



US 20150033446A1

(19) **United States**
(12) **Patent Application Publication**
Kanayama

(10) **Pub. No.: US 2015/0033446 A1**
(43) **Pub. Date: Feb. 5, 2015**

(54) **LOWER WEAR WITH SUSPENDER**

(52) **U.S. Cl.**

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CPC .. *A41D 1/06* (2013.01); *A41F 15/00* (2013.01)

USPC **2/230**

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(57) **ABSTRACT**

(21) Appl. No.: **14/335,162**

(22) Filed: **Jul. 18, 2014**

(30) **Foreign Application Priority Data**

Jul. 30, 2013 (JP) 2013-157301

To provide lower wear with a suspender enabling quick and ready lowering of lower wear to expose the wearer's hip with the suspender hung on the wearer's shoulder, lower wear 10 has a back rail part having a circular cross section on a waist periphery in an upper part of a hip part, and a suspender 20 has an engagement part that engages with the back rail part, and is movable while it is in engagement with the back rail. A first back end part of the suspender 10 has a first engagement part 211 that engages with the back rail part and is movable while it is in engagement with the back rail part, and a second back end part has a second engagement part 221 that engages with the back rail part and is movable while it is in engagement with the back rail part.

Publication Classification

(51) **Int. Cl.**

A41D 1/06 (2006.01)

A41F 15/00 (2006.01)

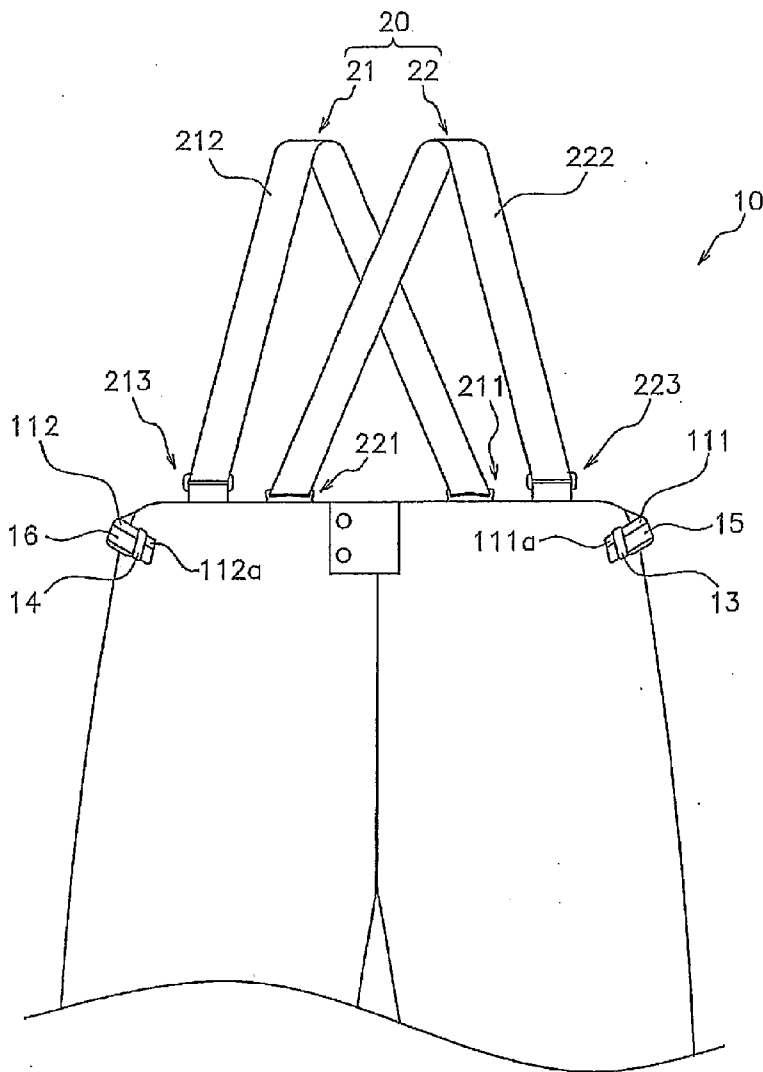


Fig. 1

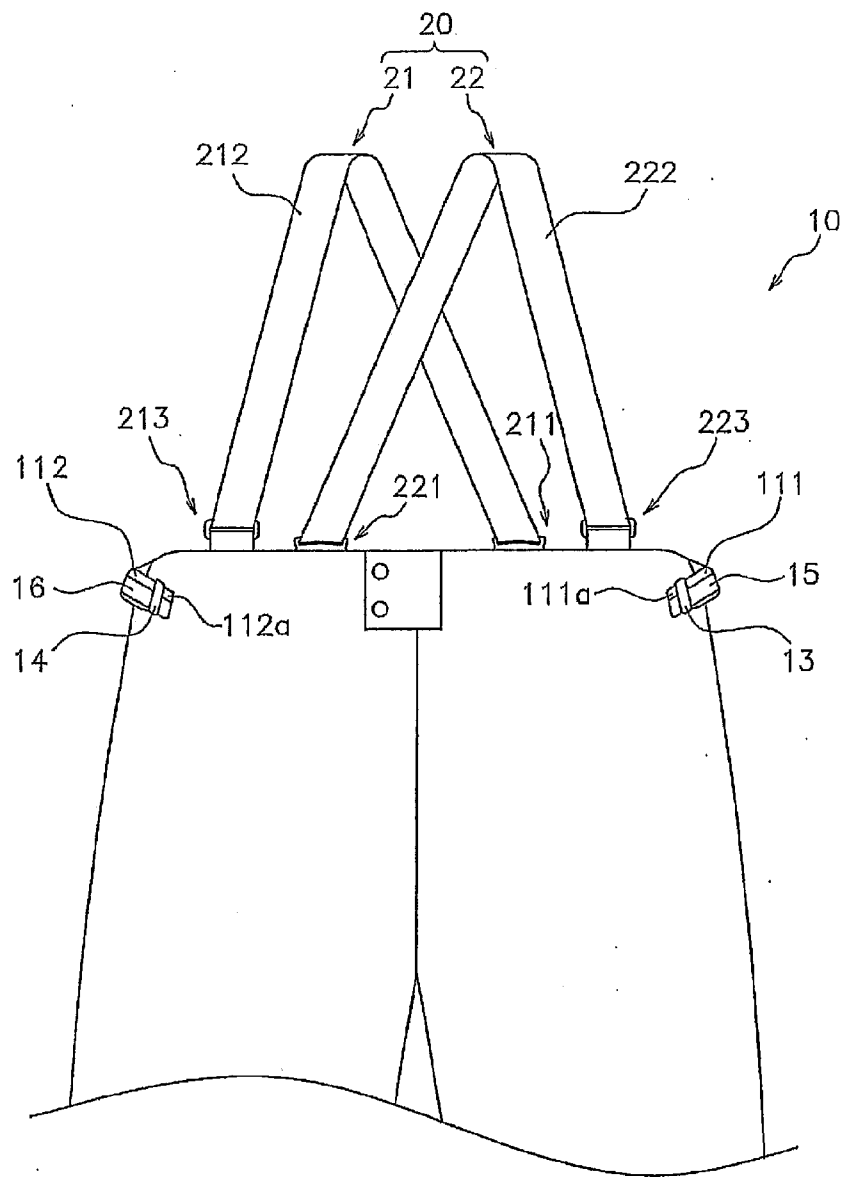


Fig. 2

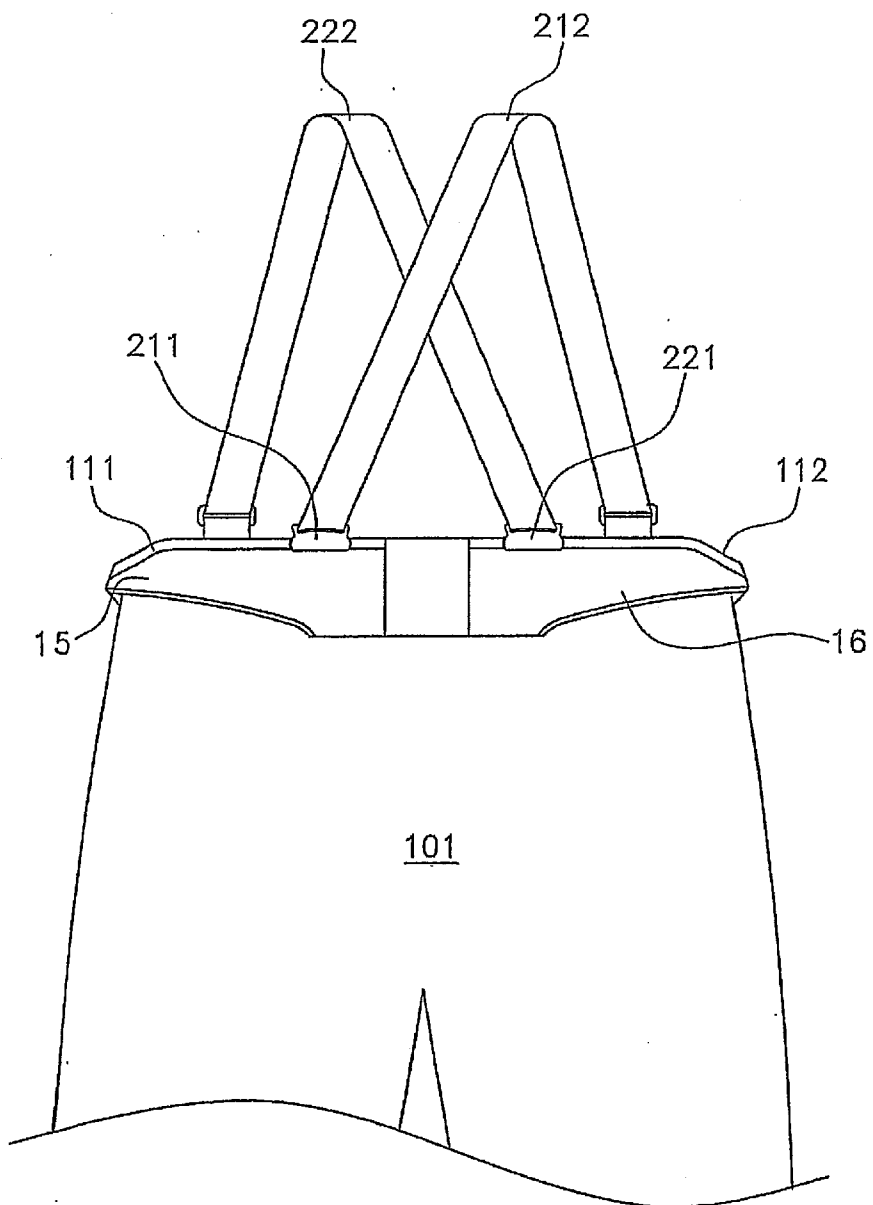


Fig. 3

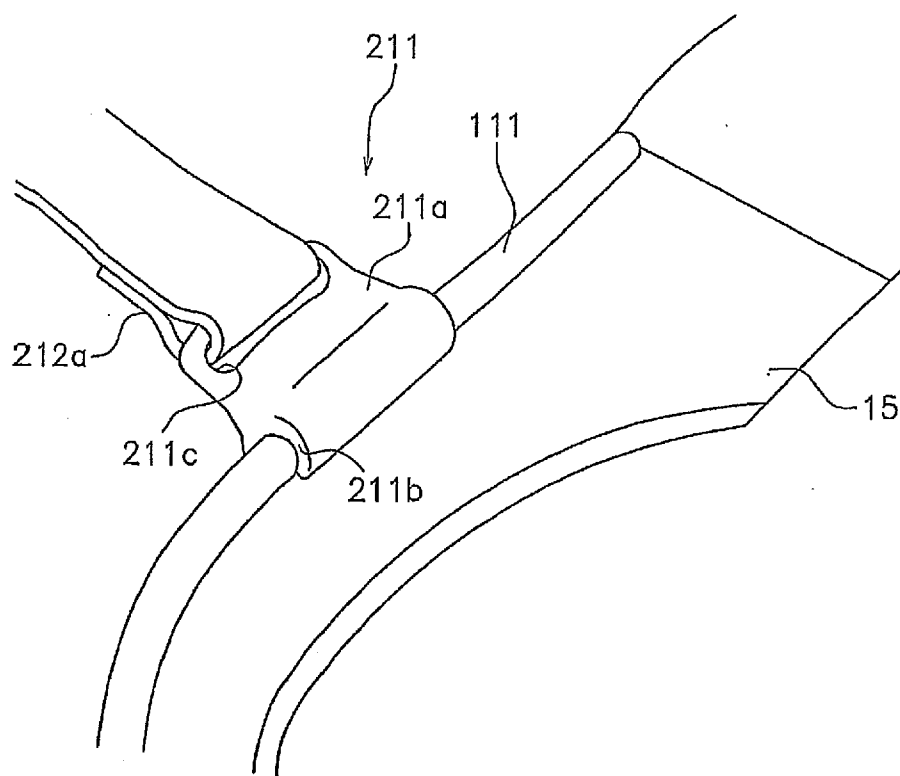
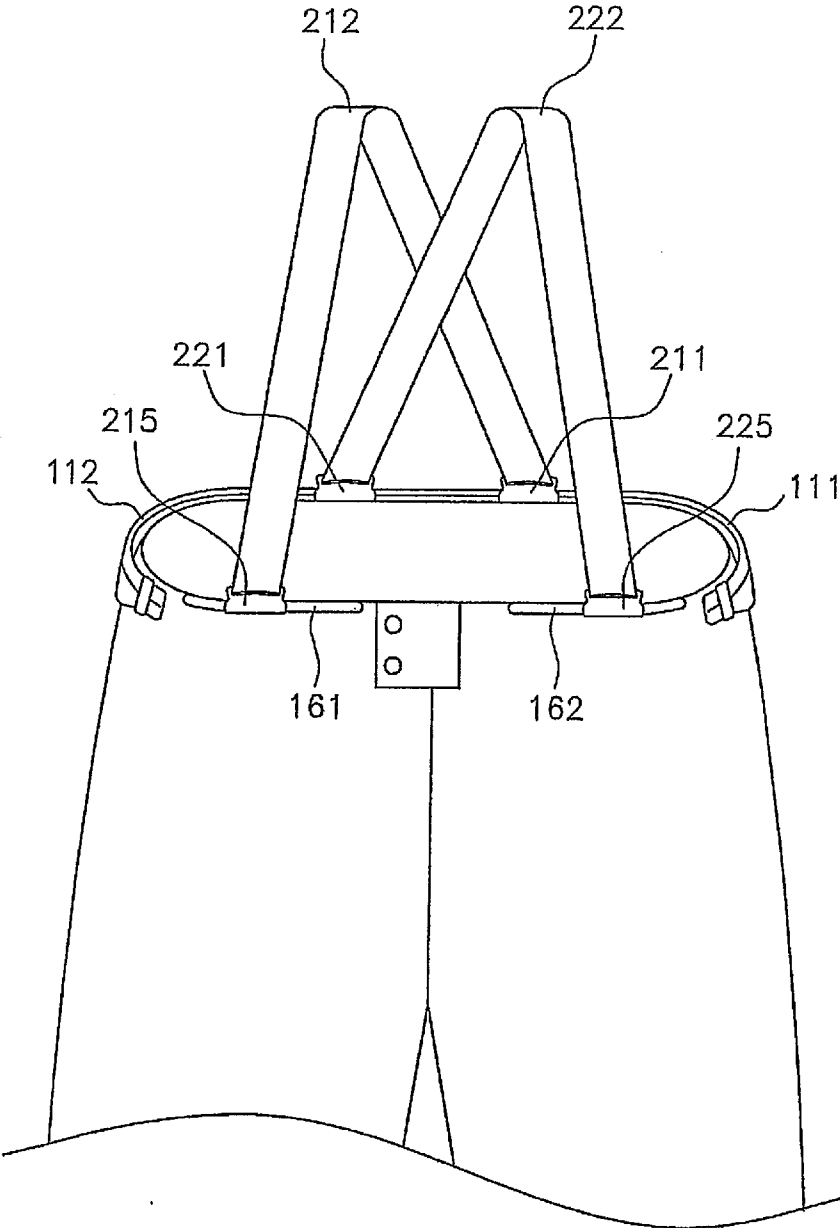


Fig. 4



LOWER WEAR WITH SUSPENDER

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to lower wear(or bottoms) (e.g., long trousers, short trousers, underpants, and pants) with a suspender.

[0003] 2. Description of the Related Art

[0004] As one example of a suspender for suspending trousers, Patent Document 1 discloses such a constitution that a suspender is fixed to an upper part of a zipper, and a lower part of the zipper is fixed to the waist periphery of trousers, and thus a wearer can readily expose his/her hip by separating the upper part and the lower part from each other by opening the zipper.

[0005] Patent Document 2 discloses such a constitution that a front band body is folded back via a ring that allows free passage of the front band body and that is disposed in a back band body, and by bringing a trousers-attachment member attached to the front band body or an engagement member disposed in the vicinity of the circumference of the front upper part into engagement with an engagement member disposed in the vicinity of one end part of the front band body, which is a counterpart of the aforementioned engagement member, at the time of wearing the trousers, the wearer can raise or lower the trousers without removing the trousers-attachment member from the trousers while he/she remains wearing outerwear.

PRIOR ART DOCUMENT

Patent Document

[0006] [Patent Document 1] JP-A-2005-256257

[0007] [Patent Document 2] JP-A-2002-242015

SUMMARY OF THE INVENTION

[0008] However, in Patent Document 1, the opening or closing operation is unstable because the wearer needs to open or close the zipper while turning his/her arm behind, and such problems are likely to occur that the zipper is out of engagement and the surrounding cloth is pinched unless the upper and the lower positions are generally adjusted, particularly in closing the zipper.

[0009] Patent Document 2, which requires a plurality of engagement members and a plurality of operation steps, does not provide a constitution that allows quick and ready lowering of trousers. Although the engagement members can be brought into engagement or disengagement while the wearer remains wearing outerwear, the wearer needs to make an operation of attaching or detaching the engagement members, for example, by inserting his/her hand inside the outerwear (between outerwear and innerwear), and thus has a difficulty in making the operation quickly.

[0010] The present invention was devised in light of the above problems, and it is an object of the present invention to provide lower wear with a suspender that enables a wearer to expose his/her hip by lowering the lower wear quickly and readily while hanging the suspender on his/her shoulder as in a usual wearing state.

[0011] The present invention, solving the problems described above, is a Lower wear with a suspender, to which a suspender is attached,

[0012] the lower wear including a back rail part having a circular cross section on a waist periphery in an upper part of a hip part, and

[0013] the suspender having an engagement part that engages with the back rail part and is movable while it is in engagement with the back rail part.

[0014] According to this constitution, the engagement part can be moved from the back side to the position on the lateral (for example, right lateral or left lateral) side of the waist while it is in engagement with the back rail part, so that the wearer can expose his/her hip by lowering (pulling off) the lower wear quickly and readily while hanging the suspender on his/her shoulder as in a usual wearing state.

[0015] The back rail formed of, e.g., an elastic material, disables the engagement part to freely move due to fastening of the rail part by the engagement part. For achieving movement in this constitution, the engagement part is pinched with fingers and moved.

[0016] As one embodiment of the present invention, the suspender has a back end part, a first body part, a first front end part, a second body part and a second front end part. The back end part has the engagement part that engages with the back rail part, and is movable while it is in engagement with the back rail part. The first front end part is attached to the front part of the lower wear, and the second front part is attached to the front part of the lower wear. This constitution is applicable to a so-called Y-shaped suspender.

[0017] As one embodiment of the present invention, the suspender includes a first suspending part having a first back end part, a first body part, and a first front end part, and a second suspending part having a second back end part, a second body part, and a second front end part,

[0018] the first back end part has a first engagement part that engages with the back rail part and is movable while the first engagement part is in engagement with the back rail part, and the first front end part is attached to a front part of the lower wear, and

[0019] the second back end part has a second engagement part that engages with the back rail part and is movable while the second engagement part is in engagement with the back rail part, and the second front end part is attached to a front part of the lower wear.

[0020] According to this constitution, the first engagement part can be moved to the position on the lateral side of the waist (for example, right lateral side) from the back side while it is in contact with the back rail part, and the second engagement part can be moved to the position on the lateral side of the waist (for example, left lateral side) from the back side while it is in contact with the back rail part, so that the wearer can lower the lower wear and expose his/her hip quickly and readily while hanging the suspender on his/her shoulder as in a usual wearing state. This constitution has two engagement members on the back side, which are individually movable.

[0021] As one embodiment of the present invention, the present invention further including a front rail part having a circular cross section in a front part, wherein

[0022] the first front end part has a third engagement part that engages with the front rail part, and is movable while the third engagement part is in engagement with the front rail part, and

[0023] the second front end part has a fourth engagement part that engages with the front rail part, and is movable while the fourth engagement part is in engagement with the front rail part.

[0024] According to this constitution, the front side as well as the back side of the suspender can be moved laterally of the waist, so that the lower wear can be lowered more quickly and readily.

[0025] As one embodiment of the present invention, the first engagement part and/or the second engagement part are/is inserted from one end of the back rail part protruding outside and brought into engagement. As another embodiment, the first engagement part is inserted from one end of the back rail part protruding outside and brought into engagement, and the second engagement part is inserted from the other end of the back rail part protruding outside and brought into engagement.

[0026] According to this constitution, the first engagement part can be made detachable with respect to the back rail part, and/or the second engagement part can be made detachable with respect to the back rail part. Also, the first engagement part and the second engagement part can be readily inserted and brought into engagement with the back rail part, after the back rail part is attached to the lower wear.

[0027] As one embodiment of the present invention, the back rail part has a first subrail part and a second subrail part,

[0028] the first engagement part is inserted from one end of the first subrail part protruding outside and brought into engagement, and

[0029] the second engagement part is inserted from one end of the second subrail part protruding outside and brought into engagement.

[0030] According to this constitution, the first engagement part can be made detachable with respect to the first subrail part, and the second engagement part can be made detachable with respect to the second subrail part. Also, the first engagement part and the second engagement part can be inserted and brought into engagement with the first subrail part and the second subrail part after the first subrail part and the second subrail part are attached to the lower wear.

[0031] As one embodiment of the present invention, the present invention further including :

[0032] a first stopping part configured to stop movement of the first engagement part, at a position inside one end of the first subrail part protruding outside, and

[0033] a second stopping part configured to stop movement of the second engagement part, at a position inside one end of the second subrail part protruding outside.

[0034] According to this constitution, it is possible to temporarily stop the first engagement part having moved thereto at the first stopping part, and to temporarily stop the second engagement part having moved thereto at the second stopping part. The first and the second stopping parts may be directly attached to the first and the second subrail parts, or may be attached to the lower wear so that they bridge the first and the second subrail parts.

[0035] As one embodiment of the present invention, the front rail part has a third subrail part and a fourth subrail part,

[0036] the third engagement part is inserted from one end of the third subrail part protruding outside and brought into engagement, and

[0037] the fourth engagement part is inserted from one end of the fourth subrail part protruding outside and brought into engagement.

[0038] According to this constitution, the third engagement part can be made detachable with respect to the third subrail part, and the fourth engagement part can be made detachable with respect to the fourth subrail part. Also, the third engage-

ment part and the fourth engagement part can be readily inserted and brought into engagement with the third subrail part and the fourth subrail part after the third subrail part and the fourth subrail part are attached to the lower wear.

[0039] As one embodiment of the present invention, the present invention further including:

[0040] a third stopping part configured to stop movement of the third engagement part, at a position inside one end of the third subrail part protruding outside; and

[0041] a fourth stopping part configured to stop movement of the fourth engagement part, at a position inside one end of the fourth subrail part protruding outside.

[0042] According to this constitution, it is possible to temporarily stop the third engagement part having moved thereto at the third stopping part, and to temporarily stop the fourth engagement part having moved thereto at the fourth stopping part. The third and the fourth stopping parts may be directly attached to the third and the fourth subrail parts, or may be attached to the lower wear so that they bridge the third and the fourth subrail parts, respectively.

[0043] In the present invention, examples of the lower wear include long trousers, short trousers, underpants, salopette, pants, cold-proof trousers, skiing trousers, and ice climbing trousers.

BRIEF DESCRIPTION OF THE DRAWINGS

[0044] FIG. 1 illustrates the external appearance of the front side of cold-proof trousers with a suspender according to a first embodiment;

[0045] FIG. 2 illustrates the external appearance of the back side of the cold-proof trousers with the suspender according to the first embodiment;

[0046] FIG. 3 is a view for illustrating a back rail part and an engagement part; and

[0047] FIG. 4 illustrates the external appearance of the front side of cold-proof trousers with a suspender according to a second embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

First Embodiment

[0048] Cold-proof trousers with a suspender according to the first embodiment will be described with reference to attached drawings. The present invention maybe applied to trousers of other forms without limited to cold-proof trousers.

[0049] FIG. 1 illustrates one example of cold-proof trousers 10 to which a suspender 20 is attached. The suspender 20 includes a first suspending part 21 having a first back end part 211, a first body part 212, and a first front end part 213, and a second suspending part 22 having a second back end part 221, a second body part 222, and a second front end part 223. In FIG. 1, the first suspending part 21 and the second suspending part 22 cross each other on the back side. Any other forms not having a cross may be employed without limited to the above.

[0050] As illustrated in FIG. 2, in the cold-proof trousers 10, back rail parts (111, 112) having a circular cross section are attached to the waist periphery of an upper part of a hip part 101. The circular shape of the cross section of the back rail part may be any shape that corresponds to the shape with which it comes into contact with the engagement part as will be described later, and for example, the circle is not limited to a perfect circle, and is not necessary an oval, an ellipse, or a

perfect circle, and may be a half circle, a three-quarter circle, or a partially chipped circle. In the first embodiment, the back rail part is composed of two parts: a first subrail part **111** and a second subrail part **112**. The first subrail part **111** and the second subrail part **112** are arranged respectively in upper parts of a first band part **15** and a second band part **16** attached along the waist periphery of the trousers. In the first embodiment, the first subrail part **111** and the second subrail part **112** are formed of elongated cylindrical elastic members (for example, rubber, plastic, or vinyl) or straps (for example, elastic braid, braided rope, or fibrous strap) that are covered with cloths, and attached to the upper parts of the first band part **15** and the second band part **16** by sewing. In another embodiment, the first subrail part **111** (second subrail part **112**) is formed of a long rail member having a keyhole-shaped cross section, having one longitudinal end formed with the aforementioned elastic member (or the aforementioned strap) and the other longitudinal end attached to the upper part of the first band part **15** (second band part **16**).

[0051] In FIG. 2, the first band part **15** extends to the waist position of the left lateral face along the waist periphery from the center of the upper part of the hip part **101** (see FIG. 1). On the other hand, the second band part **16** extends to the waist position of the right lateral face along the waist periphery from the center of the upper part of the hip part **101**.

[0052] The first back end part **211** of the first suspending part **21** has a first engagement part (**211a**, **211b**, **211c**) that engages with the first subrail part **111**, and is movable while it is in engagement with the first subrail part **111**. The first engagement part has a first engagement body part **211a**, a first engagement end part **211b** having a shape corresponding to the profile of the first subrail part **111**, and a first opening **211c** through which an end part **212a** of the first body part **212** is passed and wound. By passing the end part **212a** of the first body part **212** through the first opening, folding it back, and fixing it by sewing, the first engagement part and the first body part **212** are fixed.

[0053] Similarly to the first back end part **211** of the first suspending part **21**, the second back end part **221** of the second suspending part **22** has a second engagement part (not illustrated) that engages with the second subrail part **112**, and is movable while it is in engagement with the second subrail part **112**. Similarly to the first engagement part, the second engagement part has a second engagement body part, a second engagement end part having a shape corresponding to the profile of the second subrail part, and a second opening through which an end part of the second body part **222** is passed and wound. Bypassing the end part of the second body part **222** through the second opening **222c**, folding it back, and fixing it by sewing, the second engagement part and the second body part **222** are fixed.

[0054] As shown in FIG. 1, the first front end part **213** of the first suspending part **21** is attached to the front part of the cold-proof trousers **10**. The method for attachment is not particularly limited. In the first embodiment, a ring is attached to a band that is sewed to protrude from the front part of the cold-proof trousers **10**, and the first end part **213** is passed and wound through this ring, and fixed by sewing. In a similar manner, the second end part **223** of the second suspending part **22** is also attached to the front part of the cold-proof trousers **10**.

[0055] According to the above constitution, the first engagement part (**211a**, **211b**, **211c**) can be moved to the left lateral position of the waist from the back side while it is in engage-

ment with the first subrail part **111**, and the second engagement part can be moved to the right lateral position of the waist from the back side while it is in engagement with the second subrail part **112**. Therefore, the wearer can lower the cold-proof trousers and expose his/her hip quickly and readily while hanging the suspender on his/her shoulder.

[0056] In the first embodiment, the first engagement part (**211a**, **211b**, **211c**) is inserted from one end **111a** of the first subrail part **111** protruding outside and brought into engagement. Also, the second engagement part (not illustrate) is inserted from one end **112a** of the second subrail part **112** protruding outside and brought into engagement. As a result, the first engagement part can be made detachable with respect to the first subrail part, and the second engagement part can be made detachable with respect to the second subrail part. Also it is possible to readily insert the first engagement part and the second engagement part into the first subrail part and the second subrail part after attaching the first subrail part and the second subrail part to the cold-proof trousers **10**.

[0057] In the first embodiment, in the cold-proof trousers **10**, a first stopping part **13** that allows ready stopping of movement of the first engagement part (**211a**, **211b**, **211c**) is attached in the position inside the one end **111a** of the first subrail part **111** protruding outside. Similarly, a second stopping part **14** that allows ready stopping of movement of the second engagement part is attached in the position inside the one end **112a** of the second subrail part **112** protruding outside. The first and the second stopping parts may be directly attached to the first and the second subrail parts in a detachable manner, or may be attached to the cloth of the trousers so that they bridge the first and the second subrail parts.

Second Embodiment

[0058] In the second embodiment shown in FIG. 4, a front rail portion having a circular cross section is formed in the front part of the cold-proof trousers, through which the first and the second suspending parts are laterally movable. The significance of the circular cross section is as same as described in the first embodiment. In the second embodiment, the front rail part is composed of two parts: a third subrail part **161** and a fourth subrail part **162**, however, it may be formed of one rail without limited to the above. A first front end part **215** of the first suspending part **21** engages with the third subrail part **161** by the third engagement part, and a second front end part **225** of the second suspending part **22** engages with the fourth subrail part **162** by the fourth engagement part. The mode of engagement between these engagement parts and respective rail parts is similar to that between the first engagement part (**211a**, **211b**, **211c**) and the first subrail part **111** in the first embodiment.

What is claimed is:

1. Lower wear with a suspender, to which a suspender is attached,
 - the lower wear comprising a back rail part having a circular cross section on a waist periphery in an upper part of a hip part, and
 - the suspender having an engagement part that engages with the back rail part and is movable while it is in engagement with the back rail part.
2. The lower wear with a suspender according to claim 1, wherein
 - the suspender includes a first suspending part having a first back end part, a first body part, and a first front end part,

and a second suspending part having a second back end part, a second body part, and a second front end part, the first back end part has a first engagement part that engages with the back rail part and is movable while the first engagement part is in engagement with the back rail part, and the first front end part is attached to a front part of the lower wear, and

the second back end part has a second engagement part that engages with the back rail part and is movable while the second engagement part is in engagement with the back rail part, and the second front end part is attached to a front part of the lower wear.

3. The lower wear with a suspender according to claim 2, further comprising a front rail part having a circular cross section in a front part, wherein

the first front end part has a third engagement part that engages with the front rail part, and is movable while the third engagement part is in engagement with the front rail part, and

the second front end part has a fourth engagement part that engages with the front rail part, and is movable while the fourth engagement part is in engagement with the front rail part.

4. The lower wear with a suspender according to claim 2, wherein

the back rail part has a first subrail part and a second subrail part,

the first engagement part is inserted from one end of the first subrail part protruding outside and brought into engagement, and

the second engagement part is inserted from one end of the second subrail part protruding outside and brought into engagement.

5. The lower wear with a suspender according to claim 4, further comprising:

a first stopping part configured to stop movement of the first engagement part, at a position inside one end of the first subrail part protruding outside, and

a second stopping part configured to stop movement of the second engagement part, at a position inside one end of the second subrail part protruding outside.

6. The lower wear with a suspender according to claim 2, wherein

the front rail part has a third subrail part and a fourth subrail part,

the third engagement part is inserted from one end of the third subrail part protruding outside and brought into engagement, and

the fourth engagement part is inserted from one end of the fourth subrail part protruding outside and brought into engagement.

7. The lower wear with a suspender according to claim 6, further comprising:

a third stopping part configured to stop movement of the third engagement part, at a position inside one end of the third subrail part protruding outside; and

a fourth stopping part configured to stop movement of the fourth engagement part, at a position inside one end of the fourth subrail part protruding outside.

* * * * *