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(54) **BABY CARRIER**

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(57) **ABSTRACT**

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.

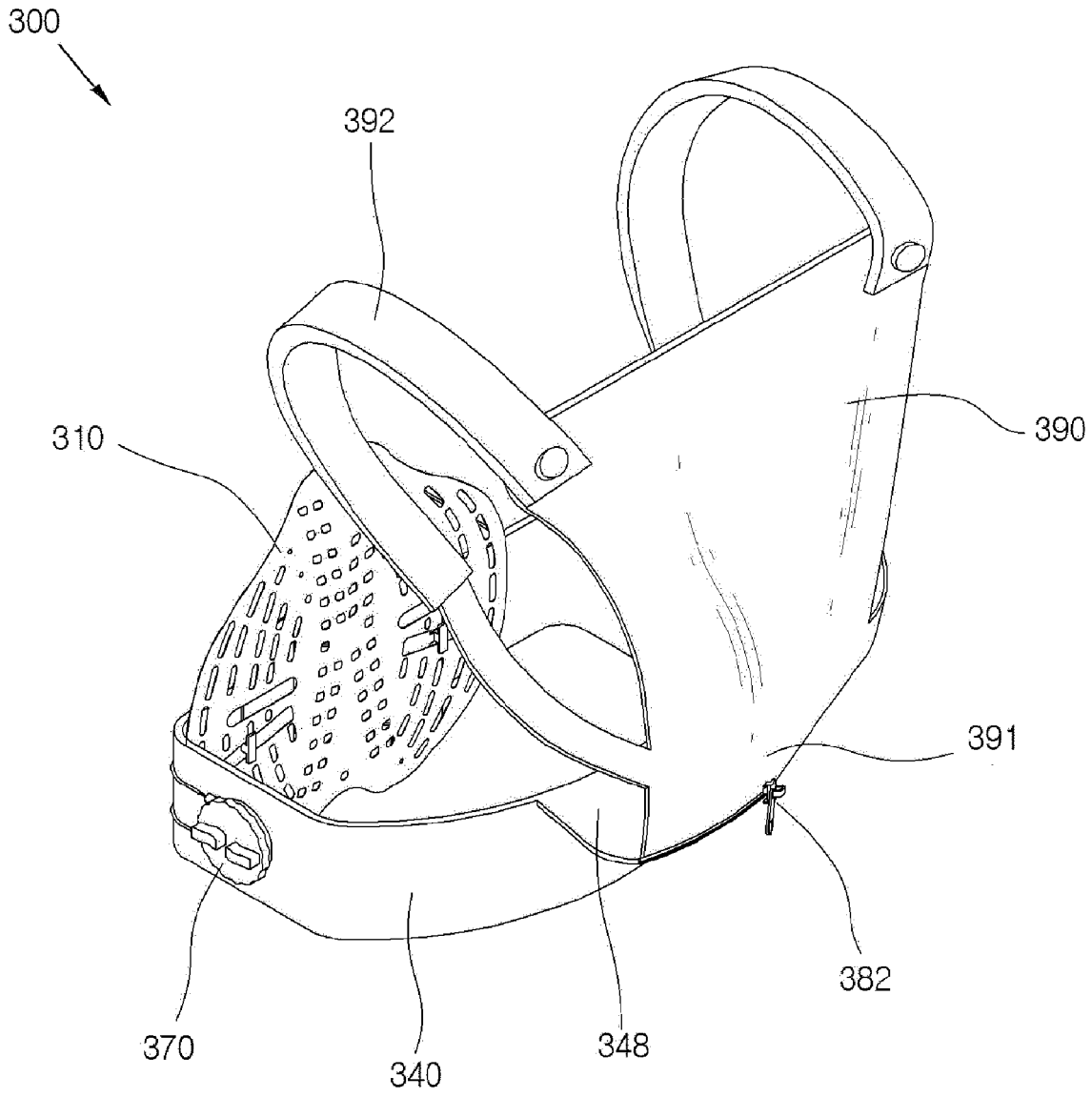

FIG. 1

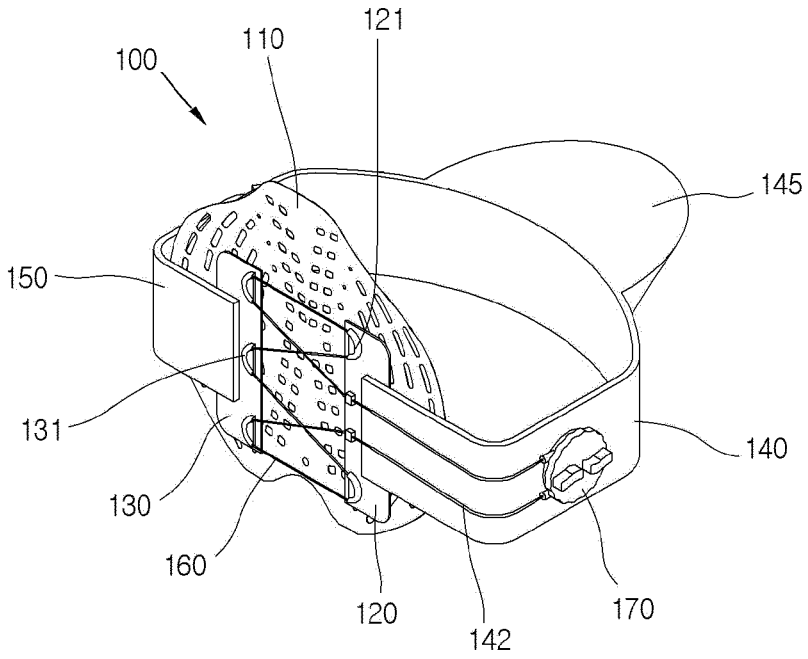
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FIG. 2

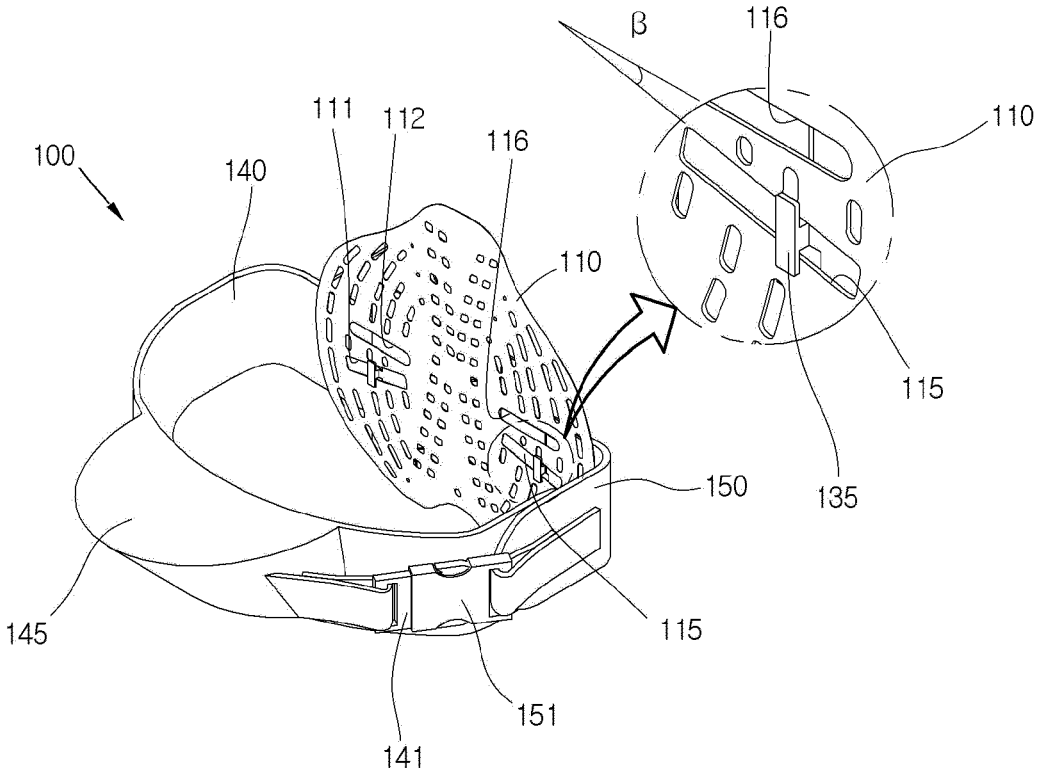
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FIG. 3

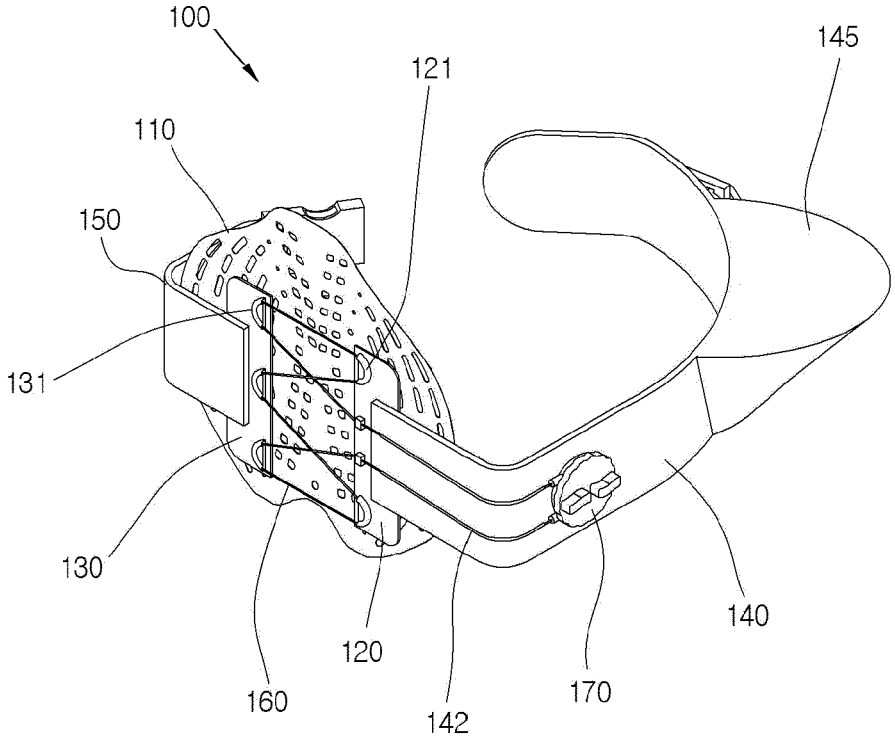
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FIG. 4

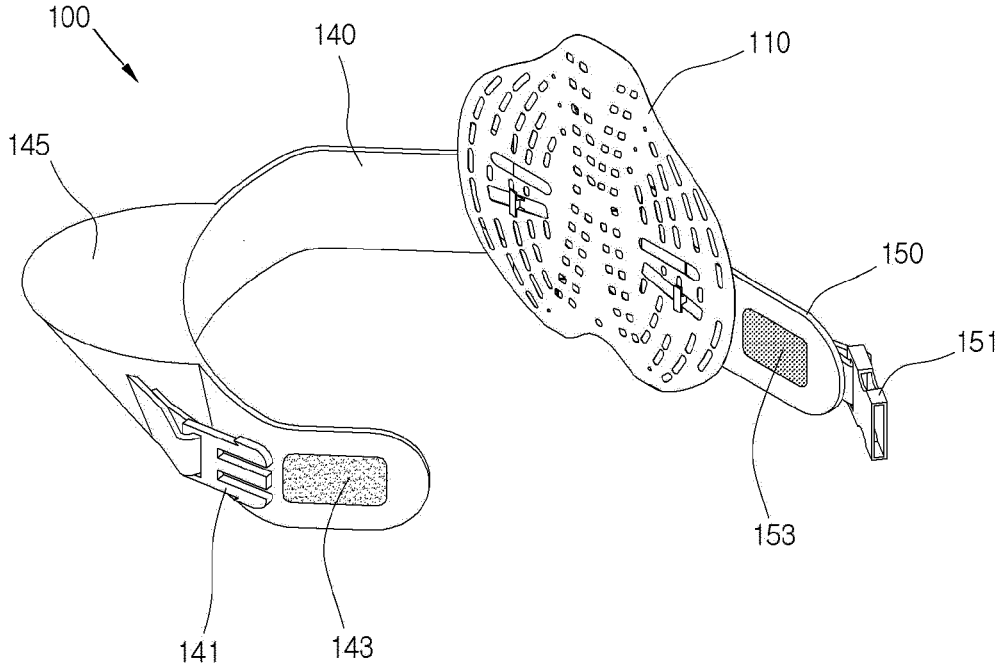
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FIG. 5

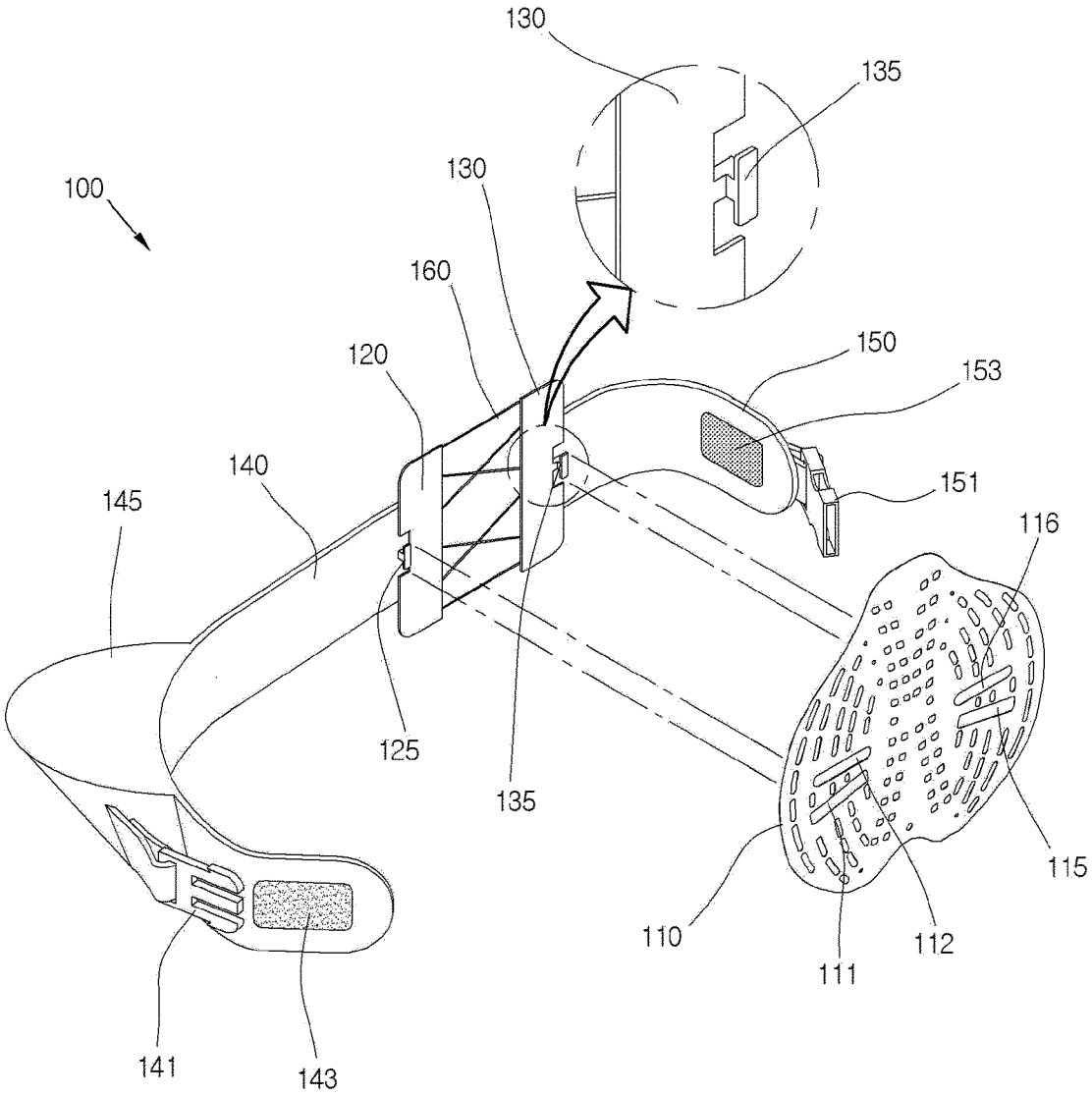
130
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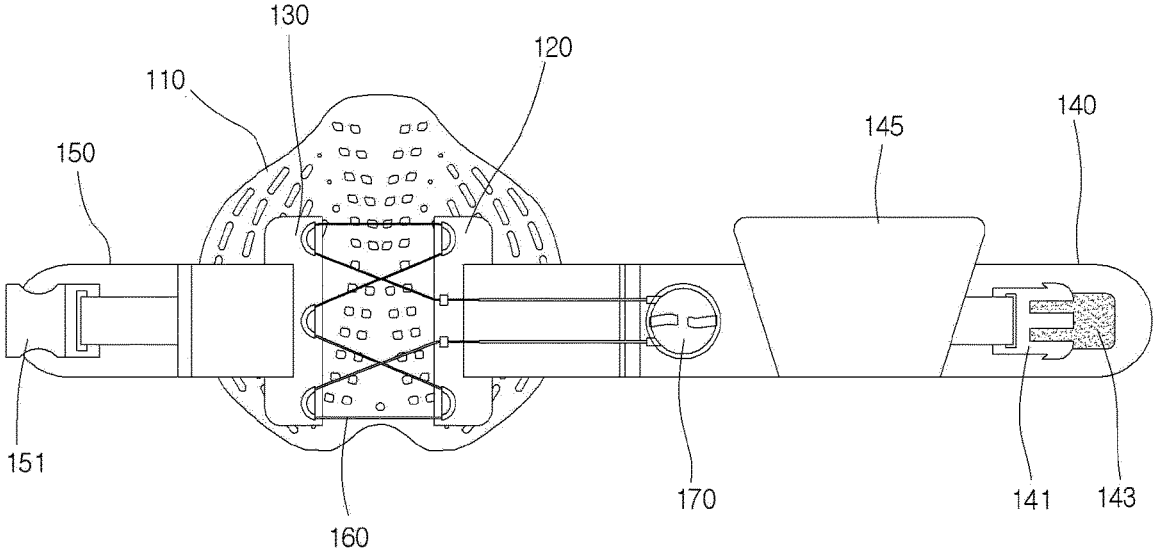
FIG. 6A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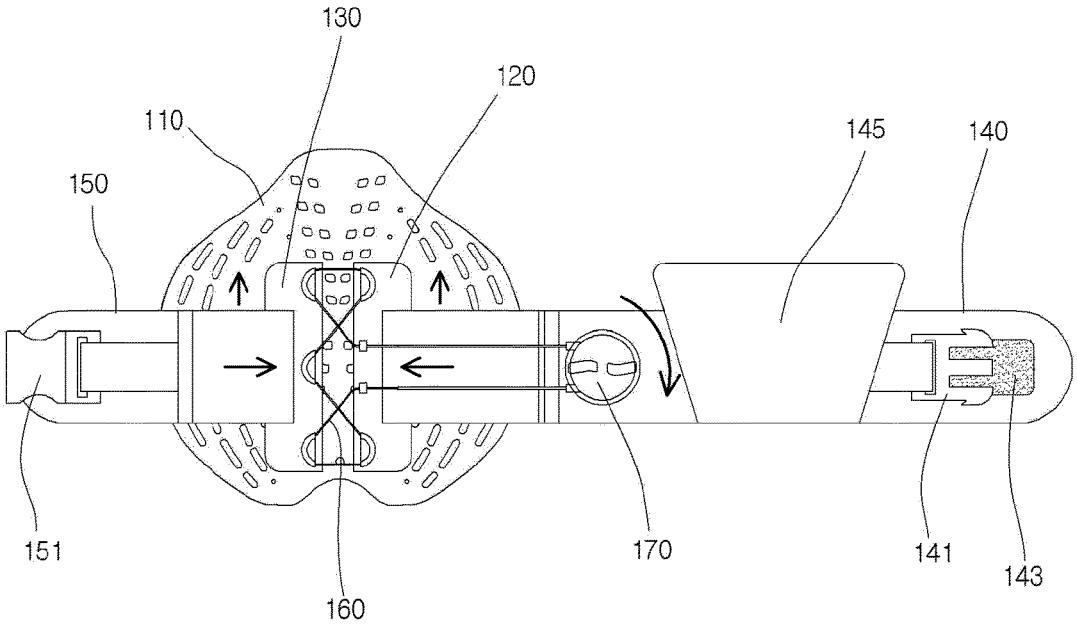
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143

FIG. 6B

FIG. 7

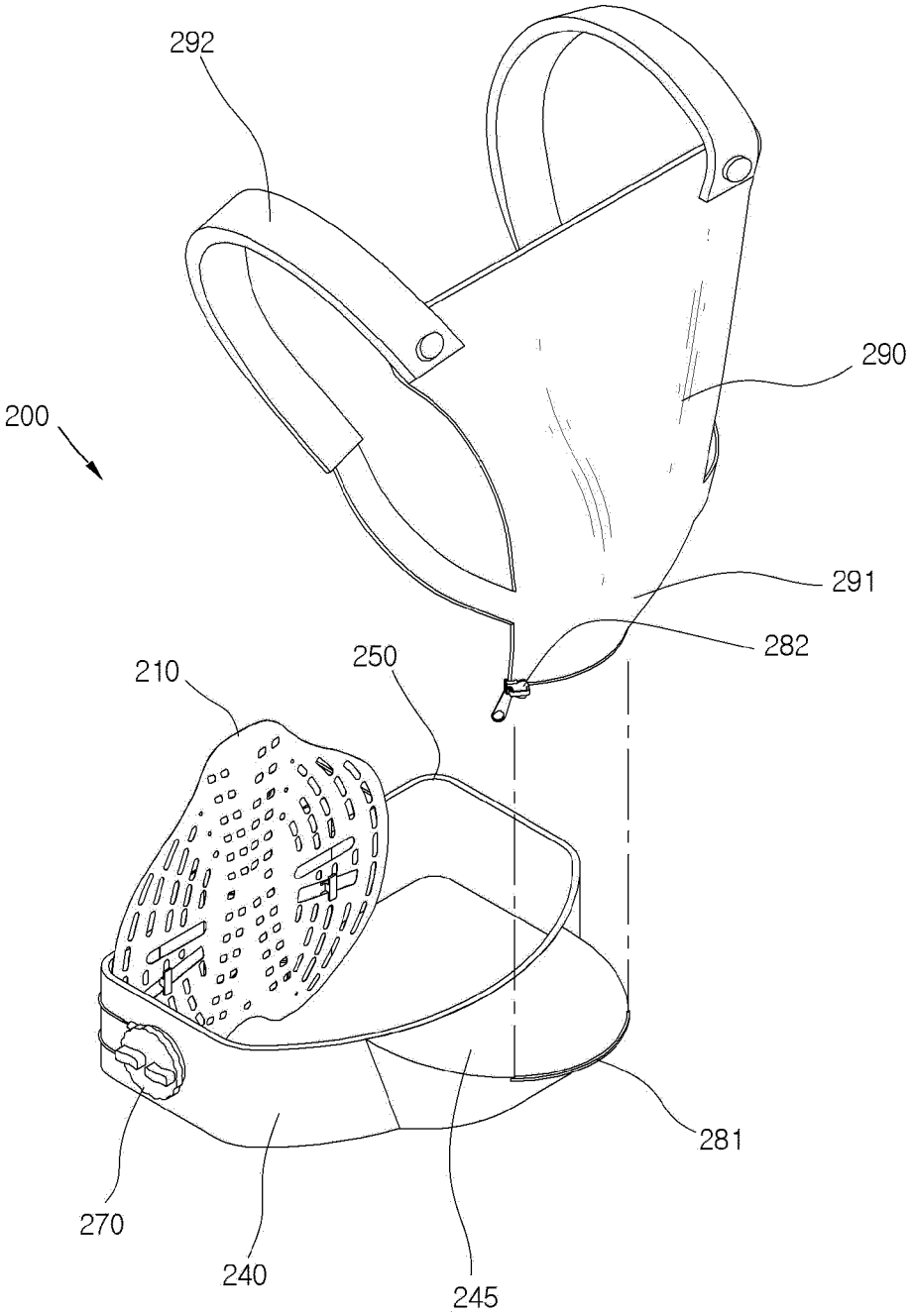


FIG. 8

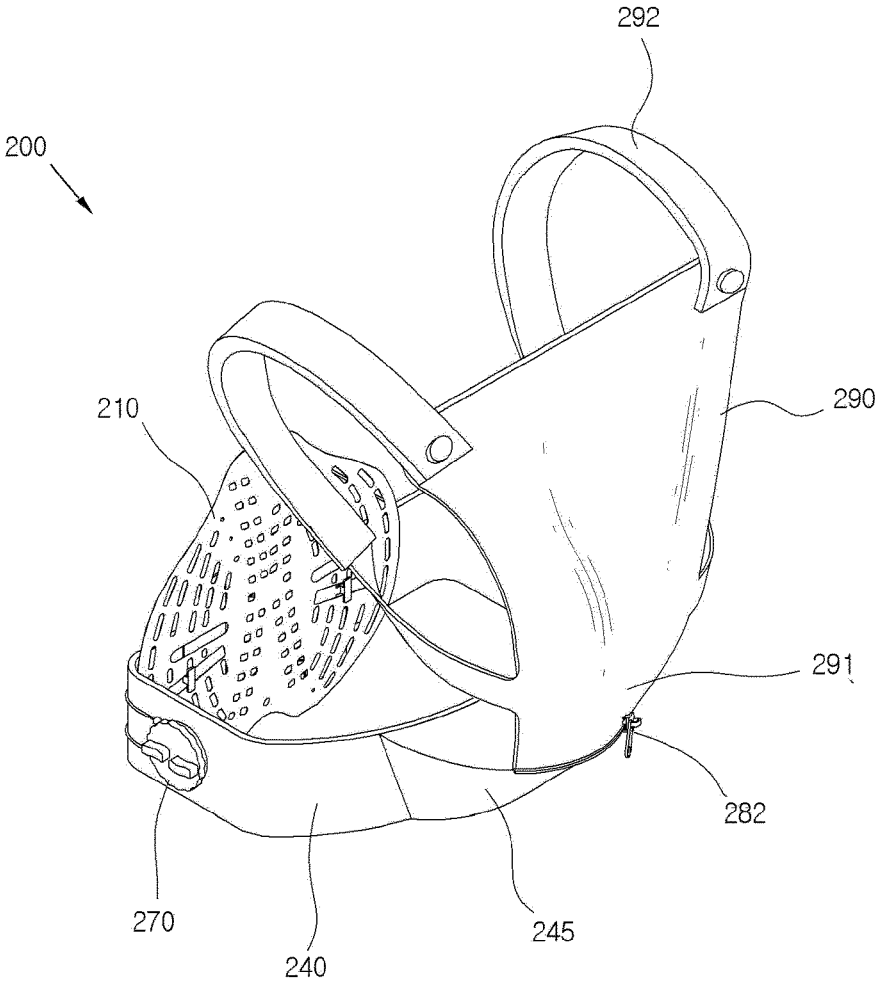


FIG. 9A

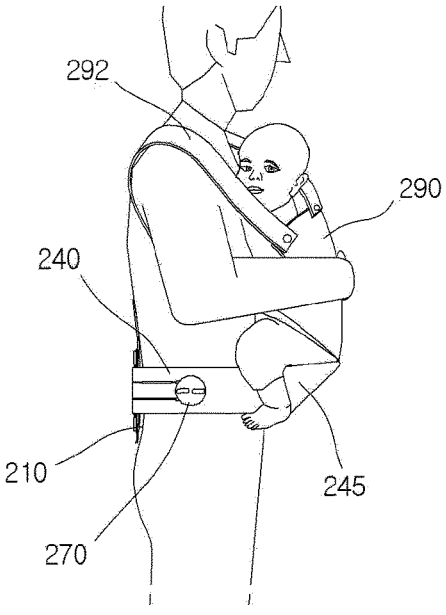


FIG. 9B

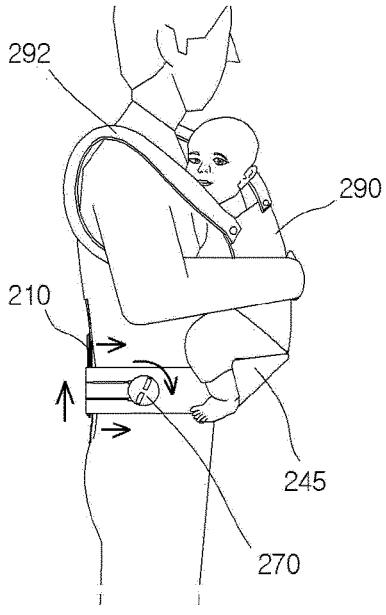


FIG. 10

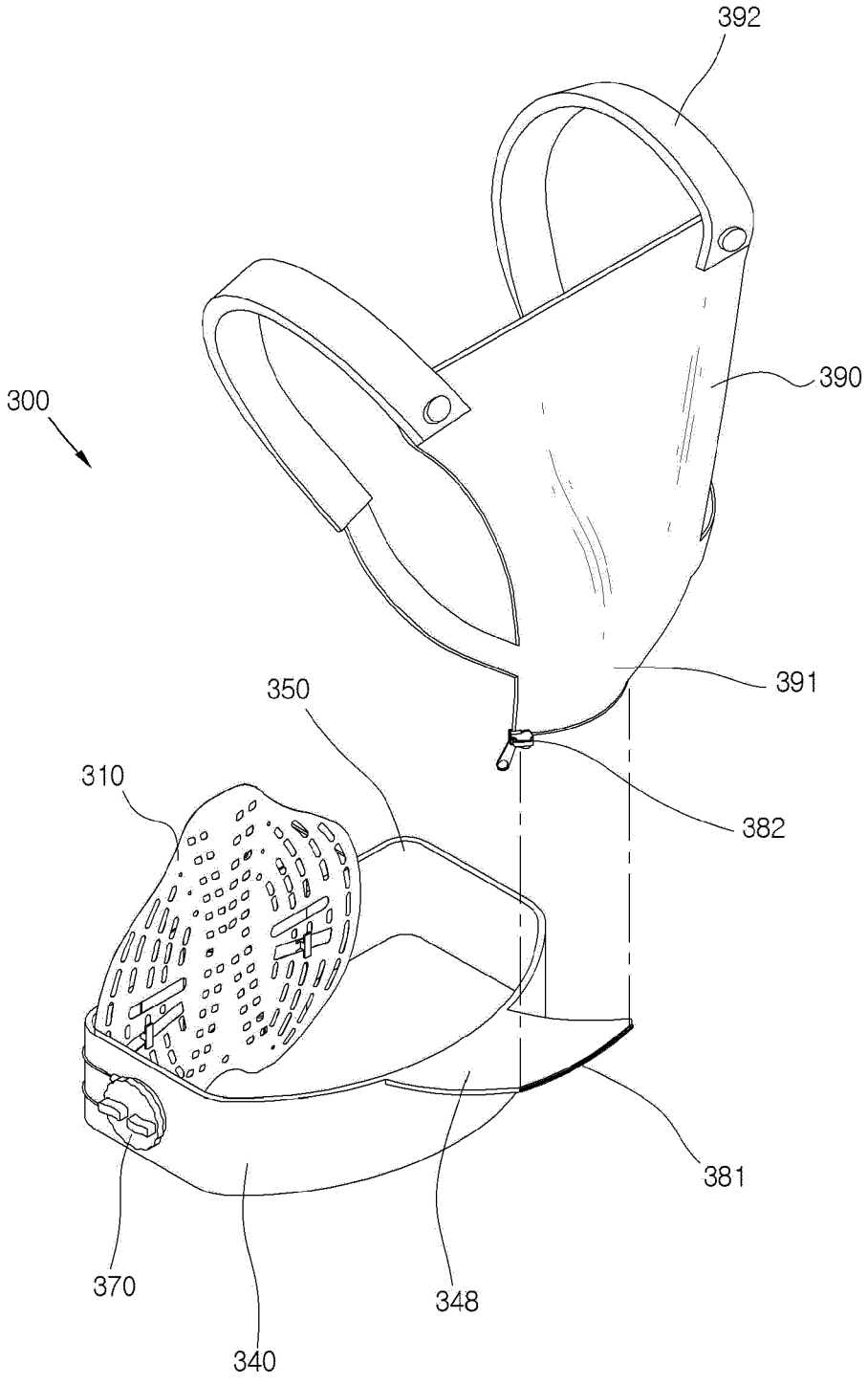
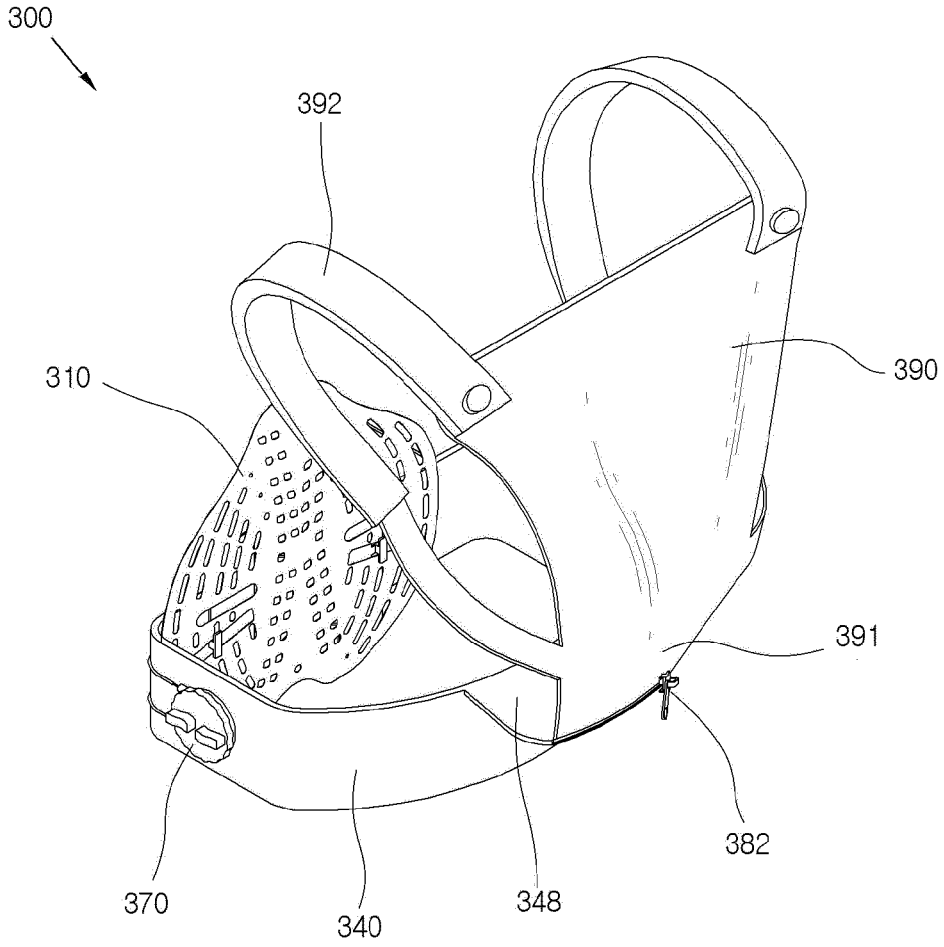


FIG. 11



BABY CARRIER

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.

[0022] FIG. **2** is a schematic perspective view illustrating the baby carrier **100** of FIG. **1** when viewed from a front side.

[0023] 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.

[0024] FIG. **4** is a schematic perspective view illustrating the baby carrier **100** in a state of FIG. **3** when viewed from a front side.

[0025] 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**.

[0026] FIGS. **6**A and **6**B 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**.

[0027] 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.

[0028] FIG. **8** is a perspective view of an assembled state of the baby carrier **200** of FIG. **7**.

[0029] FIGS. **9**A and **9**B 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**.

[0030] 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.

[0031] FIG. **11** is a perspective view of an assembled state of the baby carrier **300** of FIG. **10**.

BEST MODE FOR INVENTION

[0032] Hereinafter, a baby carrier according to the present invention will be described in detail with reference to the accompanying drawings.

[0033] 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**.

[0034] 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**.

[0035] 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.

[0036] 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.

[0037] 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**.

[0038] 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.

[0039] 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**.

[0040] 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.

[0041] 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 thereinto may be provided, and a fourth guide rail **116** formed so that the second slide portion **135** may be selectively inserted thereinto 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 improving convenience.

[0042] 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.

[0043] FIGS. **6**A and **6**B 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**.

[0044] FIG. **6**A 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.

[0045] 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**.

[0046] 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.

[0047] 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**.

[0048] 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.

[0049] FIGS. **9**A and **9**B 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. **9**A, 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. **9**B. 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.

[0050] 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**.

[0051] The configurations and the methods of the baby carries 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.

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

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.

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:

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.

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:

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:

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.

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.

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.

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.

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.

10. The baby carrier of claim **9**, wherein the raising unit includes:

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.

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.

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.

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