

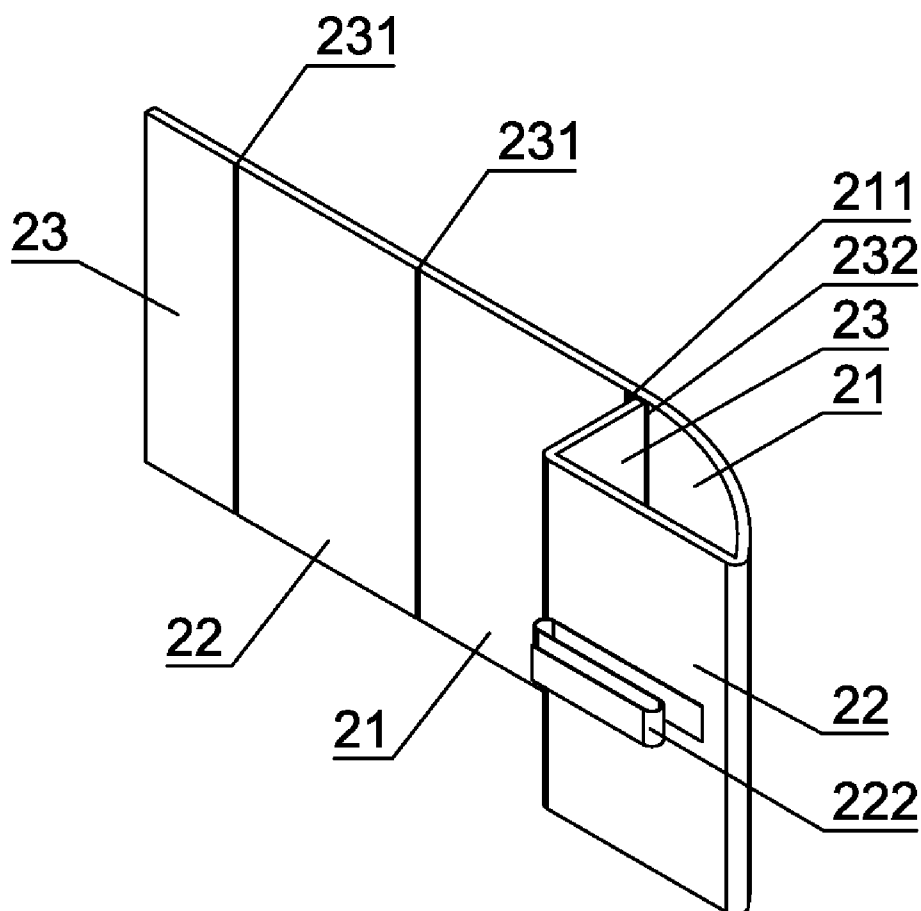


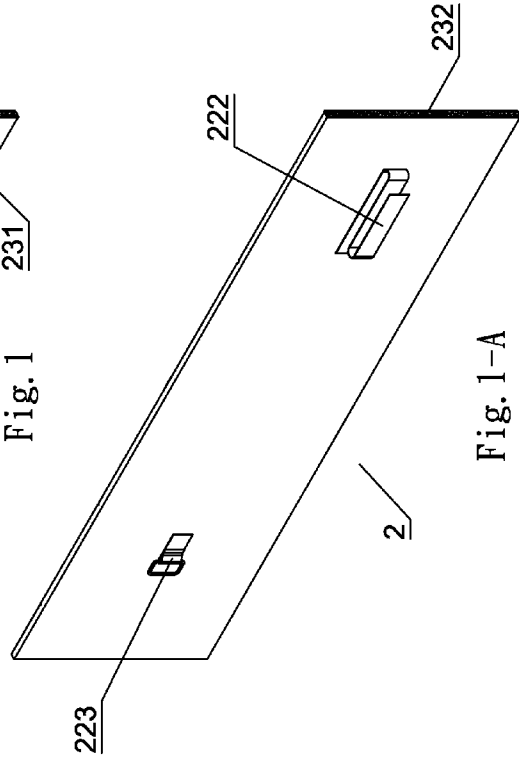
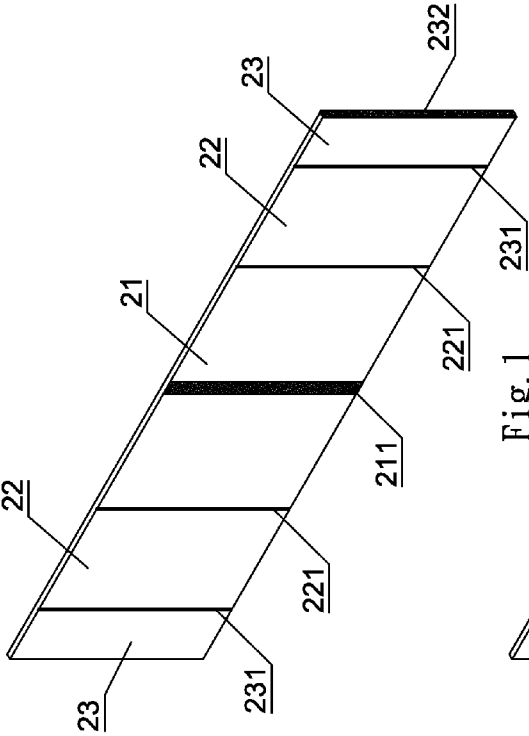
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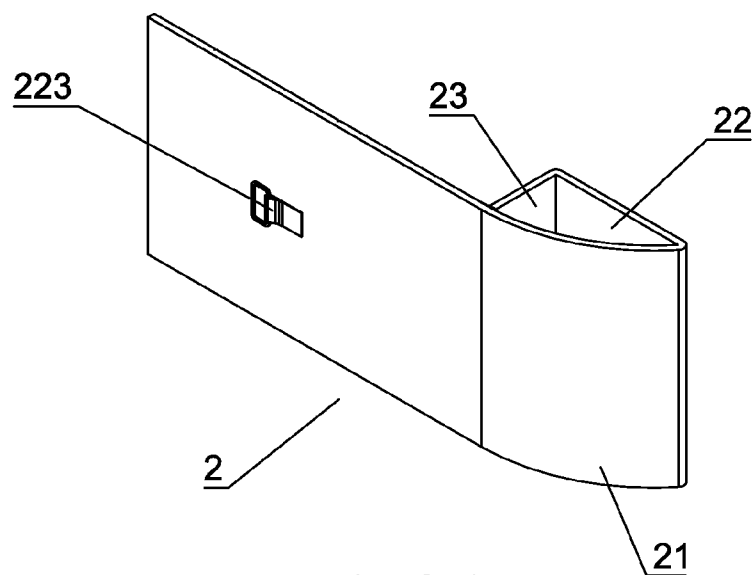
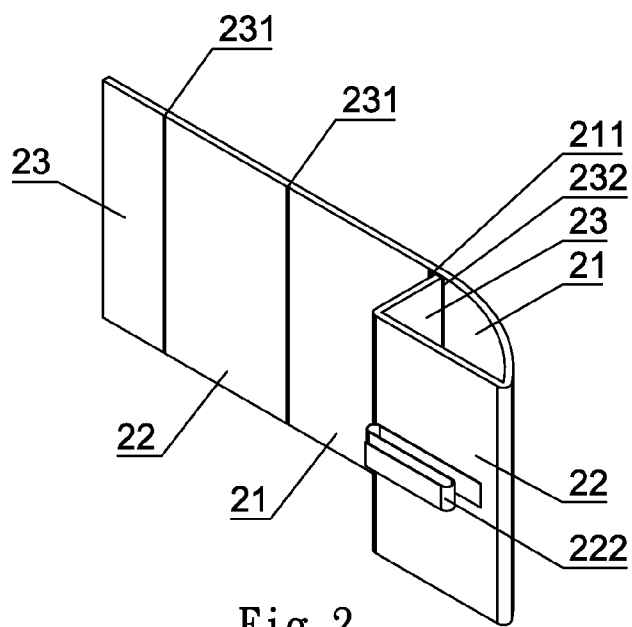
(19) **United States**(12) **Patent Application Publication**
KU(10) **Pub. No.: US 2011/0233977 A1**(43) **Pub. Date: Sep. 29, 2011**(54) **FOLDABLE WAIST SUPPORT**(76) Inventor: **Ming-Chou KU**, Taichung City
(TW)(21) Appl. No.: **12/732,469**(22) Filed: **Mar. 26, 2010****Publication Classification**(51) **Int. Cl.**
A47C 7/40 (2006.01)(52) **U.S. Cl.** **297/230.13**(57) **ABSTRACT**

A foldable wait support includes a foldable resilient board. The foldable resilient board includes a central portion, a pair of foldable portions and a pair of stand portions. Between the central portion and each of the foldable portions is formed with a first dent. Between each of the pair of foldable portions and each of the pair of stand portions is formed with a second

dent. A first side of the foldable resilient board is provided with a female buckle strap which is located on the central portion to engage with a male buckle strap provided on one edge of each of the pair of stand portions. A second side of the foldable resilient board is provided with a binding strap and a loop which are located on the foldable portions. When folding, the first dents are folded towards the same direction, such that the foldable portions and the stand portions are folded over the first side of the central portion and the binding strap is to engage with the loop. The foldable resilient board is folded in a flat form for convenient storing and carrying. When unfolding, the second dent between the foldable portion and the stand portion is folded inward and the male buckle strap is to engage with the female buckle strap, such that at least one of the stand portions is perpendicular to the foldable portion. Because the foldable resilient board is resilient and extendable, the central portion is bent outwardly to have a predetermined curved surface. The foldable waist support of the present invention can be placed on the back of a chair, on the chair or under the head of the user, providing a waist support to the user.







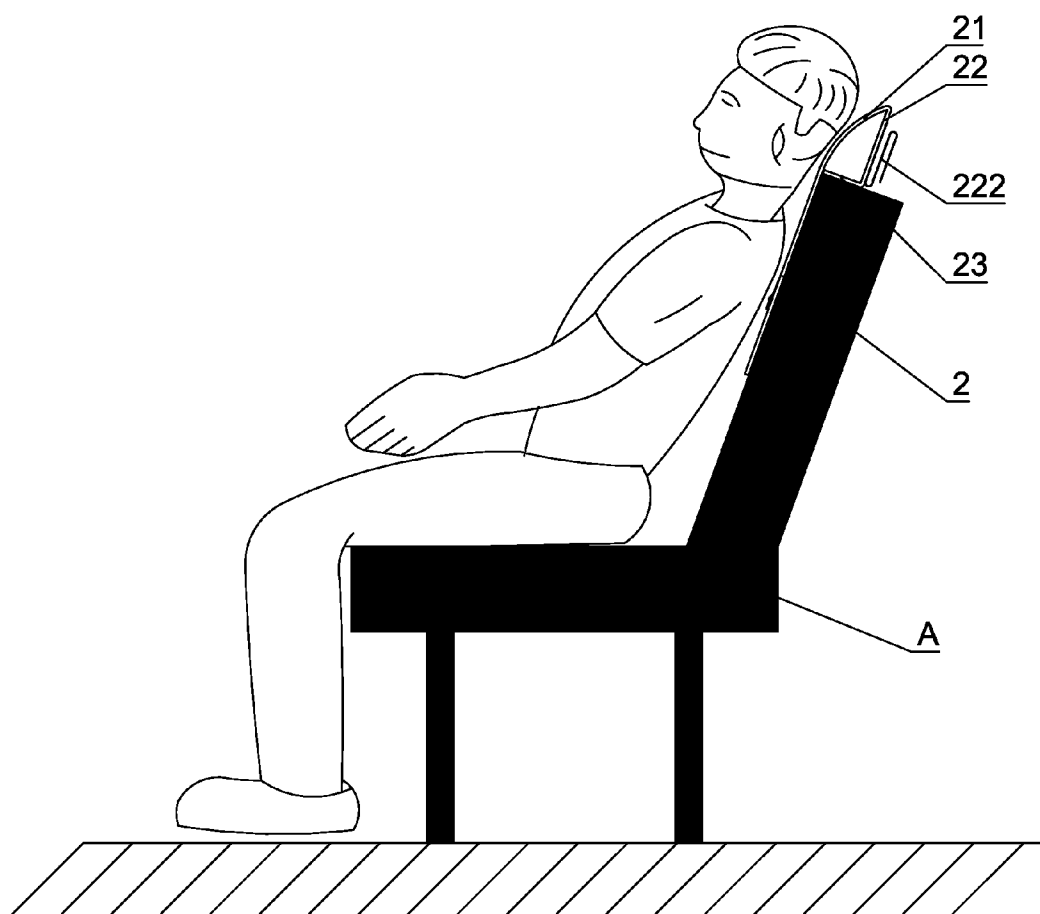


Fig. 3

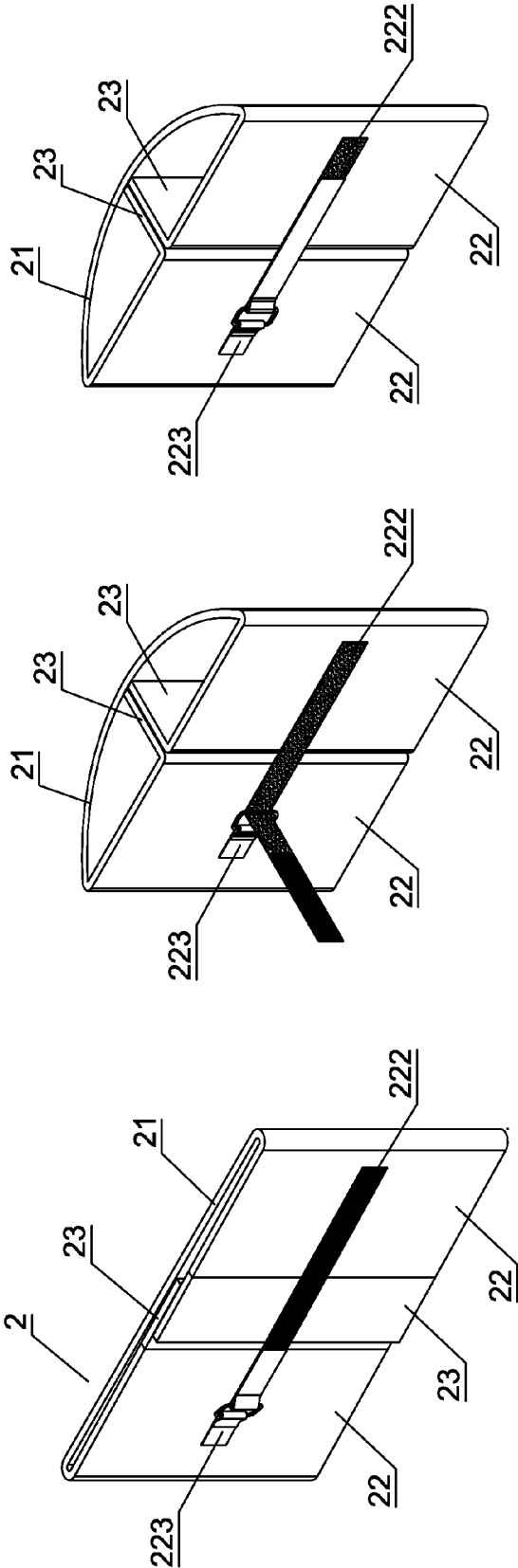


Fig. 4-C

Fig. 4-B

Fig. 4-A

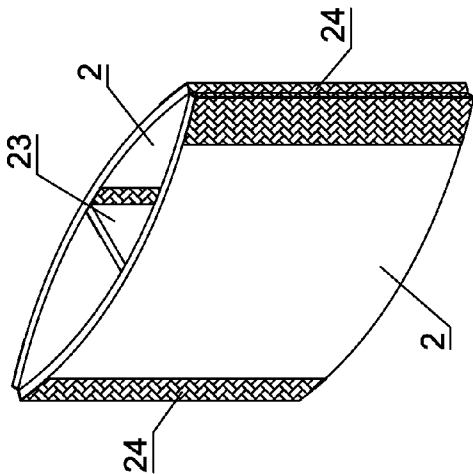


Fig. 6

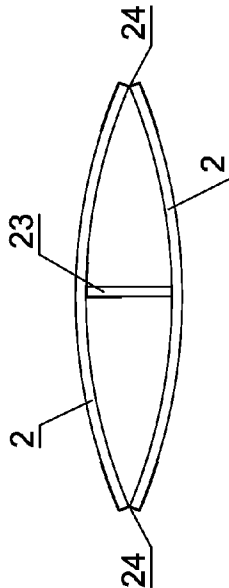


Fig. 6-A

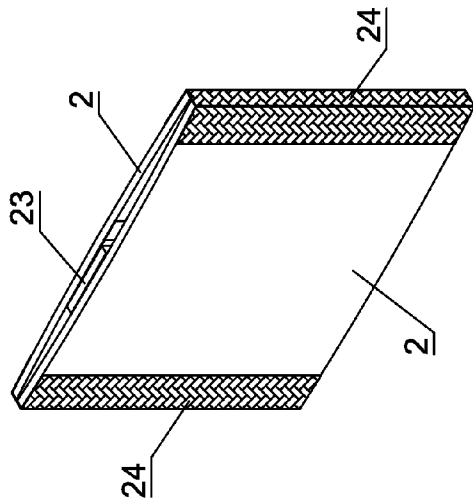


Fig. 5

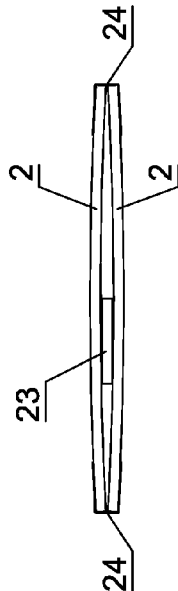


Fig. 5-A

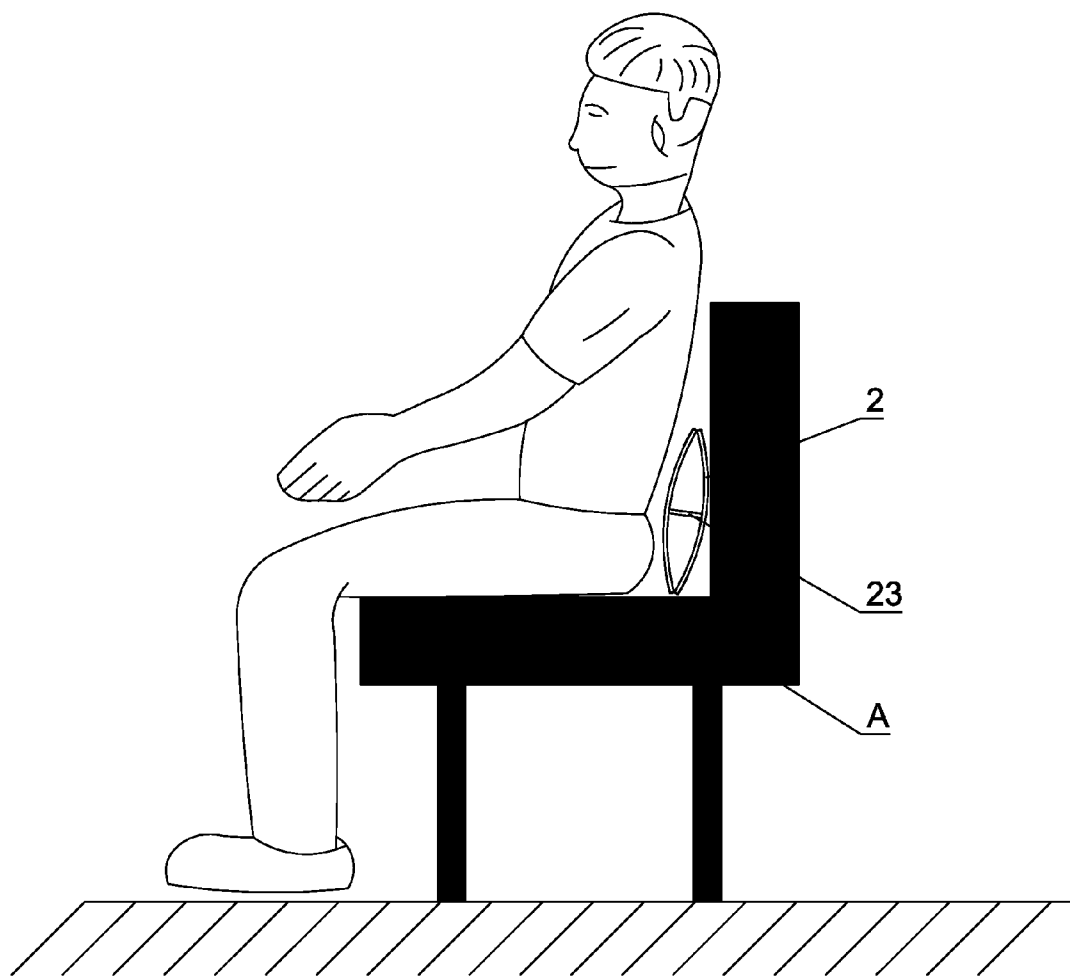


Fig. 7

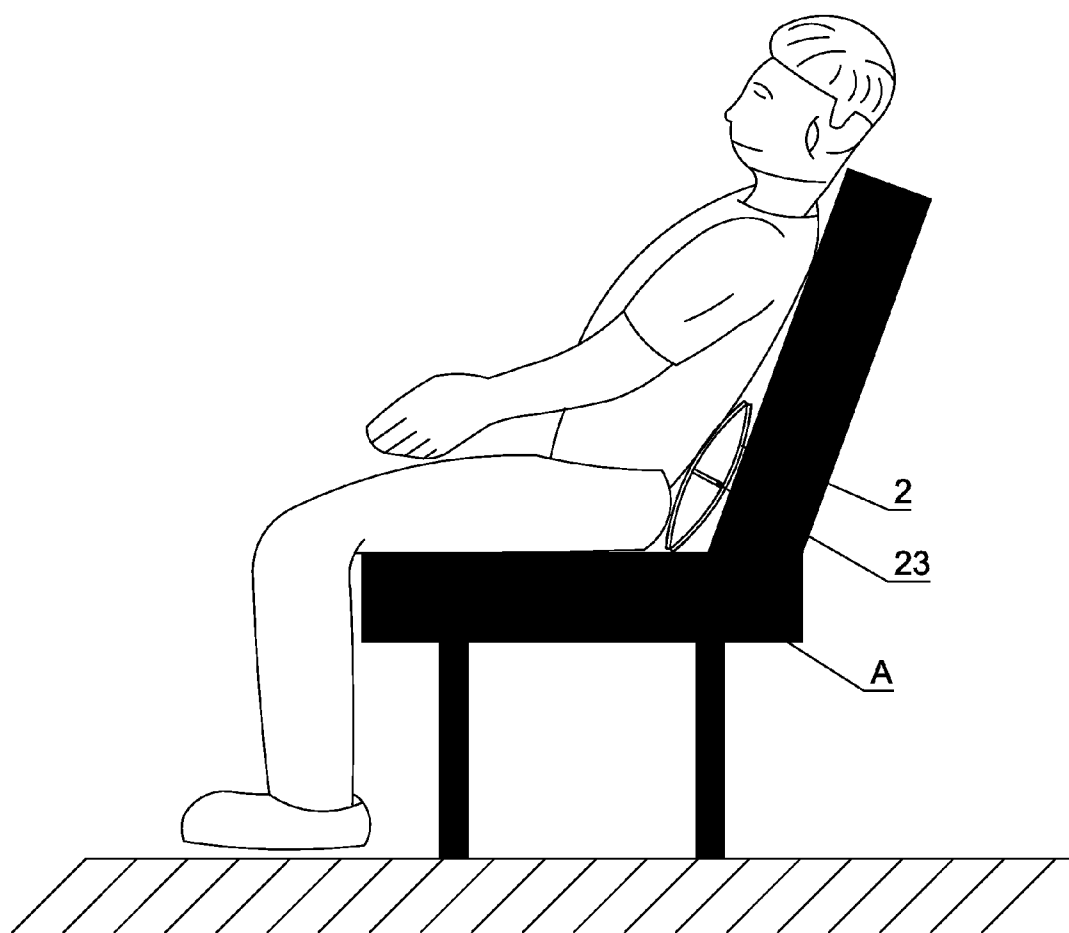


Fig. 8

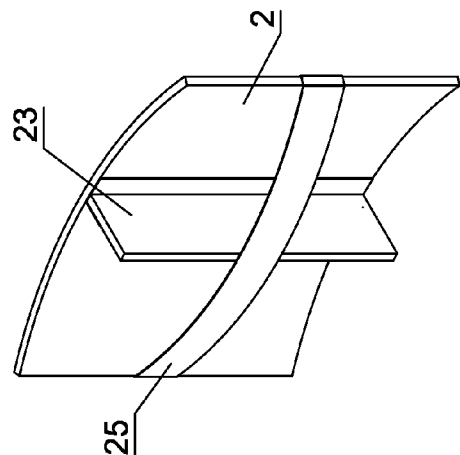


Fig. 10

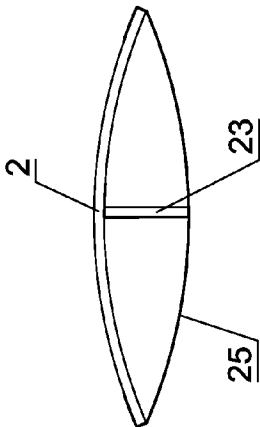


Fig. 10-A

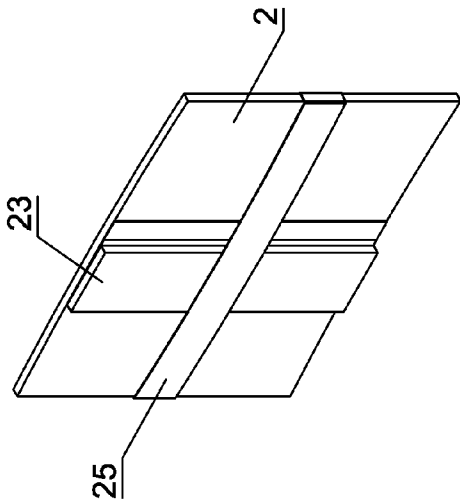


Fig. 9

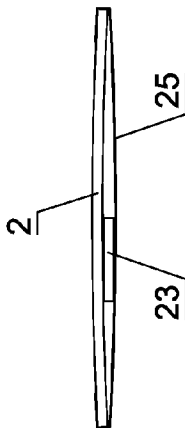


Fig. 9-A

FOLDABLE WAIST SUPPORT

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a foldable waist support, and more particularly to one that includes a foldable resilient board having a central portion, foldable portions and stand portions, a female buckle strap, a binding strap, a loop, and a male buckle strap, or one that includes a strap connected to two ends of a foldable resilient board and a stand portion, or one that includes two foldable resilient boards, two limit straps sealing two ends of the two foldable resilient boards and a stand portion. Through the resilient and extendable effect of the foldable resilient board, the foldable resilient board can be folded in a flat form for convenient storing and carrying. When unfolding, because the foldable resilient board is resilient and extendable, the central portion is bent outwardly to have a predetermined curved surface, providing a waist support to the user.

[0003] 2. Description of the Prior Art

[0004] In general, people always sit on a chair when chatting, eating, taking a trip or the like. When a person sits on a chair, he/she may keep a distance from the back of the chair. After a period of time, the person may feel uncomfortable because there is not a support to his/her waist. Sometimes, the user leans against the back of the chair or put his/her head on a table for taking a rest. There are waist supports on the markets. However, they are larger in size and not retractable for carrying. Accordingly, the inventor of the present invention has devoted himself based on his many years of practical experiences to solve this problem.

SUMMARY OF THE INVENTION

[0005] According to a first aspect of the present invention, there is provided a foldable waist support which comprises a foldable resilient board. The foldable resilient board includes a central portion, a pair of foldable portions extending from two opposing ends of the central portion and a pair of stand portions extending from the pair of foldable portions. Between the central portion and each of the foldable portions is formed with a first dent. Between each of the pair of foldable portions and each of the pair of stand portions is formed with a second dent. A first side of the foldable resilient board is provided with a female buckle strap which is located on the central portion to engage with a male buckle strap provided on one edge of each of the pair of stand portions. A second side of the foldable resilient board is provided with a binding strap and a loop which are located on the foldable portions. When unfolding, the second dent between the foldable portion and the stand portion at one end of the foldable resilient board is folded inward and the male buckle strap at the edge of the stand portion is to engage with the female buckle strap of the central portion, such that the stand portion is perpendicular to the foldable portion. Because the foldable resilient board is resilient and extendable, the central portion is bent outwardly to have a predetermined curved surface. Another end of the foldable resilient board is a flat surface. The foldable waist support of the present invention is placed on the back of a chair. The stand portion is placed to lean against the top of the back of the chair. When the user sits on the chair, the back of the user can lean against the flat surface and the head of the user can lean against the curved surface of the central portion, providing a waist support to the user.

[0006] According to a second aspect of the present invention, when unfolding, the second dents between the pair of foldable portions and the pair of stand portions at both ends of the foldable resilient board are folded inward and the male buckle straps of the stand portions are to engage with the female buckle strap of the central portion, such that the pair of stand portions are perpendicular to the pair foldable portions, respectively. Because the foldable resilient board is resilient and extendable, the central portion is bent outwardly to have a predetermined curved surface. The binding strap is to engage with the loop. The foldable waist support of the present invention can be placed on the chair, providing a waist support to the user.

[0007] According to a third aspect of the present invention, there is provided a foldable waist support which comprises two foldable resilient boards stacked up. Left and right ends of the two foldable resilient boards are connected and sealed with two limit straps. A rectangular stand portion is provided between the two foldable resilient boards. One end of the stand portion is movably connected to an inner side of the two foldable resilient boards. When folding, the stand portion is folded in the two foldable resilient boards. The foldable resilient board is folded in a flat form for convenient storing and carrying. When unfolding, the stand portion is erected in the two foldable resilient boards. Because the foldable resilient board is resilient and extendable, the two foldable resilient boards are bent outwardly in different directions to have two predetermined curved surfaces. The foldable waist support of the present invention can be placed on the chair, providing a waist support to the user.

[0008] According to a fourth aspect of the present invention, there is provided a foldable waist support which comprises a foldable resilient board. Left and right ends of the resilient board are connected with a strap. A rectangular stand portion is provided between the foldable resilient board and the strap. One end of the stand portion is movably connected between the foldable resilient board and the strap. When folding, the stand portion is folded between the foldable resilient board and the strap. The foldable resilient board is folded in a flat form for convenient storing and carrying. When unfolding, the stand portion is erected between the foldable resilient board and the strap. Because the foldable resilient board is resilient and extendable, the foldable resilient board is bent outwardly to have a predetermined curved surface. The foldable waist support of the present invention can be placed on the chair, providing a waist support to the user.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of the present invention;

[0010] FIG. 1-A is another perspective view of the present invention;

[0011] FIG. 2 is a perspective view of a first embodiment of the present invention;

[0012] FIG. 2-A is another perspective view of the first embodiment of the present invention;

[0013] FIG. 3 is a schematic view of the first embodiment of the present invention placed on a chair;

[0014] FIG. 4-A is a perspective view of a second embodiment of the present invention in a folded status;

[0015] FIG. 4-B and FIG. 4-C are perspective views of the second embodiment of the present invention in an unfolded status;

[0016] FIG. 5 is a perspective view of a third embodiment of the present invention in a folded status;

[0017] FIG. 5-A is a top view of the third embodiment of the present invention in a folded status;

[0018] FIG. 6 is a perspective view of the third embodiment of the present invention in an unfolded status;

[0019] FIG. 6-A is a top view of the third embodiment of the present invention in an unfolded status;

[0020] FIG. 7 and FIG. 8 are schematic views of the third embodiment of the present invention placed on a chair;

[0021] FIG. 9 is a perspective view of a fourth embodiment of the present invention in a folded status;

[0022] FIG. 9-A is a top view of the fourth embodiment of the present invention in a folded status;

[0023] FIG. 10 is a perspective view of the fourth embodiment of the present invention in an unfolded status; and

[0024] FIG. 10-A is a top view of the fourth embodiment of the present invention in an unfolded status.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings.

[0026] Referring to FIG. 1 and FIG. 1-A, a foldable resilient board 2 comprises a central portion 21, a pair of foldable portions 22 extending from two opposing ends of the central portion 21 and a pair of stand portions 23 extending from the pair of foldable portions 22. Between the central portion 21 and each of the foldable portions 22 is formed with a first dent 221 and between the foldable portion 22 and the stand portion 23 is formed with a second dent 231 to provide a correct folding direction. The foldable resilient board 2 is made of resilient, restoring and extendable material, such as a plastic board. A first side of the foldable resilient board 2 is provided with a female buckle strap 211 which is located on the central portion 21 to engage with a male buckle strap 232 provided on one edge of each of the pair of stand portions 23. A second side of the foldable resilient board 2 is provided with a binding strap 222 and a loop 223 which are located on the foldable portions 22 to engage with each other or disengage from each other. The female buckle strap 211, the male buckle strap 232 and the binding strap 222 can be Velcro straps. The present invention provides a convenient way to fold and unfold the foldable resilient board 2.

[0027] FIG. 2, FIG. 3, FIG. 2-A and FIG. 4-A are to show a first embodiment of the present invention. When folding, the first dents 221 between the central portion 21 and the pair of foldable portions 22 are folded towards the same direction, such that the pair of foldable portions 22 and the pair of stand portions 23 are folded over the first side of the central portion 21 and the binding strap 222 is to engage with the loop 223. The foldable resilient board 2 is folded in a flat form for convenient storing and carrying, as shown in FIG. 4-A. When unfolding, the second dent 231 between the foldable portion 22 and the stand portion 23 at one end of the foldable resilient board 2 is folded inward and the male buckle strap 232 at the edge of the stand portion 23 is to engage with the female buckle strap 211 of the central portion 21, such that the stand portion 23 is perpendicular to the foldable portion 22. Because the foldable resilient board 2 is resilient and extendable, the central portion 21 is bent outwardly to have a predetermined curved surface. Another end of the foldable resilient board 2 is a flat surface, as shown in FIG. 2 and FIG.

2-A. The foldable waist support of the present invention is placed on the back of a chair A. The stand portion 23 is placed to lean against the top of the back of the chair. When the user sits on the chair, the back of the user can lean against the flat surface and the head of the user can lean against the curved surface of the central portion 21, as shown in FIG. 3, providing a waist support to the user.

[0028] FIG. 4-A, FIG. 4-B, FIG. 4-C and FIG. 7 are to show a second embodiment of the present invention. When folding, the two first dents 221 between the central portion 21 and the pair of foldable portions 22 are folded towards the same direction, such that the pair of foldable portions 22 and the pair of stand portions 23 are folded over the first side of the central portion 21 and the binding strap 222 is to engage with the loop 223. The foldable resilient board 2 is folded in a flat form for convenient storing and carrying, as shown in FIG. 4-A. When unfolding, the second dents 231 between the pair of foldable portions 22 and the pair of stand portions 23 at both ends of the foldable resilient board 2 are folded inward and the male buckle straps 232 of the stand portions 23 are to engage with the female buckle strap 211 of the central portion 21, such that the pair of stand portions 23 are perpendicular to the pair of foldable portions 22, respectively. Because the foldable resilient board 2 is resilient and extendable, the central portion 21 is bent outwardly to have a predetermined curved surface, as shown in FIG. 4-B. The binding strap 223 is to engage with the loop 223, as shown in FIG. 4-C. The foldable waist support of the present invention is placed on the chair A, as shown in FIG. 7, providing a waist support to the user.

[0029] Referring to FIG. 4-C, according to the steps of the second embodiment, the foldable resilient board of the present invention can be used as a pillow placed underneath the head of the user. With the predetermined arc surface of the central portion 21, the inclined angle between the head of the user and the level is at 15 degrees to support the user's head, conforming to the ergonomic requirement.

[0030] FIG. 5, FIG. 5-A, FIG. 6, FIG. 6-A, FIG. 7 and FIG. 8 are to show a third embodiment of the present invention. Two foldable resilient boards 2 are stacked up. Left and right ends of the two foldable resilient boards 2 are connected and sealed with two limit straps 24 to enhance the connection strength. A rectangular stand portion 23 is provided between the two foldable resilient boards 2. One end of the stand portion 23 is movably connected to an inner side of the two foldable resilient boards 2. When folding, the stand portion 23 is folded in the two foldable resilient boards 2. The foldable resilient board is folded in a flat form for convenient storing and carrying, as shown in FIG. 5 and FIG. 5-A. When unfolding, the stand portion 23 is erected in the two foldable resilient boards 2. Because the foldable resilient boards 2 are resilient and extendable, the two foldable resilient boards 2 are bent outwardly in different directions to have two predetermined curved surfaces, as shown in FIG. 6 and FIG. 6-A. The foldable waist support of the present invention is placed on the chair A, as shown in FIG. 7 and FIG. 8, providing a waist support to the user.

[0031] FIG. 9, FIG. 9-A, FIG. 10 and FIG. 10-A are to show a fourth embodiment of the present invention. Left and right ends of a foldable resilient board 2 are connected with a strap 25. A rectangular stand portion 23 is provided between the foldable resilient board 2 and the strap 25. One end of the stand portion 23 is movably connected between the foldable resilient board 2 and the strap 25. When folding, the stand portion 23 is folded between the foldable resilient board 2 and

the strap **25**. The foldable resilient board **2** is folded in a flat form for convenient storing and carrying, as shown in FIG. **9** and FIG. **9-A**. When unfolding, the stand portion **23** is erected between the foldable resilient board **2** and the strap **25**. Because the foldable resilient board **2** is resilient and extendable, the foldable resilient board **2** is bent outwardly to have a predetermined curved surface, as shown in FIG. **10** and FIG. **10-A**. The foldable waist support of the present invention is placed on the chair **A**, as shown in FIG. **7** and FIG. **8**, providing a waist support to the user.

[0032] Although particular embodiments of the present invention have been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the present invention. Accordingly, the present invention is not to be limited except as by the appended claims.

What is claimed is:

1. A foldable wait support, comprising a foldable resilient board, the foldable resilient board including a central portion, a pair of foldable portions extending from two opposing ends of the central portion and a pair of stand portions extending from the pair of foldable portions, between the central portion and each of the foldable portions being formed with a first dent, between each of the pair of foldable portions and each of the pair of stand portions being formed with a second dent, a first side of the foldable resilient board being provided with a female buckle strap which is located on the central portion to engage with a male buckle strap provided on one edge of each of the pair of stand portions, a second side of the foldable resilient board being provided with a binding strap and a loop which are located on the foldable portions; when folding, the pair of foldable portions and the pair of stand portions being

folded over the first side of the central portion to be in a flat form, when unfolding, the stand portions being perpendicular to the foldable portions and the central portion being bent outwardly to have a predetermined curved surface.

2. The foldable wait support as claimed in claim **1**, wherein the female buckle strap, the male buckle strap and the binding strap are Velcro straps.

3. The foldable wait support as claimed in claim **1**, wherein the predetermined curved surface of the central portion is bent at fifteen degrees.

4. A foldable wait support, comprising two foldable resilient boards which are stacked up, left and right ends of the two foldable resilient boards being connected and sealed with two limit straps, a rectangular stand portion being provided between the two foldable resilient boards, one end of the stand portion being movably connected to an inner side of the two foldable resilient boards, when folding, the stand portion being folded in the two foldable resilient boards, when unfolding, the stand portion being erected in the two foldable resilient boards.

5. The foldable wait support as claimed in claim **4**, wherein the foldable resilient board is made of a plastic board which is resilient, restoring and extendable.

6. The foldable wait support as claimed in claim **4**, wherein one of the two foldable resilient boards is replaced with a strap connected to the left and right ends of the other foldable resilient board.

7. The foldable wait support as claimed in claim **1**, wherein the foldable resilient board is made of a plastic board which is resilient, restoring and extendable.

* * * * *