step C**10** in FIG. **12**). Specifically, the adhesive applying device **400** applies an adhesive to the left-side edge portion of the second left-side sheet material W2*b* in a position thereof that the second sleeve member **30**L will contact in a downstream process. Though this is not intended to be limiting, the adhesive applied by the adhesive applying device **400** is a hot-melt adhesive.

[0116] To return to the description of processing performed on the first sheet material W**1**. Hereinafter, the processing performed on the first sheet material W**1** will be described with reference mainly to FIG. **5**, FIG. **10**, and FIG. **15**.

[0117] The second sheet material superimposing device **410** (see FIG. **15**) superimposes the transported first sheet material W**1** and the transported second right-side sheet material W2*a* (the second sheet material W**2**) so that the first sleeve member **30**R superimposed with the first sheet material W**1** is disposed between the first sheet material W**1** and the second right-side sheet material W2*a* (step A**9** in FIG. **10**). Step A**9** in FIG. **10** is an example of a second superimposition process.

[0118] It will be noted that when superimposing the first sheet material W**1** and the second right-side sheet material W2*a*, the second sheet material superimposing device **410** applies heat to the part of the right-side edge portion of the second right-side sheet material W2*a* to which the adhesive applying device **370** applied the hot-melt adhesive. As a result, the second right-side sheet material W2*a* and the first sleeve member **30**R are joined. In other words, step A**9** of FIG. **10** is also part of a joining process of joining the second sheet material W**2** (the second right-side sheet material W2*a*) and the sleeve members **30**.

[0119] The second sheet material superimposing device **420** (see FIG. **15**) superimposes the transported first sheet material W**1** and the transported second left-side sheet material W2*b* (the second sheet material W**2**) so that the second sleeve member **30**L superimposed with the first sheet material W**1** is disposed between the first sheet material W**1** and the second left-side sheet material W2*b* (step A**10** in FIG. **10**). Step A**10** in FIG. **10** is an example of a second superimposition process.

[0120] It will be noted that when superimposing the first sheet material W**1** and the second left-side sheet material W2*b*, the second sheet material superimposing device **420** applies heat to the part of the left-side edge portion of the second left-side sheet material W2*b* to which the adhesive applying device **400** applied the hot-melt adhesive. As a result, the second left-side sheet material W2*b* and the second sleeve member **30**L are joined. In other words, step A**10** in FIG. **10** is also part of a joining process of joining the second sheet material W**2** (the second left-side sheet material W2*b*) and the sleeve members **30**.

[0121] By going through the processes of step A**9** and step A**10**, the first sheet material W**1**, the first sleeve member **30**R, the second sleeve member **30**L, and the second sheet material W**2** become disposed in this order as schematically depicted in the enlarged area inside the long dashed double-short dashed line in FIG. **15**. Furthermore, by going through the processes of step A**9** and step A**10**, the first sleeve member **30**R and the second sleeve member **30**L become sandwiched between the outer surface of the first sheet material W**1** (the surface that becomes the outer surface of the front member **10** when the garment **1** is completed) and the outer surface of the second sheet material W**2** (the surface that becomes the outer surface of the rear member **20** when the garment **1** is completed).

[0122] The first sheet material W**1** and the second sheet material W**2** that have been superimposed through the processes of step A**9** and step A**10** are transported further downstream.

[0123] It will be noted that in the garment manufacturing system **100** one garment **1** is formed from region Z of the first sheet material W**1** and the second sheet material W**2** transported in the superimposed state. Region Z is, as shown in FIG. **5**, a region defined by line segment X**1**, line segment X**2**, and both edge portions of the first sheet material W**1** and the second sheet material W**2** in the direction orthogonal to the transport direction thereof. Line segment X**1** and line segment X**2** are straight lines extending in the width direction of the first sheet material W**1** and the second sheet material W**2**, which is orthogonal to the lengthwise direction of the first sheet material W**1** and the second sheet material W**2**. Line segment X**1** and line segment X**2** are disposed apart from each other by a length L**3** (see FIG. **3**) that is the total length of the garment **1**.

[0124] The garment **1** is manufactured using most of the raw material in region Z of the first sheet material W**1** and the second sheet material W**2**. What becomes leftover material out of the first sheet material W**1** and the second sheet material W**2** in region Z are just the part defined by line segment X**1** and virtual line X**3** depicted in the position that becomes the neckline of the garment **1** (the neckline **14** of the front member **10** and the neckline **24** of the rear member **20**) when the garment **1** is finished and the parts defined by line segment X**1** and virtual lines X**4** depicted in positions that become the sloping portions of the shoulder parts of the garment **1** (the sloping portions **16***a* of the shoulder parts **16** of the front member **10** and the sloping portions **26***a* of the shoulder parts **26** of the rear member **20**) when the garment **1** is finished. It will be noted that line segment X**1** here is a line segment depicted in positions that become the horizontal portions of the shoulder parts of the garment **1** (the horizontal portions **16***b* of the shoulder parts **16** of the front member **10** and the horizontal portions **26***b* of the shoulder parts **26** of the rear member **20**) when the garment **1** is finished. Furthermore, line segment X**2** is a line segment depicted in a position that becomes the bottom of the garment **1** (the bottom **18** of the front member **10** and the bottom **28** of the rear member **20**) when the garment **1** is finished.

[0125] In steps A**11** and A**12** described below, in order to form one garment **1** from region Z of the first sheet material W**1** and the second sheet material W**2** transported in the superimposed state, in region Z, the first sheet material W**1** and the second sheet material W**2***a* are partially joined in conformity with the shape of the outer edge of the garment **1**, and the first sheet material W**1** and the second sheet material W**2***b* are partially joined in conformity with the shape of the outer edge of the garment **1**. That is, the processes of steps A**11** and A**12** are an example of a second formation process.

[0126] In step A**11**, the body edge portion joining device **180**, which is disposed on the downstream side of the second sheet material superimposing device **420** in the transport direction of the first sheet material W**1** and the second sheet material W**2**, partially joins the first sheet material W**1** and the second sheet material W**2**.

[0127] Specifically, the body edge portion joining device **180** joins the first sheet material W**1** and the second sheet material W**2** at the parts of the garment **1** extending from the armpit parts to the bottom when the garment **1** is finished and the parts of the garment **1** that become the shoulder parts when the garment **1** is finished (the parts indicated by thick solid lines).

[0128] In other words, the body edge portion joining device **180** joins both edge portions, in the direction orthogonal to the transport direction of the first sheet material W**1** and the second sheet material W**2**, of the first sheet material W**1** and the second sheet material W**2** where the first sheet material W**1** and the second sheet material W**2** are in direct contact. Moreover, the body edge portion joining device **180** joins the parts of the first sheet material W**1** that become the shoulder parts **16** of the front member **10** when the garment **1** is finished to the parts of the second sheet material W**2** that become the shoulder parts **26** of the rear member **20** when the garment **1** is finished.

[0129] The method by which the body edge portion joining device **180** joins the first sheet material W**1** and the second sheet material W**2** may be heat welding or ultrasonic welding. The method by which the body edge portion joining device **180** joins the first sheet material W**1** and the second sheet material W**2** may be adhesion using an adhesive.

[0130] In step A**12**, the body edge portion cutting device **190** cuts, in region Z of the first sheet material W**1** and the second sheet material W**2** transported in the superimposed state, the first sheet material W**1** and the second sheet material W**2** in conformity with the shapes (so as to correspond to the shapes) of the sloping portions of the shoulder parts (the sloping portions **16***a* of the shoulder parts **16** of the front member **10** and the sloping portions **26***a* of the shoulder parts **26** of the rear member **20**) and the necklines (the neckline **14** of the front member **10** and the neckline **24** of the rear member **20**) in the outer edge of the garment **1**.

[0131] Describing this now in detail using the drawings, in step A**12** the body edge portion cutting device **190** cuts the parts, indicated by thick lines in FIG. **9**, that become the sloping portions **16***a* of the shoulder parts **16** of the front member **10** and the sloping portions **26***a* of the shoulder parts **26** of the rear member **20** when the garment **1** is finished. Furthermore, the body edge portion cutting device **190** cuts the parts, indicated by a thick line in FIG. **9**, that become the neckline **14** of the front member **10** and the neckline **24** of the rear member **20** when the garment **1** is finished. Furthermore, the body edge portion cutting device **190** cuts the part of line segment **17**, indicated by a thick line in FIG. **9**, that interconnects one end of each of the neckline **14** of the front member **10** and the neckline **24** of the rear member **20** and the other end of each of the neckline **14** of the front member **10** and the neckline **24** of the rear member **20**. It will be noted that the leftover material generated at this time (the part defined by line segment **17** and the parts that become the neckline **14** of the front member **10** and the neckline **24** of the rear member **20** when the garment **1** is finished) is recovered by a leftover material recovery device not shown in the drawings.

[0132] The body edge portion cutting device **190** does not cut the parts, indicated by dashed lines in FIG. **9**, that become the horizontal portions **16***b* of the shoulder parts **16** of the front member **10** and the horizontal portions **26***b* of the shoulder parts **26** of the rear member **20** when the garment **1** is finished. By not cutting the parts that become the horizontal portions **16***b* of the shoulder parts **16** of the front member **10** and the horizontal portions **26***b* of the shoulder parts **26** of the rear member **20** when the garment **1** is finished, even when the body edge portion cutting device **190** cuts the first sheet material W**1** and the second sheet material W**2**, the first sheet material W**1** and the second sheet material W**2** on the downstream side of the places cut by the body edge portion cutting device **190** and the first sheet material W**1** and the second sheet material W**2** on the upstream side of the places cut by the body edge portion cutting device **190** remain interconnected. For that reason, by transporting the first sheet material W**1** and the second sheet material W**2** that are on the downstream side of the places cut by the body edge portion cutting device **190**, the first sheet material W**1** and the second sheet material W**2** that are on the upstream side of the places cut by the body edge portion cutting device **190** can also be transported.

[0133] It will be noted that in step A**12** the body edge portion cutting device **190** need not cut the part of line segment **17** as indicated by the dashed line in FIG. **10**.

[0134] The first sheet material W**1** and the second sheet material W**2** on which processing has been performed by the body edge portion cutting device **190** are transported further downstream.

[0135] The folding device **195** (see FIG. **15**) folds the first sheet material W**1** and the second sheet material W**2** transported in the superimposed state after processing has been performed thereon by the body edge portion cutting device **190**, along a direction in which the first sheet material W**1** and the second sheet material W**2** are transported (a third direction D**3**, see FIG. **5**), so that the both end portions of the first sheet material W**1** and the second sheet material W**2** in a direction orthogonal to the third direction are folded inward (step A**13** of FIG. **10**). As a result, the first sheet material W**1** and the second sheet material W**2** that are transported become reduced in width in the width direction orthogonal to the transport direction.

[0136] The first sheet material W**1** and the second sheet material W**2** that have been folded by the folding device **195** are transported further downstream, and the separating device **200** disposed on the downstream side of the folding device **195** cuts apart an amount of the first sheet material W**1** and the second sheet material W**2** equivalent to one garment **1** (in other words, the part of region Z used to manufacture the garment **1**) from the first sheet material W**1** and the second sheet material W**2** transported in the superimposed state (step A**14** in FIG. **10**). In other words, the separating device **200** separates from the first sheet material W**1** and the second sheet material W**2** the garment **1** that has been formed by the second formation process (step A**11** and step A**12**). The process of step A**14** is an example of a separation process, and by going through the process of step A**14**, one garment **1** is cut apart from the first sheet material W**1** and the second sheet material W**2** and becomes independent of the first sheet material W**1** and the second sheet material W**2**. It will be noted that leftover material generated at this time is recovered by a leftover material recovery device not shown in the drawings.

[0137] To make the garment **1** more compact after step A**14**, the garment manufacturing system **100** may have a folding device that further folds the garment **1**. Here, detailed description thereof is omitted.

(3) Characteristics

[0138] Characteristics of the method of manufacturing the garment **1** of the above embodiment are described below.

(3-1)

[0139] The method of manufacturing the garment **1** of the above embodiment includes a first transport process (step A**1**), a second transport process (step C**1**), a first formation process (steps B**5**, B**6**, B**7**), a first superimposition process (steps A**7**, A**8**), a second superimposition process (steps A**9**, A**10**), a second formation process (steps A**11**, A**12**), and a separation process (step A**14**). In the first transport process, the first sheet material W**1** for forming the front member **10** (front body) serving as an example of a first member is transported. In the second transport process, the second sheet material W**2** for forming the rear member **20** (back body) serving as an example of a second member is transported. In the first formation process, the tubular sleeve members **30** are formed by superimposing the transported third sheet material W**3** and the transported fourth sheet material W**4**, partially joining the third sheet material W**3** and the fourth sheet material W**4** transported in the superimposed state, and cutting them in predetermined positions. In the first superimposition process, the transported first sheet material W**1** and the sleeve members **30** are superimposed. In the second superimposition process, the transported first sheet material W**1** and the transported second sheet material W**2** are superimposed so that the sleeve members **30** superimposed with the first sheet material W**1** are disposed between the first sheet material W**1** and the second sheet material W**2**. Particularly in the above embodiment, in the second superimposition process, the transported first sheet material W**1** and the transported second right-side sheet material W**2***a* are superimposed so that the first sleeve member **30**R superimposed with the first sheet material W**1** is disposed between the first sheet material W**1** and the second right-side sheet material W**2***a*. Furthermore, in the above embodiment, in the second superimposition process, the transported first sheet material W**1** and the transported second left-side sheet material W**2***b* are superimposed so that the second sleeve member **30**L superimposed with the first sheet material W**1** is disposed between the first sheet material W**1** and the second left-side sheet material W**2***b*. In the second formation process, the first sheet material W**1** and the second sheet material W**2** transported in a superimposed state are partially joined in conformity with the shape of the outer edge of the garment **1**. Furthermore, in the second formation process, the first sheet material W**1** and the second sheet material W**2** transported in a superimposed state are partially cut in conformity with the shape of the outer edge of the garment **1**. In the separation process, the garment that has been formed by the second formation process is separated from the first sheet material W**1** and the second sheet material W**2**.

[0140] In the method of manufacturing the garment **1** of the above embodiment, the garment **1** can be manufactured by a relatively simple process, and the garment **1** can be efficiently manufactured.

[0141] Furthermore, in the method of manufacturing the garment **1** of the above embodiment, the sleeve members **30** are disposed between the first sheet material W**1** for forming the front member **10** and the second sheet material W**2** for forming the rear member **20**, so the sleeve members **30** and the part that becomes the outer surface of the front member **10** can be covered by the rear member **20**. As a result, in the method of manufacturing the garment **1** of the above embodiment, a hygienically excellent garment, capable of reducing the occurrence of a situation where the sleeve members **30** and the outer surface of the front member **10** of the manufactured garment **1** are touched by a person's hands for example and become contaminated, and can be manufactured.

[0142] Moreover, in the method of manufacturing the garment **1** of the above embodiment, since the inner surface side of the rear member **20** is exposed to the outside in the garment **1** before being donned, a hygienically excellent garment, capable of reducing the occurrence of a situation where the outer surface of the rear member **20** is touched by a person's hands for example and becomes contaminated before the garment **1** is donned, can be manufactured.

(3-2)

[0143] The method of manufacturing the garment **1** pertaining to the above embodiment includes a third formation process (step C**3**). In the third formation process, a slit is formed in the second sheet material W**2** along the direction in which the second sheet material is transported.

[0144] In the method of manufacturing the garment **1** pertaining to the above embodiment, before the garment **1** is donned, contamination of the sleeve members **30** and the part that becomes the outer surface of the front member **10** (the front body) can be inhibited by the rear member **20** (the back body), and when the garment **1** is donned, the rear member **20** can be easily disposed on the back side of the wearer's body. In short, in the method of manufacturing the garment **1** pertaining to the above embodiment, the garment **1** that is hygienically excellent and easy to don can be manufactured.

(3-3)

[0145] In the garment **1** manufactured by the method of manufacturing the garment **1** pertaining to the above embodiment, the dimension of the openings of the cuffs **32** of the sleeve members **30** is smaller than the dimension of the openings of the armholes **34** of the sleeve members **30**. Additionally, in the process of forming the sleeve members, the first sleeve member **30**R and the second sleeve member **30**L are alternately formed from the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in a superimposed state. The first sleeve member **30**R is a sleeve member **30** where the cuff **32** is disposed on one end side, in the second direction D**2** orthogonal to the first direction D**1**, of the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in a superimposed state. The second sleeve member **30**L is a sleeve member **30** where the cuff **32** is disposed on the other end side (the opposite side of the first sleeve member **30**R), in the second direction D**2** orthogonal to the first direction D**1**, of the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in a superimposed state.

[0146] In the sleeve members **30** of the garment **1** manufactured by the method of manufacturing the garment **1** pertaining to the above embodiment, the dimension of the openings of the cuffs **32** is small and the dimension of the openings of the armholes **34** is large. For that reason, in the garment manufactured by this manufacturing method, it is easy for the wearer to move his/her arms when the wearer is donning the garment and less likely for the cuffs **32** to interfere with work.

[0147] It will be noted that in the first sleeve member **30**R, the cuff **32** which requires less sheet material is disposed on one end (called a first end portion) in the second direction D**2**, and the armhole **34** which requires more sheet material is disposed on the other end (called a second end portion) in the second direction D**2**, of the third sheet material W**3** and the fourth sheet material W**4** transported in a superimposed state. In the second sleeve member **30**L, the cuff **32** which requires less sheet material is disposed on the second end portion in the second direction D**2**, and the armhole **34** which requires more sheet material is disposed on the first end portion in the second direction D**2**, of the third sheet material W**3** and the fourth sheet material W**4** transported in a superimposed state. For that reason, using the above mentioned method of manufacturing the garment **1** can reduce the amount of raw material needed to manufacture the sleeve members **30** compared with a case where just sleeve members **30** corresponding to the first sleeve member **30**R or the second sleeve member **30**L are continuously manufactured from the third sheet material W**3** and the fourth sheet material W**4**.

(3-4)

[0148] The method of manufacturing the garment **1** of the above embodiment includes a first placement process (step B**2**) and a second placement process (step B**4**). In the first placement process, the elastic materials E are placed, with respect to the transported third sheet material W**3**, on both end portions thereof in a direction orthogonal to the direction in which the third sheet material W**3** is transported. In the second placement process, the elastic materials E are placed, with respect to the transported fourth sheet material W**4**, on both end portions thereof in a direction orthogonal to the direction in which the fourth sheet material W**4** is transported.

[0149] In this method of manufacturing the garment **1**, the elastic materials E are placed, with respect to each of the third sheet material W**3** and the fourth sheet material W**4**, on both end portions thereof in directions orthogonal to the transport directions of the third sheet material W**3** and the fourth sheet material W**4**, so the elastic materials E can be provided in the cuffs **32** of the sleeve members **30**. For that reason, in the garment **1** manufactured by this manufacturing method, the cuffs **32** can be tightened by the elastic materials E, making it less likely for the cuffs **32** to interfere with work and, furthermore, less likely for foreign matter to get inside the garment **1** through the cuffs **32**.

(3-5)

[0150] In the method of manufacturing the garment **1** of the above embodiment, the elastic materials E are placed on both the parts of the sleeve members **30** that become the cuffs **32** and the parts of the sleeve members **30** that become the armholes **34**. The method of manufacturing the garment **1** includes a cutting process of cutting the elastic materials E that are attached to the parts of the sleeve members **30** that become the armholes **34**.

[0151] In a case where the elastic materials E are present in the armhole **34** parts of the sleeve members **30**, there is a concern that during the manufacture of the garment **1** wrinkles will form in the sheet materials W**3**, W**4** that form the sleeve members **30** and the first sheet material W**1** or the second sheet material W**2** to which the sleeve members **30** become attached, so that the garment **1** will be unable to be neatly manufactured. Furthermore, if the elastic materials E are present in the armhole **34** parts of the sleeve members **30**, there is a concern that they will interfere with the donning of the garment **1**.

[0152] To address this, in this method of manufacturing the garment **1**, the elastic materials E that are attached to the armhole **34** parts of the sleeve members **30** are cut, so the occurrence of situations where the elastic materials E interfere with the manufacture of the garment **1** or interfere with the donning of the garment **1** can be reduced.

(3-6)

[0153] The method of manufacturing the garment **1** of the above embodiment includes a joining process (steps A**7**, A**8**, A**9**, A**10**). The joining process is performed before joining the first sheet material W**1** and the second sheet material W**2**. In the joining process, the first sheet material W**1** and the sleeve members **30** are joined, and the second sheet material W**2** and the sleeve members **30** are joined.

[0154] In this method of manufacturing the garment **1**, misalignment of the sleeve members **30** relative to the first sheet material W**1** and the second sheet material W**2** in the manufacturing process can be inhibited.

(3-7)

[0155] In the method of manufacturing the garment **1** of the above embodiment, the end portions (**16***c*, **26***c*) of the shoulder parts (the shoulder part **16** of the front member **10** and the shoulder part **26** of the rear member **20**) of the garment **1** on the sides of the sleeve member **30** of the garment **1** are disposed closer to the bottom of the garment **1** (the bottom **18** of the front member **10** and the bottom **28** of the rear member **20**) than are the end portions (**16***d*, **26***d*) of the shoulder parts of the garment **1** on the sides of the neckline (the neckline **14** of the front member **10** and the neckline **24** of the rear member **20**) of the garment **1**. In the second formation process, the first sheet material W**1** and the second sheet material W**2** are cut in conformity with the shapes of at least parts of the shoulder parts (the sloping portion **16***a* of the shoulder part **16** of the front member **10** and the sloping portion **26***a* of the shoulder part **26** of the rear member **20**) of the outer edge of the garment **1**.

[0156] The garment **1** manufactured by this manufacturing method has a shape where the shoulder parts become lower from the neckline side toward the sleeve portions. For that reason, the garment **1** manufactured by this manufacturing method easily fits the body.

(3-8)

[0157] The method of manufacturing the garment **1** of the above embodiment includes a folding process (step A**13**). The folding process is executed after the second formation process (steps A**11**, A**12**) and before the separation process (step A**14**) on the first sheet material W**1** and the second sheet material W**2** transported in the third direction D**3** in the superimposed state. In the folding process, both end portions of the first sheet material W**1** and the second sheet material W**2** in a direction orthogonal to the third direction D**3** are folded inward along the third direction D**3**.

[0158] In this method of manufacturing the garment **1**, the garment **1** that is manufactured can be made compact.

(4) Example Modifications

[0159] Example modifications of the above embodiment will be described below. It will be noted that the following example modifications may be combined as appropriate to the extent that they are not mutually contradictory.

(4-1) Example Modification A

[0160] The positions and numbers of the ties and the hook-and-loop fastener for fastening provided on the front member **10** and the rear member **20** are examples and can be changed as appropriate. Furthermore, the ties and the hook-and-loop fastener for fastening may be omitted as appropriate.

(4-2) Example Modification B

[0161] In the process of step C**3** of the above embodiment, a slit is formed in the second sheet material W**2** along the direction in which the second sheet material W**2** is transported.

[0162] However, the present invention is not limited thereto, and in the process of step C**3** a perforation may be formed instead of a slit in the second sheet material W**2** along the direction in which the second sheet material W**2** is transported. It will be noted that in this case the second sheet material W**2** is not separated. For that reason, the processes of steps C**4** to C**10** of FIG. **12** become performed on one sheet material (the second sheet material W**2**). Furthermore, in this case, rather than the second right-side sheet material W**2***a* and the second left-side sheet material W**2***b* being superimposed on the first sheet material W**1** in two processes as in step A**9** and step A**10** of FIG. **10**, the second sheet material W**2** becomes superimposed on the first sheet material W**1** in one process. Furthermore, the garment **1** manufactured in this case does not have a configuration where the right rear member **20**R and the left rear member **20**L overlap as in the above embodiment. When donning the garment **1** (see FIG. **16**) in which a perforation **23** is formed instead of a slit, for example an assistant assisting the wearer in donning the garment **1** tears the perforation **23** part and then disposes the rear member **20** on the back side of the wearer.

[0163] Furthermore, the process of step C**3** may be omitted. In this case, when donning the garment **1**, for example an assistant assisting the wearer in donning the garment **1** cuts the rear member **20** in a predetermined place along the up-down direction (e.g., cuts the rear member **20** along a cut line drawn on the rear member **20**) and disposes the rear member **20** on the back side of the wearer.

(4-3) Example Modification C

[0164] In the above embodiment, the first sheet material W**1** and the sleeve members **30** are superimposed and then the first sheet material W**1** and the second sheet material W**2** are superimposed. However, the present invention is not limited thereto, and the second sheet material W**2** and the sleeve members **30** may be superimposed and then the second sheet material W**2** and the first sheet material W**1** may be superimposed.

(4-4) Example Modification D

[0165] In the garment **1** manufactured by the manufacturing method of the above embodiment, the dimension of the openings of the cuffs **32** of the sleeve members **30** is smaller than the dimension of the openings of the armholes **34** of the sleeve members **30**. However, the present invention is not limited thereto, and the dimension of the openings of the cuffs **32** of the sleeve members **30** may be identical to the dimension of the openings of the armholes **34** of the sleeve members **30**. In other words, the thickness of the sleeve members **30** may be uniform.

(4-5) Example Modification E

[0166] In the manufacturing method of the above embodiment, the sleeve member **30** that becomes the right sleeve and the sleeve member **30** that becomes the left sleeve are manufactured from the third sheet material W**3** and the fourth sheet material W**4**. However, the present invention is not limited thereto, and the sleeve member **30** that becomes the right sleeve may be manufactured from a pair of sheet materials, and the sleeve member **30** that becomes the left sleeve may be manufactured from a pair of sheet materials different from those of the sleeve member **30** that becomes the right sleeve. In other words, the sleeve member **30** that becomes the right sleeve and the sleeve member **30** that becomes the left sleeve may be manufactured by respectively different devices. However, in this case, a manufacturing device for the right sleeve and a manufacturing device for the left sleeve each become needed, which has the potential to lead to an increase in the cost of the garment manufacturing system.

(4-6) Example Modification F

[0167] In the manufacturing method of the above embodiment, the joining of the first sheet material W**1** and the sleeve members **30** and the joining of the second sheet material W**2** and the sleeve members **30** are completed in steps A**7**, A**8**, A**9**, and A**10**.

[0168] However, the present invention is not limited thereto, and in steps A**7**, A**8**, A**9**, and A**10**, tentative fixing of the first sheet material W**1** and the sleeve members **30** and tentative fixing of the second sheet material W**2** and the sleeve members **30** may be performed. Then, when the joining of the first sheet material W**1** and the second sheet material W**2** is performed in step A**11**, the joining of the first sheet material W**1** and the sleeve members **30** and the joining of the second sheet material W**2** and the sleeve members **30** may be performed. It will be noted that even in a case where heat welding or ultrasonic welding is selected as the joining means, by adjusting the output, the first sheet material W**1** and the second sheet material W**2** can be joined to the sleeve members **30** while keeping the third sheet material W**3** and the fourth sheet material W**4** from being welded together.

(4-7) Example Modification G

[0169] The method of manufacturing the garment **1** described in the above embodiment is merely an example of the present invention and can be changed as appropriate.

[0170] For example, although in the above embodiment the elastic materials E are attached to the third sheet material W**3** and the fourth sheet material W**4**, this process may be omitted.

[0171] Furthermore, for example, although in the above embodiment the garment **1** is separated from the first sheet material W**1** and the second sheet material W**2** after the folding device **195** folds the garment **1**, conversely the garment **1** may be folded after the garment **1** is separated from the first sheet material W**1** and the second sheet material W**2**.

(4-8) Example Modification H

[0172] Although the shoulder parts **16**, **26** of the garment **1** described in the above embodiment have the sloping portions **16***a*, **26***a*, they are not limited thereto. The shoulder parts **16**, **26** may be entirely configured by the horizontal portions **16***b*, **26***b*.

(4-9) Example Modification I

[0173] In the method of manufacturing the garment of the above embodiment, the sleeve member **30** where the cuff **32** is disposed on one end side in the second direction D**2** orthogonal to the first direction D**1** and the sleeve member **30** where the cuff **32** is disposed on the other end side in the second direction D**2** are alternately formed by cutting the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** (just by joining and cutting both sheets).

[0174] However, the method of manufacturing the garment of the present disclosure is not limited to this kind of aspect. For example, in the method of manufacturing the garment of the present disclosure, the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** may be cut (both sheets may be joined and cut) to form just sleeve members **30** where the cuff **32** is disposed on one end side in the second direction D**2** orthogonal to the first direction D**1**. Then, after the sleeve members **30** are formed, the sleeve members **30** may be transported while changing the attitudes of the sleeve members **30** so that a sleeve member **30** where the cuff **32** is disposed on one end side in the direction orthogonal to the transport direction and a sleeve member **30** where the cuff **32** is disposed on the other end side in the direction orthogonal to the transport direction are alternately arranged in the transport direction.

[0175] With this kind of configuration, as a result, both the sleeve member used as the right sleeve and the sleeve member **30** used as the left sleeve can be manufactured from the third sheet material W**3** and the fourth sheet material W**4**.

(4-10) Example Modification J

[0176] In the manufacturing method of the above embodiment, the sleeve edge portion cutting device **240** cuts, along the direction in which the joints extend and in the central portions of the joints, each of the joints in the third sheet material W**3** and the fourth sheet material W**4** formed by the sleeve edge portion joining device **230**. At the point in time when this process ends, joints J (the hatched parts) between the third sheet material W**3** and the fourth sheet material W**4** project outward of the sleeve members **30** as in FIG. **17**.

[0177] If the garment **1** is manufactured with the joints J between the third sheet material W**3** and the fourth sheet material W**4** in the sleeve members **30** projecting outward (if the garment **1** is manufactured such that the joints J are disposed on the outside when the garment **1** is donned), the potential for phenomena such as for example the joints J getting caught on or contacting a patient's organs during surgery to occur, such that the joints J end up inadvertently injuring the patient's organs, is conceivable. Furthermore, there is the concern that such a garment **1** may also deteriorates the appearance.

[0178] From such a standpoint, the method of manufacturing the garment **1** may include a reversal process. The reversal process is a process executed before superimposing the sleeve members **30** that have been formed by the first formation process with the first sheet material in the first superimposition process. The reversal process is a process of reversing the sleeve members **30** so that the surfaces of the sleeve members **30** that are disposed on the outside during the first formation process are disposed on the inside.

[0179] The reversal process specifically for example is a process of gripping the sides of the cuff **32** of the sleeve members that have been formed by the first formation process and whose first faces F**1** (the sides where the joints J are exposed) face outward as in FIG. **17**, and moving the cuffs **32** through the openings formed between the third sheet material W**3** and the fourth sheet material W**4** on the sides of the armhole **34** to dispose the first faces F**1** inside the tubular sleeve members **30**.

[0180] An example of a process of forming the sleeve members **30** including the reversal process will be described with reference to FIG. **18**. It will be noted that, here, a case where the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** are joined and cut to form just the sleeve members **30** where the cuffs **32** are disposed on one end side in the second direction D**2** as in example modification I will be taken as an example and described.

[0181] The process (the processes of step B**1** to step B**6** depicted in FIG. **18**) of forming the sleeve members **30** described here is the same as the process of forming the sleeve members **30** of the above embodiment except that step B**2** and step B**4** are partially different. Therefore, regarding the processes of step B**1** to step B**6**, just the differences will be described here.

[0182] Here, since only the sleeve members **30** where the cuffs **32** are disposed on one end side in the second direction D**2** are formed by joining and cutting the third sheet material W**3** and the fourth sheet material W**4**, it is not necessary to dispose the elastic materials E on both ends in the second direction D**2** in step B**2** and step B**4**, and the elastic materials E need only be disposed on the side in the second direction D**2** where the cuffs **32** are disposed. It will be noted that in the manufacturing flow of FIG. **18**, the process of cutting the elastic materials E on the armhole **34** side is also unnecessary because the elastic materials E are not disposed on the armhole **34** side.

[0183] In step B**7***a*, as in the above embodiment, the sleeve edge portion cutting device **240** cuts, along the direction in which the joints extend and in the central portions of the joints, each of the joints formed by the sleeve edge portion joining device **230** in the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** in the superimposed state. However, preferably, the sleeve edge portion cutting device **240** does not entirely cut the third sheet material W**3** and the fourth sheet material W**4** in the second direction D**2**. With this configuration, at the point in time when step B**7***a* ends, the sleeve member **30** formed through the configuration of step B**7***a* is connected to the sleeve members **30** adjacent thereto in the first direction D**1** on the armhole **34** side in the second direction D**2** (see FIG. **18**).

[0184] Next, at the position indicated by reference sign R**1** in FIG. **18**, the sleeve members **30** are reversed by a reversing device (a blowing machine, a suction machine, a robot arm, etc.). The reversal method is as described above.

[0185] Thereafter, at the position indicated by reference sign B**7***b* in FIG. **18**, the sleeve members **30** adjacent to each other in the first direction D**1** are cut apart by a cutting device so that the sleeve members **30** become mutually independent.

[0186] After the end of step B**7***b*, the sleeve members **30** are transported to the next process by the position adjusting devices **245**, **250** in the same manner as in step B**8** of the above embodiment (step B**8***a*). However, in the flow shown in FIG. **18**, just the sleeve members **30** where the cuffs **32** are disposed on one end side in the second direction D**2** are formed by joining and cutting the third sheet material W**3** and the fourth sheet material W**4** (by going through the processes of step B**6** and step B**7***a*). For that reason, in step B**8***a*, the position adjusting devices **245**, **250** together perform processes to change the attitudes in which the sleeve members **30** are transported so that a sleeve member **30** where the cuff **32** is disposed on one end side in the direction orthogonal to the transport direction and a sleeve member **30** where the cuff **32** is disposed on the other end side in the direction orthogonal to the transport direction are alternately arranged along the transport direction of the sleeve members **30** as described in example modification I.

[0187] It will be noted that the process of forming the sleeve members **30** described with reference to FIG. **18** is merely an example and may be changed as appropriate.

[0188] For example, the reversal process R**1** may be performed after the sleeve members **30** have become mutually independent members.

[0189] Furthermore, the reversal process R**1** may also be applied to the case described in the above embodiment of alternately forming a sleeve member **30** where the cuff **32** is disposed on one end side in the second direction D**2** orthogonal to the first direction D**1** and a sleeve member **30** where the cuff **32** is disposed on the other end side in the second direction D**2** by cutting the third sheet material W**3** and the fourth sheet material W**4** transported in the first direction D**1** (just by joining and cutting both sheets).

<Addendum>

[0190] Finally, the technical ideas that can be grasped from the above embodiment and other examples (example modifications) is appended below.

[0191] A method of manufacturing a garment pertaining to a first aspect of the present invention includes a first transport process, a second transport process, a first formation process, a first superimposition process, a second superimposition process, a second formation process, and a separation process. In the first transport process, a first sheet material for forming a first member is transported. In the second transport process, a second sheet material for forming a second member is transported. The first member is one of a front body and a back body, and the second member is the other of the front body and the back body. In the first formation process, tubular sleeve members are formed by superimposing a transported third sheet material and a transported fourth sheet material, partially joining the third sheet material and the fourth sheet material transported in the superimposed state, and cutting them in predetermined positions. In the first superimposition process, the transported first sheet material and the sleeve members are superimposed. In the second superimposition process, the transported first sheet material and the transported second sheet material are superimposed so that the sleeve members superimposed with the first sheet material are disposed between the first sheet material and the second sheet material. In the second formation process, the first sheet material and the second sheet material transported in the superimposed state are partially joined in conformity with the shape of the outer edge of the garment. Furthermore, in the second formation process, the first sheet material and the second sheet material transported in the superimposed state are partially cut in conformity with the shape of the outer edge of the garment. In the separation process, the garment that has been formed by the second formation process is separated from the first sheet material and the second sheet material.

[0192] In the method of manufacturing the garment of the first aspect, the garment can be manufactured by a relatively simple process, and the garment can be efficiently manufactured.

[0193] Furthermore, in the method of manufacturing the garment pertaining to the first aspect, the sleeve members are disposed between the first sheet material for forming the first member and the second sheet material for forming the second member, so the sleeve members and the part that becomes the outer surface (front surface) of the front body can be covered by the back body. As a result, in the method of manufacturing the garment pertaining to the first aspect, a hygienically excellent garment, capable of reducing the

occurrence of a situation where the sleeve members and the outer surface of the front body of the manufactured garment are touched by a person's hands for example and become contaminated, can be manufactured.

[0194] A garment manufacturing method pertaining to a second aspect of the present invention is the garment manufacturing method of the first aspect, further including a third formation process. In the third formation process, a slit or perforation is formed in the first sheet material along the direction in which the first sheet material is transported. Alternatively, in the third formation process, a slit or perforation is formed in the second sheet material along the direction in which the second sheet material is transported.

[0195] In the method of manufacturing the garment pertaining to the second aspect, a slit or perforation can be formed in the member that becomes the back body. As a result, before the garment is donned, contamination of the sleeve members and the part that becomes the outer surface of the front body can be inhibited by the back body, and when the garment is donned, the back body can be easily disposed on the back side of the wearer's body. In short, in the method of manufacturing the garment pertaining to the second aspect, a garment that is hygienically excellent and easy to don can be manufactured.

[0196] A garment manufacturing method pertaining to a third aspect of the present invention is the garment manufacturing method of the first aspect or the second aspect, wherein in the garment manufactured by the manufacturing method, the dimension of openings of cuffs of the sleeve members is smaller than the dimension of openings of armholes of the sleeve members. In the process of forming the sleeve members, a first sleeve member and a second sleeve member are alternately formed from the third sheet material and the fourth sheet material transported in a first direction in the superimposed state. The first sleeve member is a sleeve member where the cuff is disposed on one end side, in a second direction orthogonal to the first direction, of the third sheet material and the fourth sheet material transported in the first direction in the superimposed state. The second sleeve member is a sleeve member where the cuff is disposed on the other end side (the opposite side of the first sleeve members), in the second direction orthogonal to the first direction, of the third sheet material and the fourth sheet material transported in the first direction in the superimposed state.

[0197] In the sleeve members of the garment manufactured by the method of manufacturing the garment pertaining to the third aspect, the dimension of the openings of the cuffs is small and the dimension of the openings of the armholes is large, so in the method of manufacturing the garment pertaining to the third aspect, a garment in which it is easy for the wearer to move his/her arms when the wearer is donning the garment and less likely for the cuffs to interfere with work can be manufactured.

[0198] It will be noted that in the first sleeve member, the cuff which requires less sheet material is disposed on one end (called a first end portion) in the second direction of the third sheet material and the fourth sheet material transported in a superimposed state, and the armhole which requires more sheet material is disposed on the other end (called a second end portion) in the second direction of the third sheet material and the fourth sheet material transported in a superimposed state. In the second sleeve member, the cuff which requires less sheet material is disposed on the second end portion in the second direction of the third sheet material and the fourth sheet material transported in a superimposed state, and the armhole which requires more sheet material is disposed on the first end portion in the second direction of the third sheet material and the fourth sheet material transported in a superimposed state. For that reason, using the method of manufacturing the garment pertaining to the third aspect can reduce the generation of leftover material in the manufacture of the sleeve members compared with a case where just sleeve members corresponding to the first sleeve member or the second sleeve member are continuously manufactured from the third sheet material and the fourth sheet material.

[0199] A garment manufacturing method pertaining to a fourth aspect of the present invention is the garment manufacturing method of the third aspect, further including a first placement process and a second placement process. In the first placement process, elastic materials are placed, with respect to the transported third sheet material, on both end portions thereof in a direction orthogonal to the direction in which the third sheet material is transported. In the second placement process, elastic materials are placed, with respect to the transported fourth sheet material, on both end portions thereof in a direction orthogonal to the direction in which the fourth sheet material is transported.

[0200] In the garment manufacturing method pertaining to the fourth aspect, the elastic materials are placed, with respect to each of the third sheet and the fourth sheet, on both end portions thereof in directions orthogonal to the transport directions of the third sheet and the fourth sheet, so the elastic materials can be provided in the cuffs of the sleeve members. For that reason, in the garment manufactured by the garment manufacturing method of the fourth aspect, the cuffs can be tightened by the elastic materials, making it less likely for the cuffs to interfere with work and, furthermore, less likely for foreign matter to get inside the garment through the cuffs.

[0201] A garment manufacturing method pertaining to a fifth aspect of the present invention is the garment manufacturing method of the fourth aspect, wherein the elastic materials are placed on both the parts of the sleeve members that become the cuffs and the parts of the sleeve members that become the armholes. The garment manufacturing method further includes a cutting process of cutting the elastic materials that are attached to the parts of the sleeve members that become the armholes.

[0202] In a case where the elastic materials are present in the armhole parts of the sleeve members, there is a concern that during the manufacture of the garment wrinkles will form in the sheets that form the sleeve members and the first sheet material or the second sheet material to which the sleeve members become attached, so that the garment will be unable to be neatly manufactured. Furthermore, if the elastic materials are present in the armhole parts of the sleeve members, there is a concern that they will interfere with the donning of the garment.

[0203] To address this, in the method of manufacturing the garment pertaining to the fifth aspect, the elastic materials that are attached to the armhole parts of the sleeve members are cut, so the occurrence of situations where the elastic materials interfere with the manufacture of the garment or interfere with the donning of the garment can be reduced.

[0204] A garment manufacturing method pertaining to a sixth aspect of the present invention is the garment manu-

facturing method of any of the first aspect to the fifth aspect, further including a joining process. The joining process is performed before joining the first sheet material and the second sheet material. In the joining process, the first sheet material and the sleeve members are joined, and the second sheet material and the sleeve members are joined.

[0205] In the garment manufacturing method pertaining to the sixth aspect, misalignment of the sleeve members relative to the first sheet material and the second sheet material in the manufacturing process can be inhibited.

[0206] A garment manufacturing method pertaining to a seventh aspect of the present invention is the garment manufacturing method of any of the first aspect to the sixth aspect, wherein end portions of shoulder parts of the garment on the sleeve member sides of the garment are disposed closer to a bottom of the garment than are end portions of the shoulder parts of the garment on a neckline side of the garment. In the second formation process, the first sheet material and the second sheet material are cut in conformity with the shapes of at least parts of the shoulder parts on the outer edge of the garment.

[0207] The shoulder parts of the garment manufactured by the manufacturing method pertaining to the seventh aspect have a shape where they become lower from the neckline side toward the sleeve portions. For that reason, the garment manufactured by the manufacturing method pertaining to the seventh aspect easily fits the body.

[0208] A garment manufacturing method pertaining to an eighth aspect of the present invention is the garment manufacturing method of any of the first aspect to the seventh aspect, further including a folding process. The folding process is executed after the second formation process and before the separation process on the first sheet material and the second sheet material transported in a third direction in the superimposed state. In the folding process, both end portions of the first sheet material and the second sheet material in a direction orthogonal to the third direction are folded inward along the third direction.

[0209] In the method of manufacturing the garment pertaining to the eighth aspect, the garment that is manufactured can be made compact.

[0210] A garment manufacturing method pertaining to a ninth aspect of the present invention is the garment manufacturing method of any of the first aspect to the eighth aspect, further including a reversal process. The reversal process is executed before superimposing the sleeve members that have been formed by the first formation process with the first sheet material in the first superimposition process. In the reversal process, the sleeve members are reversed so that the surfaces of the sleeve members that are disposed on the outside during the first formation process are disposed on the inside.

[0211] In the method of manufacturing the garment pertaining to the ninth aspect, the joints between the third sheet material and the fourth sheet material in the sleeve members can be disposed inside the sleeve members, so the occurrence of a situation where the joints in the sleeve members project outward and interfere with the work of the wearer of the garment can be reduced. Furthermore, in the method of manufacturing the garment pertaining to the ninth aspect, the joints between the third sheet material and the fourth sheet material in the sleeve members can be disposed inside the sleeve members, so the appearance of the garment that is manufactured is good.

REFERENCE SIGNS LIST

[0212] **1** Garment
[0213] **10** Front Member (First Member)
[0214] **14** Neckline
[0215] **16** Shoulder Parts
[0216] **16***a* Sloping Portions
[0217] **16***b* Horizontal Portions
[0218] **20** Rear Member (Second Member)
[0219] **23** Perforation
[0220] **24** Neckline
[0221] **26** Shoulder Parts
[0222] **26***a* Sloping Portions
[0223] **26***b* Horizontal Portions
[0224] **30** Sleeve Members
[0225] **30**R First Sleeve Member
[0226] **30**L Second Sleeve Member
[0227] **32** Cuffs
[0228] **34** Armholes
[0229] E Elastic Materials
[0230] W**1** First Sheet Material
[0231] W**2** Second Sheet Material
[0232] W**3** Third Sheet Material
[0233] W**4** Fourth Sheet Material

1. A method of manufacturing a garment comprising:

a first transport process of transporting a first sheet material for forming a first member that is one of a front body and a back body;

a second transport process of transporting a second sheet material for forming a second member that is the other of the front body and the back body;

a first formation process of forming tubular sleeve members by superimposing a transported third sheet material and a transported fourth sheet material, partially joining the third sheet material and the fourth sheet material transported in the superimposed state, and cutting them in predetermined positions,

a first superimposition process of superimposing the transported first sheet material and the sleeve members;

a second superimposition process of superimposing the transported first sheet material and the transported second sheet material so that the sleeve members superimposed with the first sheet material are disposed between the first sheet material and the second sheet material;

a second formation process of partially joining, in conformity with the shape of the outer edge of the garment, the first sheet material and the second sheet material transported in the superimposed state and partially cutting, in conformity with the shape of the outer edge of the garment, the first sheet material and the second sheet material being transported in the superimposed state; and

a separation process of separating from the first sheet material and the second sheet material the garment that has been formed by the second formation process.

2. The garment manufacturing method of claim **1**, further comprising

a third formation process of forming a slit or perforation in the first sheet material along the direction in which the first sheet material is transported or forming a slit or perforation in the second sheet material along the direction in which the second sheet material is transported.

3. The garment manufacturing method of claim 1, wherein

the dimension of openings of cuffs of the sleeve members is smaller than the dimension of openings of armholes of the sleeve members, and

in the first formation process, from the third sheet material and the fourth sheet material transported in a first direction in the superimposed state are alternately formed a first sleeve member where the cuff is disposed on one end side in a second direction orthogonal to the first direction and a second sleeve member where the cuff is disposed on the other end side in the second direction.

4. The garment manufacturing method of claim 3, further comprising

a first placement process of placing, with respect to the transported third sheet material, elastic materials on both end portions thereof in a direction orthogonal to the direction in which the third sheet material is transported, and

a second placement process of placing, with respect to the transported fourth sheet material, elastic materials on both end portions thereof in a direction orthogonal to the direction in which the fourth sheet material is transported.

5. The garment manufacturing method of claim 4, wherein

the elastic materials are placed on both the parts of the sleeve members that become the cuffs and the parts of the sleeve members that become the armholes, and

the garment manufacturing method further comprises a cutting process of cutting the elastic materials that are attached to the parts of the sleeve members that become the armholes.

6. The garment manufacturing method of claim 1, further comprising

a joining process of joining the first sheet material and the sleeve members and joining the second sheet material and the sleeve members before joining the first sheet material and the second sheet material.

7. The garment manufacturing method of claim 1, wherein

end portions of shoulder parts of the garment on the sleeve member sides are disposed closer to a bottom of the garment than are end portions of the shoulder parts of the garment on a neckline side of the garment, and

in the second formation process, the first sheet material and the second sheet material are cut in conformity with the shapes of at least parts of the shoulder parts on the outer edge of the garment.

8. The garment manufacturing method of claim 1, further comprising

a folding process, executed after the second formation process and before the separation process on the first sheet material and the second sheet material transported in a third direction in the superimposed state,

in the folding process, the first sheet material and the second sheet material being folded along the third direction so that both end portions of the first sheet material and the second sheet material in a direction orthogonal to the third direction being folded inward.

9. The garment manufacturing method of claim 1, further comprising

a reversal process, executed before superimposing the sleeve members that have been formed by the first formation process with the first sheet material in the first superimposition process,

in the reversal process, the sleeve members being reversed to thereby dispose on the inside the surfaces of the sleeve members being disposed on the outside during the first formation process.

10. The garment manufacturing method of claim 2, wherein

the dimension of openings of cuffs of the sleeve members is smaller than the dimension of openings of armholes of the sleeve members, and

in the first formation process, from the third sheet material and the fourth sheet material transported in a first direction in the superimposed state are alternately formed a first sleeve member where the cuff is disposed on one end side in a second direction orthogonal to the first direction and a second sleeve member where the cuff is disposed on the other end side in the second direction.

11. The garment manufacturing method of claim 10, further comprising

a first placement process of placing, with respect to the transported third sheet material, elastic materials on both end portions thereof in a direction orthogonal to the direction in which the third sheet material is transported, and

a second placement process of placing, with respect to the transported fourth sheet material, elastic materials on both end portions thereof in a direction orthogonal to the direction in which the fourth sheet material is transported.

12. The garment manufacturing method of claim 11, wherein

the elastic materials are placed on both the parts of the sleeve members that become the cuffs and the parts of the sleeve members that become the armholes, and

the garment manufacturing method further comprises a cutting process of cutting the elastic materials that are attached to the parts of the sleeve members that become the armholes.

13. The garment manufacturing method of claim 2, further comprising

a joining process of joining the first sheet material and the sleeve members and joining the second sheet material and the sleeve members before joining the first sheet material and the second sheet material.

14. The garment manufacturing method of claim 2, wherein

end portions of shoulder parts of the garment on the sleeve member sides are disposed closer to a bottom of the garment than are end portions of the shoulder parts of the garment on a neckline side of the garment, and

in the second formation process, the first sheet material and the second sheet material are cut in conformity with the shapes of at least parts of the shoulder parts on the outer edge of the garment.

15. The garment manufacturing method of claim 2, further comprising

a folding process, executed after the second formation process and before the separation process on the first sheet material and the second sheet material transported in a third direction in the superimposed state,

in the folding process, the first sheet material and the second sheet material being folded along the third direction so that both end portions of the first sheet material and the second sheet material in a direction orthogonal to the third direction being folded inward.

16. The garment manufacturing method of claim **2**, further comprising

a reversal process, executed before superimposing the sleeve members that have been formed by the first formation process with the first sheet material in the first superimposition process,

in the reversal process, the sleeve members being reversed to thereby dispose on the inside the surfaces of the sleeve members being disposed on the outside during the first formation process.

17. The garment manufacturing method of claim **3**, further comprising

a joining process of joining the first sheet material and the sleeve members and joining the second sheet material and the sleeve members before joining the first sheet material and the second sheet material.

18. The garment manufacturing method of claim **3**, wherein

end portions of shoulder parts of the garment on the sleeve member sides are disposed closer to a bottom of the garment than are end portions of the shoulder parts of the garment on a neckline side of the garment, and

in the second formation process, the first sheet material and the second sheet material are cut in conformity with the shapes of at least parts of the shoulder parts on the outer edge of the garment.

19. The garment manufacturing method of claim **3**, further comprising

a folding process, executed after the second formation process and before the separation process on the first sheet material and the second sheet material transported in a third direction in the superimposed state,

in the folding process, the first sheet material and the second sheet material being folded along the third direction so that both end portions of the first sheet material and the second sheet material in a direction orthogonal to the third direction being folded inward.

20. The garment manufacturing method of claim **3**, further comprising

a reversal process, executed before superimposing the sleeve members that have been formed by the first formation process with the first sheet material in the first superimposition process,

in the reversal process, the sleeve members being reversed to thereby dispose on the inside the surfaces of the sleeve members being disposed on the outside during the first formation process.

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