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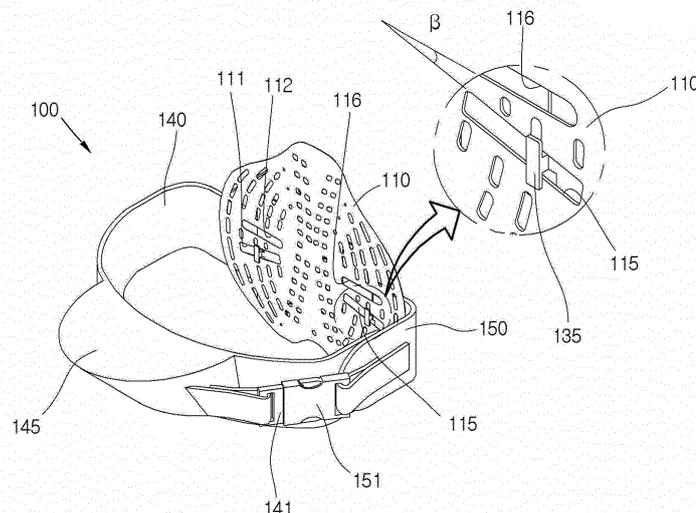
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(54) **BABY CARRIER**

(57) A baby carrier having a load distribution function according to the present invention may include: a band portion formed to be supported on a user's waist; a hip seat portion provided in front of the band portion and formed to seat a baby thereon; a back plate disposed behind the band portion and formed to be supported on

an upper end of a user's hip; at least one moving member formed to vary a connection position of the band portion to the back plate; and a fastener unit formed to move the moving member to bring the back plate into close contact with a user's body or release a close contact state.

[FIG. 2]



Description

[Technical Field]

[0001] The present invention relates to a baby carrier that may be worn on a user's waist.

[Background Art]

[0002] A baby carrier generically refers to a product literally manufactured so as to hold a baby or carry a baby on a user's back. Various types of baby carriers have been used according to history and culture, and new types of baby carriers are being developed in accordance with the progress of technology in modern times. Popular baby carriers include wraps, slings, mei tai carriers, soft structured carriers, hip seats, and the like.

[0003] Among them, the hip seat is formed to be worn over a user's pelvis and may be configured to hold the baby forward or laterally. Therefore, the hip seat may provide a sense of stability without laying a burden according to a weight of the baby on a user's spine and pelvis.

[0004] On the other hand, if a user uses the hip seat for a long time, it may strain a user's waist or user's hands or arms may not be freely used, and thus, a manner of coupling an upper structure that may wrap the baby using user's shoulders to the hip seat has been suggested. However, suspenders maintain a state in which the user carries the carrier on his/her shoulders, but if the suspenders are used for a long time, the suspenders press user's shoulders to cause pain and fatigue of the user.

[Disclosure]

[Technical Problem]

[0005] An object of the present invention is to provide a baby carrier capable of adjusting a close contact force with a user's waist, protecting the user's waist, and distributing a load.

[0006] Another object of the present invention is to provide a baby carrier having a load distribution function capable of substantially reducing a load by allowing a band portion to be slightly lifted in a close contact process.

[Technical Solution]

[0007] A baby carrier having a load distribution function according to the present invention may include: a band portion formed to be supported on a user's waist; a hip seat portion provided in front of the band portion and formed to seat a baby thereon; a back plate disposed behind the band portion and formed to be supported on an upper end of a user's hip; at least one moving member formed to vary a connection position of the band portion to the back plate; and a fastener unit formed to move the

moving member to bring the back plate into close contact with a user's body or release a close contact state.

[0008] The baby carrier may further include a buckle portion provided in the band portion and formed to be coupled to or decoupled by a manipulation.

[0009] The baby carrier may further include: a connection portion to be attachable to or detachable to the hip seat by a zipper; a trunk support portion formed at an upper portion of the connection portion and formed to wrap the baby; and suspender portions formed on both sides of the trunk support portion, respectively, and formed to be hung on user's shoulders, respectively.

[0010] The baby carrier may further include a raising unit configured to allow the moving member to be raised with respect to the back plate in a process in which the back plate is brought in close contact with the user's waist.

[0011] The band portion may include: a first band portion connected to one side of the back plate; and a second band portion connected to the other side of the back plate; and the moving member may include: a first moving member having one end coupled to the first band portion and the other end formed to be slidable with respect to the back plate; and a second moving member disposed to be spaced apart from the first moving member and having one end coupled to the second band portion and the other end formed to be slidable with respect to the back plate.

[0012] The baby carrier may further include a wire formed to be pulled or relaxed by the fastener unit, wherein the wire is connected to the first moving member and the second moving member so that the first moving member and the second moving member move in a direction in which the first moving member and the second moving member become close to each other when the wire is pulled by the fastener unit.

[0013] The fastener unit may be disposed on the first band portion, respective guides through which the wire is hung may be formed on the first moving member and the second moving member, and the wire may be connected to the guides in a row so that the first moving member and the second moving member are simultaneously moved in a direction in which the first moving member and the second moving member become close to each other by a manipulation of the fastener unit.

[0014] The fastener unit may include a dial formed to pull the wire by being rotated in one direction.

[0015] The dial may pull the wire by catching of a winding shaft when the dial is pressed in a central axis direction of rotation, and release a state in which the wire is pulled when the dial is pulled in an opposite direction.

[0016] The raising unit may include: a first guide rail disposed on one side of the back plate and formed to be inclined upward toward the center of the back plate; a second guide rail formed on the other side of the back plate so as to be symmetrical to the first guide rail; a first slide portion formed on the first moving member so as to be inserted into and constrained by the first guide rail;

and a second slide portion formed on the second moving member so as to be inserted into and constrained by the second guide rail.

[0017] The first slide portion and the second slide portion may be formed to protrude from end portions of the first moving member and the second moving member, respectively.

[0018] The first slide portion and the second slide portion may have rectangular or oval end portions so that they are inserted into the first guide rail and the second guide rail, respectively, and are rotated by 90° to be caught.

[Advantageous Effects]

[0019] With the baby carrier according to the present invention, a connection position between the band portion on which the hip seat is installed and the back plate is varied by the moving member and the fastener unit, and it is possible to increase a close contact force with the user's waist and protect a user's waist by a combination of the back plate and the band portion at the time of fastening.

[0020] According to an exemplary embodiment of the present invention, the raising unit is added, such that the moving member may be raised with respect to the back plate in a process in which the back plate is brought into contact with the user's trunk, and a substantial distribution and reduction effect of a load may thus be obtained.

[Description of Drawings]

[0021]

FIG. 1 is a schematic perspective view illustrating a baby carrier 100 according to a first exemplary embodiment of the present invention when viewed from a rear side.

FIG. 2 is a schematic perspective view illustrating the baby carrier 100 of FIG. 1 when viewed from a front side.

FIG. 3 is a perspective view illustrating a state in which a first band portion 140 and a second band portion 150 of the baby carrier 100 of FIG. 1 are disassembled from each other.

FIG. 4 is a schematic perspective view illustrating the baby carrier 100 in a state of FIG. 3 when viewed from a front side.

FIG. 5 is a partially exploded perspective view illustrating a state in which a back plate 110 is disassembled from the baby carrier 100 of FIG. 1.

FIGS. 6A and 6B are rear views each illustrating states before and after fastening a fastener unit 170 in order to describe an action of a waist support 100 of FIG. 1.

FIG. 7 is a perspective view of a disassembled state of a baby carrier 200 according to a second exemplary embodiment of the present invention.

FIG. 8 is a perspective view of an assembled state of the baby carrier 200 of FIG. 7.

FIGS. 9A and 9B are operation state diagrams each illustrating states before and after fastening a fastener unit 770 in order to describe an action of the baby carrier 200 of FIG. 8.

FIG. 10 is a perspective view of a disassembled state of a baby carrier 300 according to a third exemplary embodiment of the present invention.

FIG. 11 is a perspective view of an assembled state of the baby carrier 300 of FIG. 10.

[Best Mode for Invention]

[0022] Hereinafter, a baby carrier according to the present invention will be described in detail with reference to the accompanying drawings.

[0023] FIG. 1 is a schematic perspective view illustrating a baby carrier 100 according to an exemplary embodiment of the present invention when viewed from a rear side. The baby carrier 100 according to the present invention includes a back plate 110 and a pair of band portions 140 and 150 connected to the left and the right of the back plate 110. The back plate 110 and the pair of band portions 140 and 150 are combined with each other to be supported on a user's waist. The back plate 110 may be positioned above a user's hip on a user's back. Buckle portions 141 and 151 formed to be coupled to or decoupled from each other by a manipulation may be formed at both end portions of the band portions 140 and 150.

[0024] Moving members 120 and 130 formed so as to vary connection positions of the band portions 140 and 150 to the back plate 110 are provided on the back plate 110. Specifically, the band portions may include a first band portion 140 connected to the right side of the back plate 110 and a second band portion 150 connected to the left side of the back plate 110, and the moving members may also include a first moving member 120 coupled to the first band portion 140 and a second moving member 130 coupled to the second band portion 150. The first moving member 120 and the second moving member 130 may be disposed on the back plate 110 so as to be laterally symmetrical to each other. The first moving member 120 and the second moving member 130 are slidably installed on the back plate 110.

[0025] A hip seat portion 145 formed to seat a baby thereon is provided in front of the first band portion 140. The hip seat portion 145 may have a form in which a frame formed of plastic is disposed in an outer skin formed of fabric. The hip seat portion 145 may be formed integrally with the first band portion 140 or may be formed to be attachable to or detachable from the first band portion 140. In addition, the hip seat portion 145 may be formed to be movable in a horizontal direction with respect to the first band portion 140. In this case, a position where the baby may be seated may be a side position, such that convenience may be improved.

[0026] A wire 160 is provided in order to adjust connection positions of the first moving member 120 and the second moving member 130 to the back plate 110. The wire 160 is pulled or relaxed by a fastener unit 170 moving the moving members 120 and 130 to bring the back plate 110 into close contact with a user's trunk or release a close contact state. The fastener unit 170 may include a dial formed to pull the wire 160 by being rotated in one direction. The dial is formed to pull the wire 160 by catching of a winding shaft of the wire 160 by a gear when the dial is pressed in a central axis direction of rotation, and is formed to release a state in which the wire 160 is pulled when the dial is pulled in an opposite direction. That is, if the wire 160 is pulled by turning the dial of the fastener unit 170, the wire 160 is drawn toward the dial, and if the dial is drawn up using fingers, the winding shaft is separated from the gear, such that the wire 160 becomes loose.

[0027] A plurality of guides 121 and 131 on which the wire 160 may be hung are formed on the first moving member 120 and the second moving member 130, respectively. The guides 121 and 131 may be formed in an arc shape so that the wire 160 may easily slide. The wire 160 is connected to the guides 121 and 131 in a row so that the first moving member 120 and the second moving member 130 are simultaneously moved in a direction in which the first moving member 120 and the second moving member 130 become close to each other by a manipulation of the fastener unit 170.

[0028] With this configuration, when the wire 160 is pulled by turning the fastener unit 170, the first moving member 120 and the second moving member 130 move in the direction in which the first moving member 120 and the second moving member 130 become close to each other. Accordingly, lengths of the band portions 140 and 150 wound around the user's waist become short, such that the back plate 110 is brought into close contact with the user's back. As a result, the back plate 110 and the band portions 140 and 150 may be brought in close contact with the user's trunk, and may protect the user's waist while supporting the user's waist.

[0029] FIG. 2 is a schematic perspective view illustrating the baby carrier 100 of FIG. 1 when viewed from a front side, FIG. 3 is a perspective view illustrating a state in which a first band portion 140 and a second band portion 150 of the baby carrier 100 of FIG. 1 are disassembled from each other, FIG. 4 is a schematic perspective view illustrating the baby carrier 100 in a state of FIG. 3 when viewed from a front side, and FIG. 5 is a partially exploded perspective view illustrating a state in which a back plate 110 is disassembled from the baby carrier 100 of FIG. 1.

[0030] As illustrated in FIGS. 2 to 5, the baby carrier 100 may include a raising unit allowing the moving members 120 and 130 to be raised with respect to the back plate 110 in a process in which the back plate 110 is brought in close contact with the user's trunk. The raising unit may include a first guide rail 111 disposed on one

side of the back plate 110, a second guide rail 115 formed on the other side of the back plate 110 so as to be symmetrical to the first guide rail 111, a first slide portion 125 formed on the first moving member 120 so as to be inserted into and constrained by the first guide rail 111, and a second slide portion 135 formed on the second moving member 130 so as to be inserted into and constrained by the second guide rail 115. The first guide rail 111 and the second guide rail 115 are formed to be inclined upward toward the center of the back plate 110. As a result, the first guide rail 111 and the second guide rail 115 may form a predetermined angle β with respect to a horizontal line. The first slide portion 125 and the second slide portion 135 may be formed to protrude from end portions of the first moving member 120 and the second moving member 130, respectively. In this case, as illustrated in FIG. 2, in order to prevent the first slide portion 125 and the second slide portion 135 from being separated from the first guide rail 111 and the second guide rail 115, the first slide portion 125 and the second slide portion 135 may have rectangular or oval end portions so that they may be inserted into the first guide rail 111 and the second guide rail 115, respectively, and be rotated by 90° to be caught.

[0031] Separately from the first guide rail 111 and the second guide rail 115, a third guide rail 112 disposed in the first moving member 120 in a horizontal direction and formed so that the first slide portion 125 may be selectively inserted thereto may be provided, and a fourth guide rail 116 formed so that the second slide portion 135 may be selectively inserted thereto may be provided on an opposite side. The third guide rail 112 and the fourth guide rail 116 may be used instead of the first guide rail 111 and the second guide rail 115 according to a selection of the user to improve convenience.

[0032] In addition to the buckle portions 141 and 151, Velcro portions 143 and 153 may be additionally provided at end portions of the first band portion 140 and the second band portion 150, respectively.

[0033] FIGS. 6A and 6B are rear views each illustrating states before and after fastening a fastener unit 170 in order to describe an action of the baby carrier 100 of FIG. 1.

[0034] FIG. 6A illustrates a state in which the fastener unit 170 is not manipulated. It is assumed that the buckle portions 141 and 151 are buckled. In this state, when the wire 160 is pulled by manipulating the fastener unit 170, the first moving member 120 and the second moving member 130 move toward the center of the back plate 110 and upward in a state in which they are constrained by the first guide rail 111 and the second guide rail 115, respectively (see Fig. 2). The first moving member 120 and the second moving member 130 moved toward the center of the back plate 110 brings the back plate 110 in close contact with the user's trunk. As a result, a close contact force may be increased to protect the user's waist, a load may be transferred to the user's trunk or an upper end of the user's hip, and the hip seat portion 145

positioned in front may distribute a load directed in a gravitational direction to a user's pelvis and waist. In addition, the first moving member 120 and the second moving member 130 moved upward provide an effect of substantially lifting the load to further enhance a weight distribution effect.

[0035] FIG. 7 is a perspective view of a disassembled state of a baby carrier 200 according to a second exemplary embodiment of the present invention, and FIG. 8 is a perspective view of an assembled state of the baby carrier 200 of FIG. 7.

[0036] In the present example, it is illustrated that an element capable of supporting a baby's trunk or head may be attached to a form of the baby carrier 100 of FIG. 1. The baby carrier 200 of the present example includes a connection portion 291 formed to be attachable to or detachable from a hip seat 245 by zippers 281 and 282, a trunk support portion 290 formed at an upper portion of the connection portion 291 and formed to wrap the baby, and suspender portions 292 formed on both sides of the trunk support portion 290, respectively, and formed to be hung on user's shoulders, respectively.

[0037] In this case, the trunk support portion 290 may be easily detached or attached to band portions 240 and 250 using the zippers 281 and 282.

[0038] In this case, by manipulating a fastener unit 270, a close contact property of the band portions 240 and 250 and a back plate 210 with a user's waist may be improved and a load distribution effect may be obtained by an inclined movement action by moving members.

[0039] FIGS. 9A and 9B are operation state diagrams each illustrating states before and after fastening a fastener unit 270 in order to describe an action of the baby carrier 200 of FIG. 8. If the fastener unit 270 is rotated in a state illustrated in FIG. 9A, the back plate 210 is brought in close contact with a user's back at an upper end of a user's hip, as illustrated in FIG. 9B. In addition, a position of a connection point of the band portion 240 to the back plate 210 is raised to more firmly support the hip seat portion 245 and direct a force toward a user's trunk, thereby effectively distributing a load of the user's shoulders on which the suspender portions 292 are substantially hung.

[0040] FIG. 10 is a perspective view of a disassembled state of a baby carrier 300 according to a third exemplary embodiment of the present invention, and FIG. 11 is a perspective view of an assembled state of the baby carrier 300 of FIG. 10. In the present example, an extension portion 348 is formed instead of the hip seat portion in band portions 340 and 350. As illustrated in FIG. 11, the extension portion 248 may be coupled to a connection portion 291 of a trunk support portion 390 in an attachable or detachable manner by zippers 381 and 382.

[0041] The configurations and the methods of the baby carrier according to the exemplary embodiments as described above are not restrictively applied. All or some of the respective exemplary embodiments may be selectively combined with each other so that the exemplary

embodiments described above may be variously modified.

5 Claims

1. A baby carrier having a load distribution function, comprising:

10 a band portion formed to be supported on a user's waist;
 a hip seat portion provided in front of the band portion and formed to seat a baby thereon;
 a back plate disposed behind the band portion and formed to be supported on an upper end of a user's hip;
 15 at least one moving member formed to vary a connection position of the band portion to the back plate; and
 20 a fastener unit formed to move the moving member to bring the back plate into close contact with a user's body or release a close contact state.

2. The baby carrier of claim 1, further comprising a buckle portion provided in the band portion and formed to be coupled to or decoupled by a manipulation.

3. The baby carrier of claim 1, further comprising:

30 a connection portion to be attachable to or detachable to the hip seat by a zipper;
 a trunk support portion formed at an upper portion of the connection portion and formed to wrap the baby; and
 35 suspender portions formed on both sides of the trunk support portion, respectively, and formed to be hung on user's shoulders, respectively.

4. The baby carrier of claim 1, further comprising a raising unit configured to allow the moving member to be raised with respect to the back plate in a process in which the back plate is brought in close contact with the user's waist.

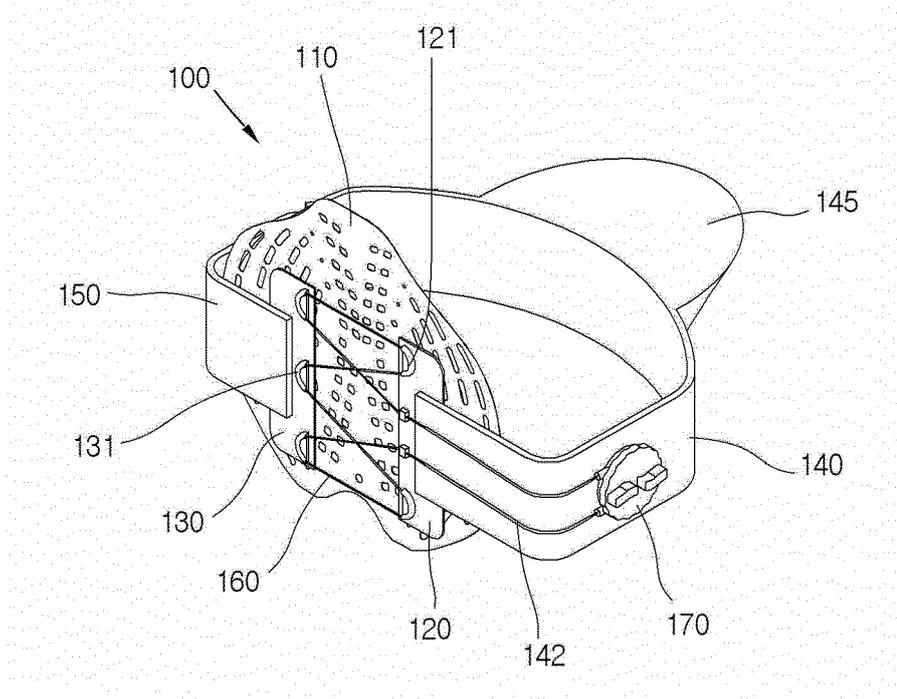
5. The baby carrier of claim 4, wherein the band portion includes:

45 a first band portion connected to one side of the back plate; and
 a second band portion connected to the other side of the back plate; and
 the moving member includes:

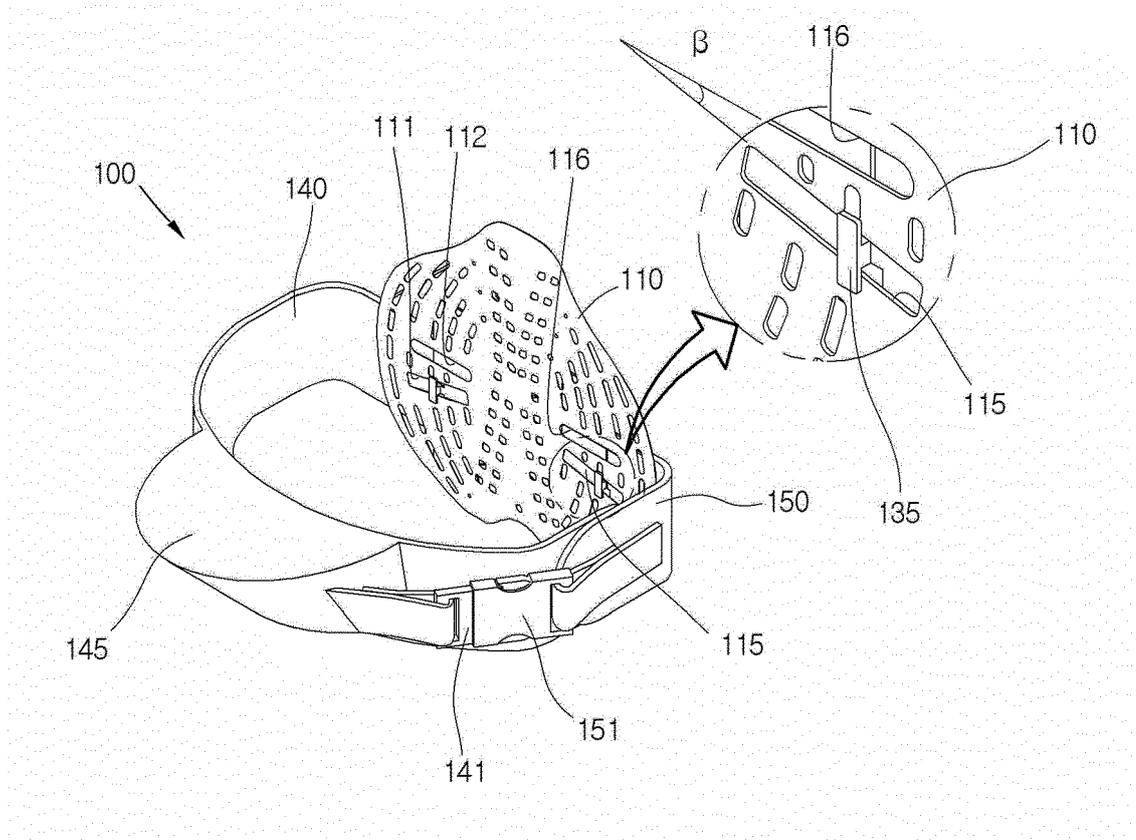
50 a first moving member having one end coupled to the first band portion and the other end formed to be slidable with respect to the back plate; and

- a second moving member disposed to be spaced apart from the first moving member and having one end coupled to the second band portion and the other end formed to be slidable with respect to the back plate. 5
6. The baby carrier of claim 5, further comprising a wire formed to be pulled or relaxed by the fastener unit, wherein the wire is connected to the first moving member and the second moving member so that the first moving member and the second moving member move in a direction in which the first moving member and the second moving member become close to each other when the wire is pulled by the fastener unit. 10 15
7. The baby carrier of claim 6, wherein the fastener unit is disposed on the first band portion, respective guides through which the wire is hung are formed on the first moving member and the second moving member, and the wire is connected to the guides in a row so that the first moving member and the second moving member are simultaneously moved in a direction in which the first moving member and the second moving member become close to each other by a manipulation of the fastener unit. 20 25
8. The baby carrier of claim 7, wherein the fastener unit includes a dial formed to pull the wire by being rotated in one direction. 30
9. The baby carrier of claim 8, wherein the dial pulls the wire by catching of a winding shaft when the dial is pressed in a central axis direction of rotation, and releases a state in which the wire is pulled when the dial is pulled in an opposite direction. 35
10. The baby carrier of claim 9, wherein the raising unit includes: 40
- a first guide rail disposed on one side of the back plate and formed to be inclined upward toward the center of the back plate;
- a second guide rail formed on the other side of the back plate so as to be symmetrical to the first guide rail; 45
- a first slide portion formed on the first moving member so as to be inserted into and constrained by the first guide rail; and 50
- a second slide portion formed on the second moving member so as to be inserted into and constrained by the second guide rail.
11. The baby carrier of claim 10, wherein the first slide portion and the second slide portion are formed to protrude from end portions of the first moving member and the second moving member, respectively. 55
12. The baby carrier of claim 11, wherein the first slide portion and the second slide portion have rectangular or oval end portions so that they are inserted into the first guide rail and the second guide rail, respectively, and are rotated by 90° to be caught.

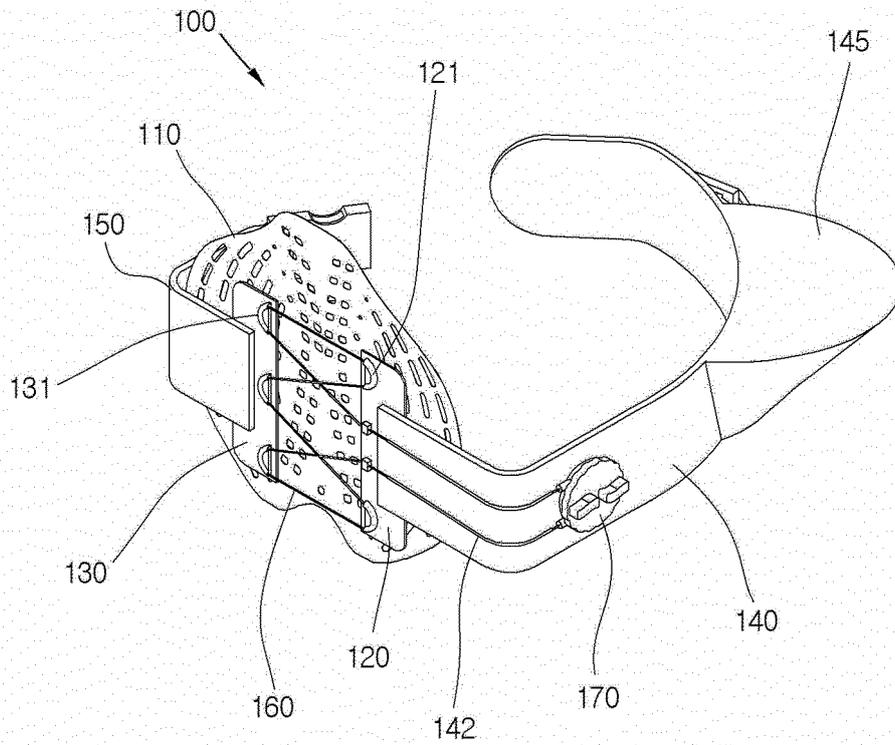
【FIG. 1】



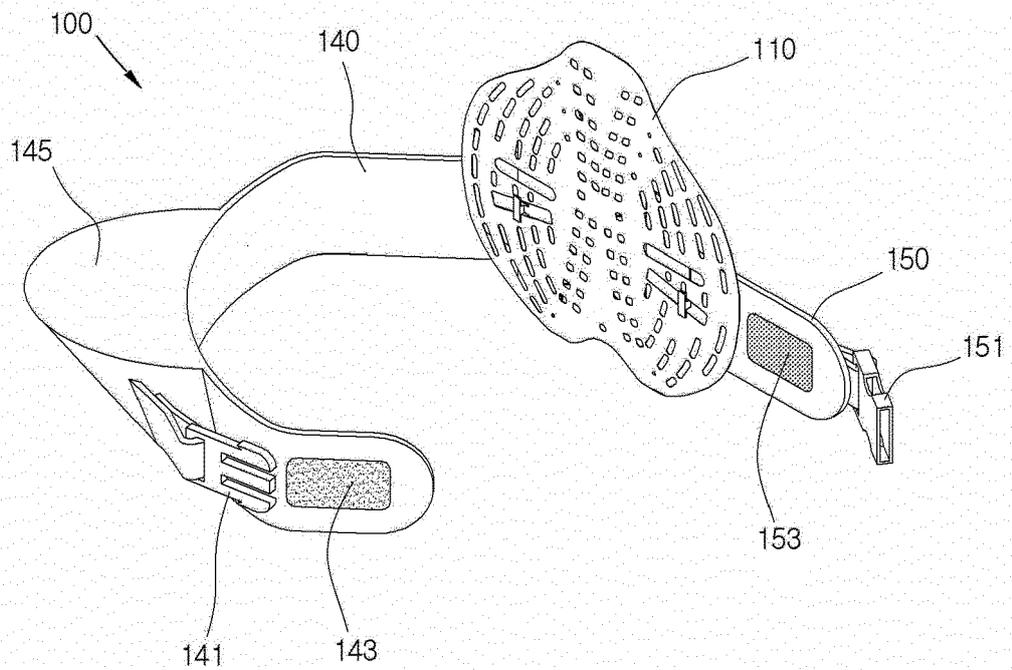
【FIG. 2】



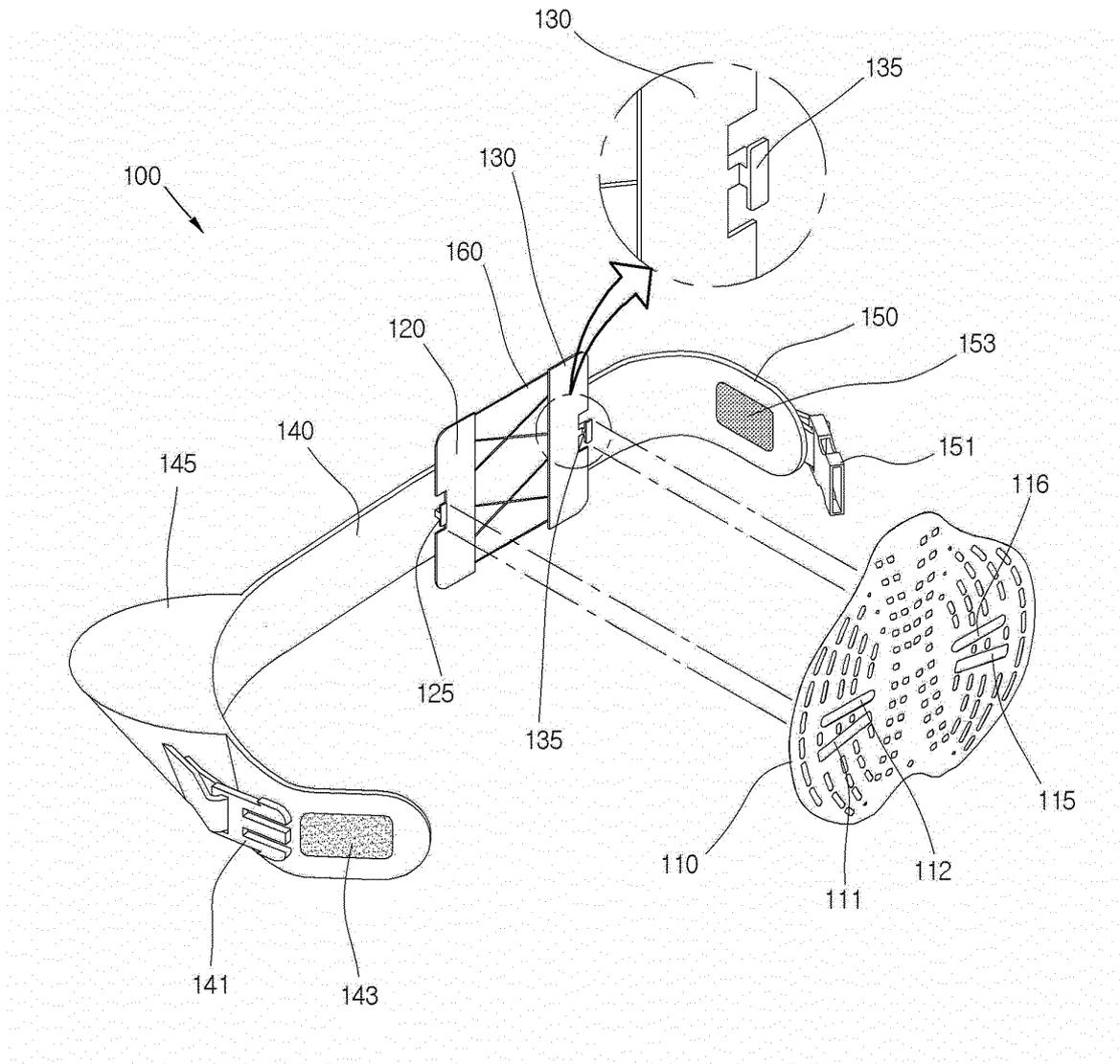
【FIG. 3】



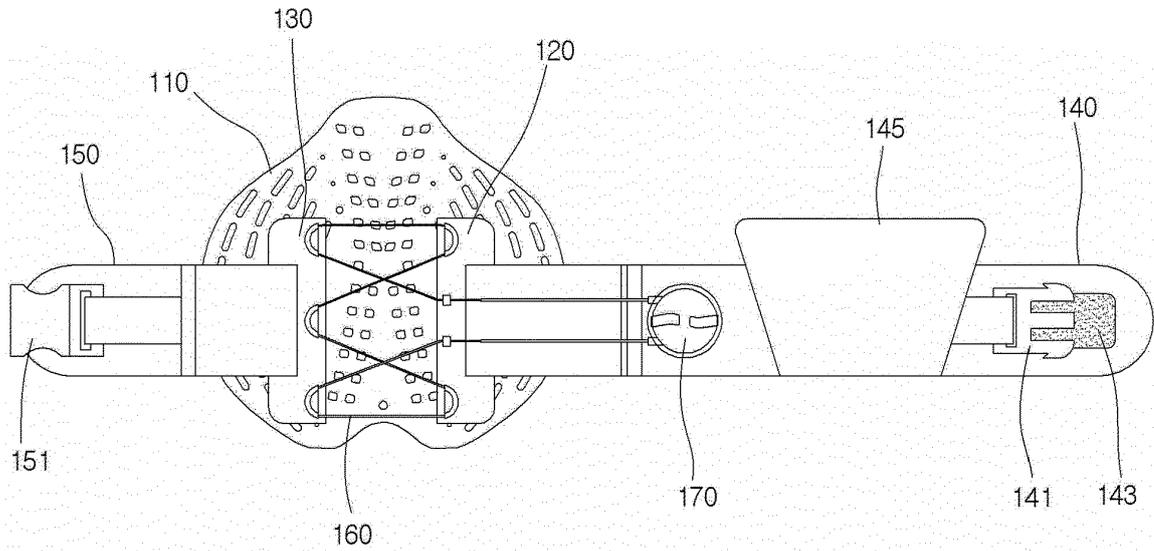
【FIG. 4】



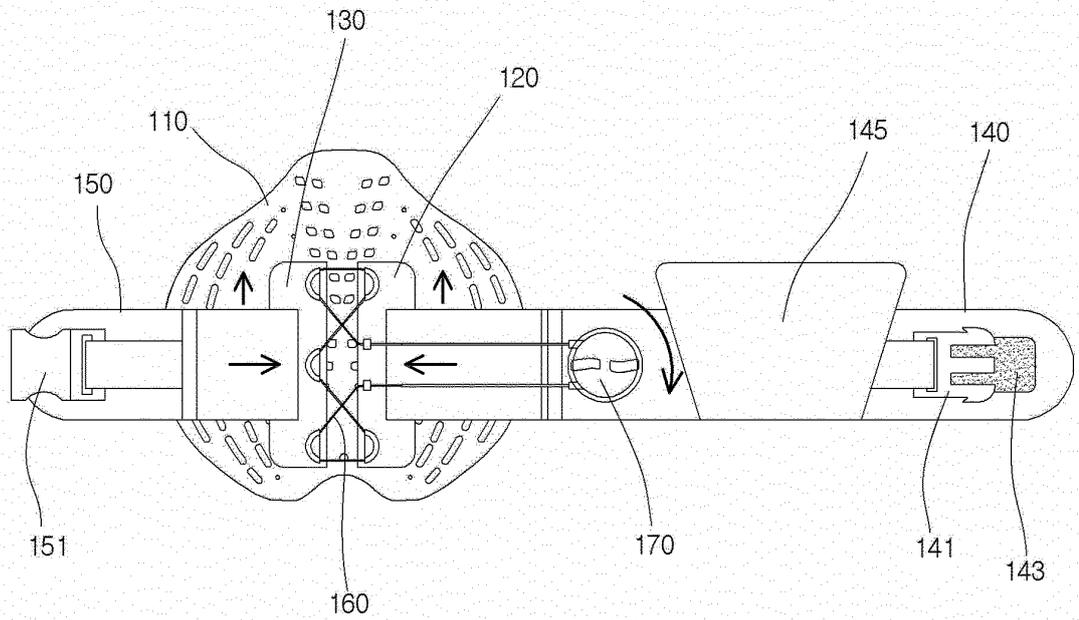
【FIG. 5】



【FIG. 6】

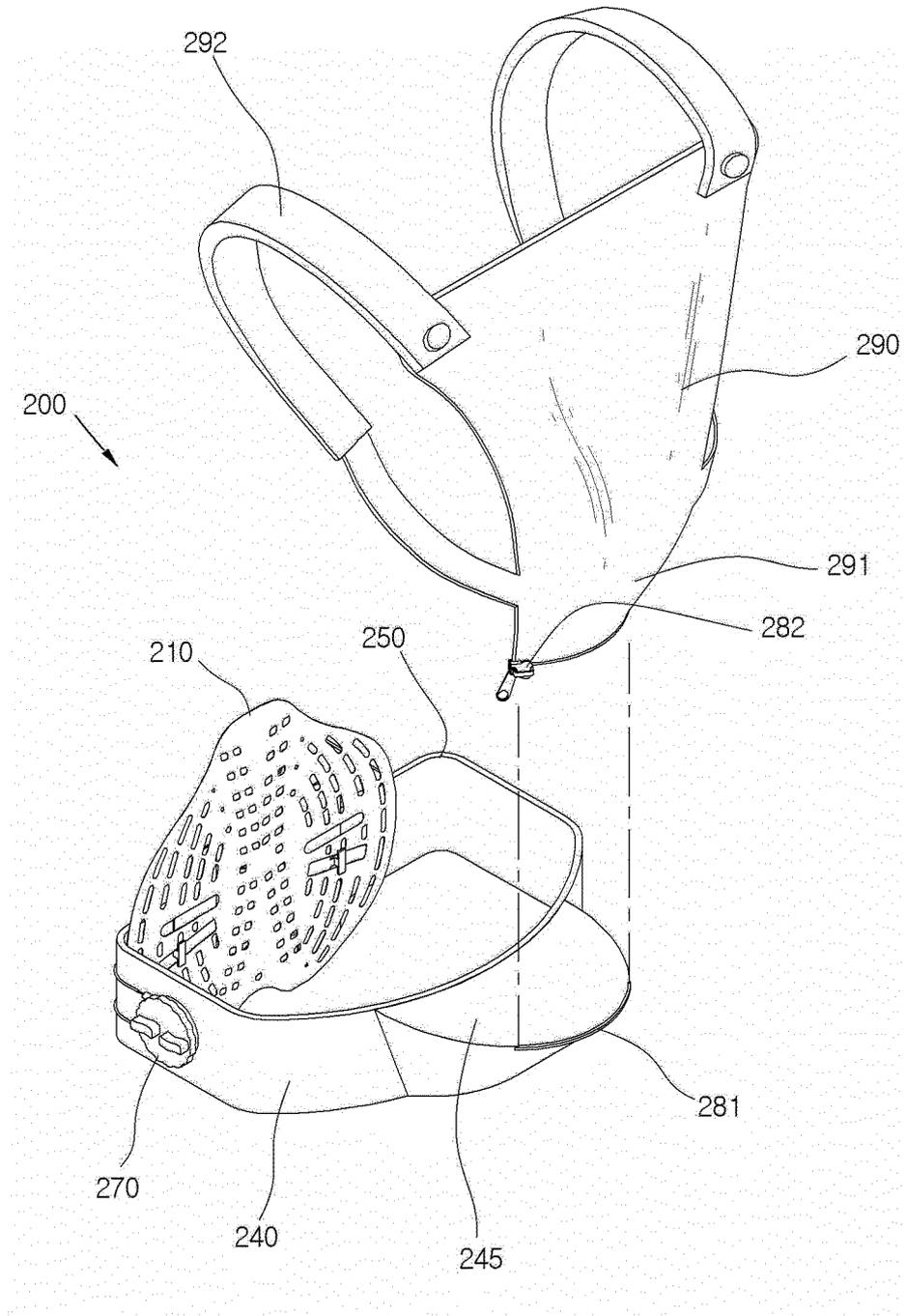


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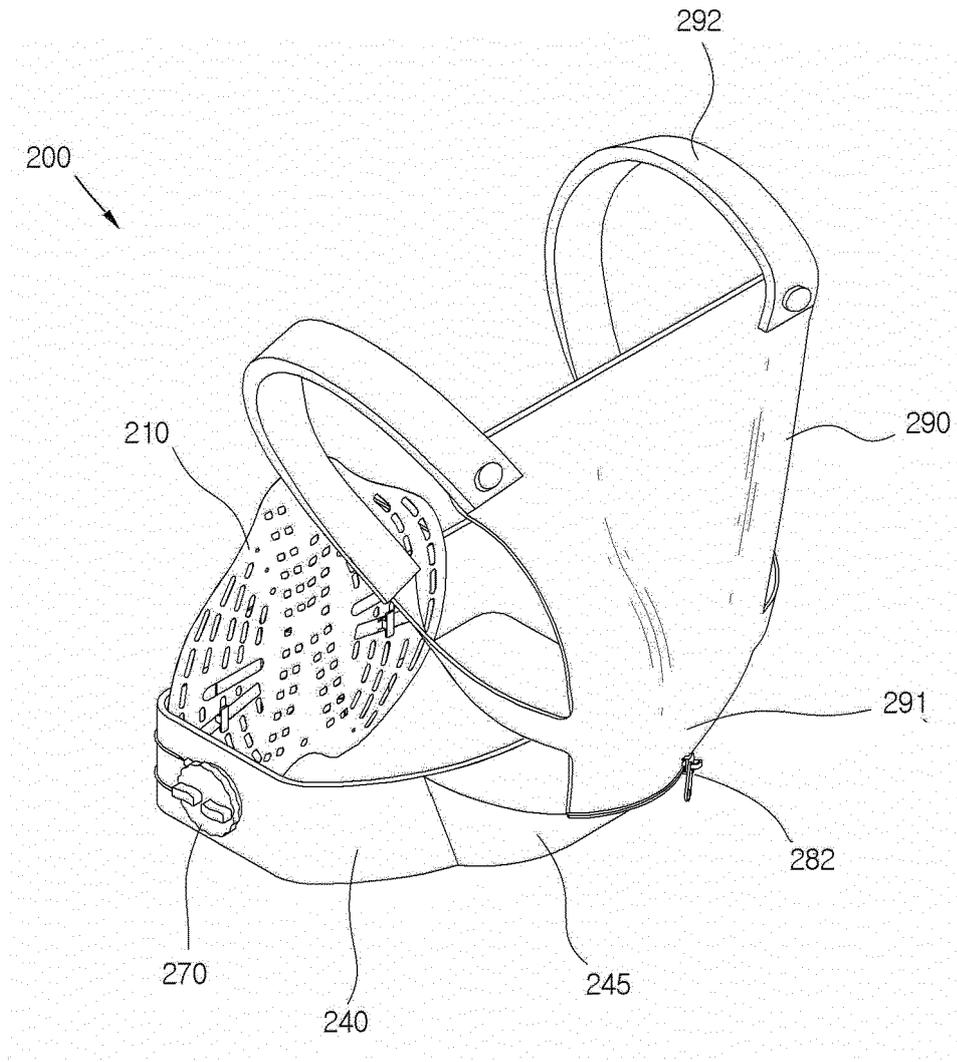


(b)

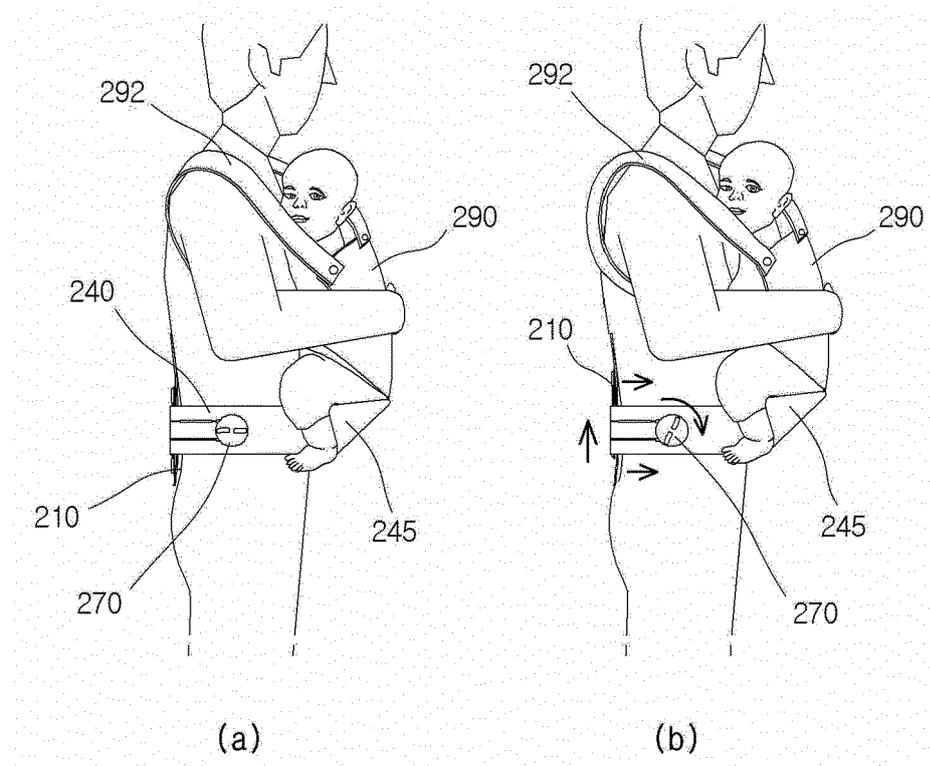
【FIG. 7】



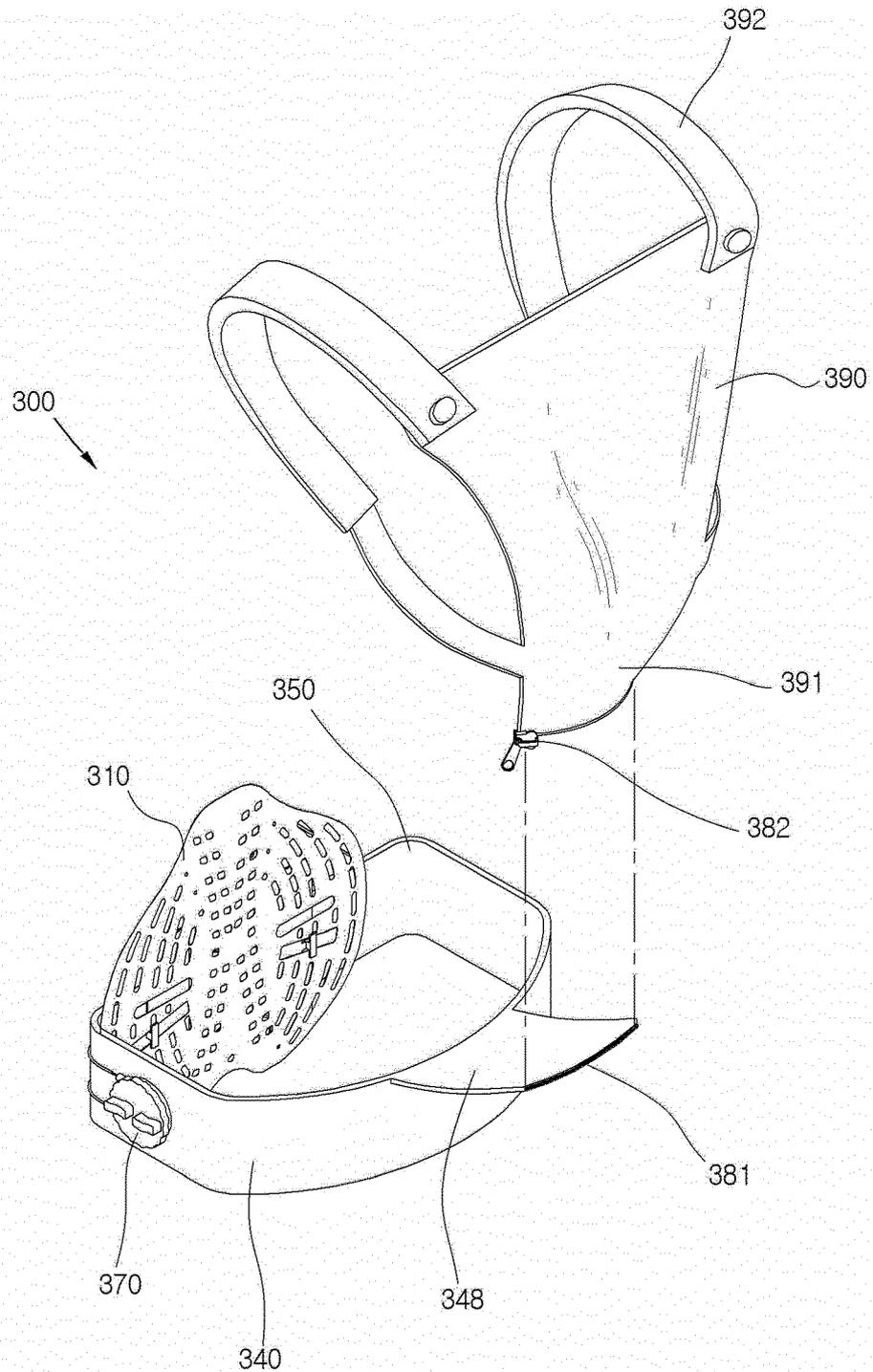
【FIG. 8】



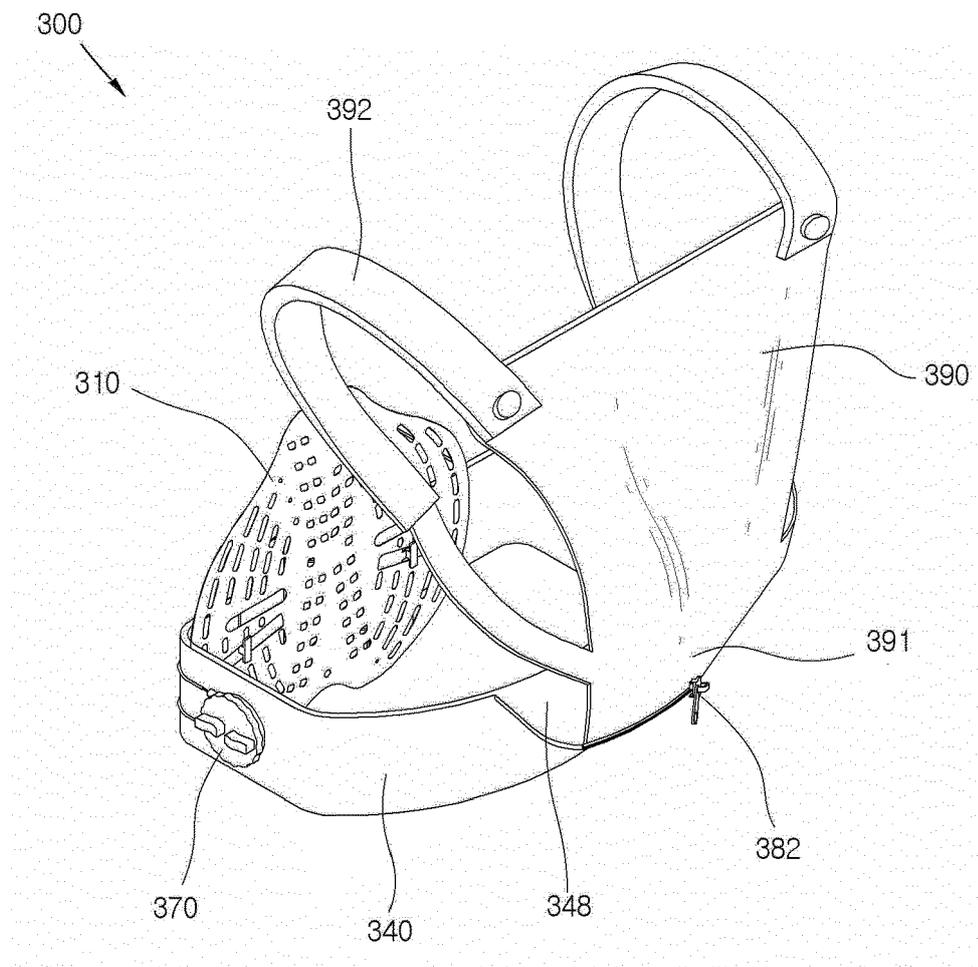
【FIG. 9】



【FIG. 10】



【FIG. 11】



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2018/013490

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A. CLASSIFICATION OF SUBJECT MATTER
A47D 13/02(2006.01)i, A47D 13/08(2006.01)i
According to International Patent Classification (IPC) or to both national classification and IPC

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B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
A47D 13/02; A45F 3/04; A47D 13/08; A61F 5/01; A61F 5/02; A61F 5/042

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models: IPC as above
Japanese utility models and applications for utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS (KIPO internal) & Key words: waist, band, hip seat, back plate, carrier

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

25

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2016-0061075 A (ELLUSBEN CO., LTD.) 31 May 2016 See paragraphs [0018]-[0025]; claim 1; and figures 1-4.	1-9
A		10-12
Y	KR 10-2017-0095093 A (UDITEL CO., LTD.) 22 August 2017 See paragraphs [0037]-[0082]; and figures 2-5.	1-9
Y	JP 2005-532844 A (LAFUMA S.A.) 04 November 2005 See paragraphs [0023]-[0043]; and figures 3, 15.	4-9
A	KR 10-2015-0088030 A (PETIT ELIN CO., LTD.) 31 July 2015 See paragraphs [0040]-[0101]; and figures 1-13b.	1-12
A	KR 10-1167957 B1 (HANA SYSTEM CO., LTD.) 23 July 2012 See paragraphs [0035]-[0217]; and figures 1-19.	1-12

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

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

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Date of the actual completion of the international search 04 JUNE 2019 (04.06.2019)	Date of mailing of the international search report 05 JUNE 2019 (05.06.2019)
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Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex Daejeon Building 4, 189, Cheongsa-ro, Seo-gu, Daejeon, 35208, Republic of Korea Facsimile No. +82-42-481-8578	Authorized officer Telephone No.
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2018/013490

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