



US 20130154333A1

(19) **United States**(12) **Patent Application Publication**
WU(10) **Pub. No.: US 2013/0154333 A1**(43) **Pub. Date: Jun. 20, 2013**(54) **SPHERICAL CHAIR STRUCTURE**(76) Inventor: **Harrison WU**, New Taipei City (TW)(21) Appl. No.: **13/325,295**(22) Filed: **Dec. 14, 2011****Publication Classification**(51) **Int. Cl.**
A47C 7/02 (2006.01)(52) **U.S. Cl.**
USPC **297/452.23**(57) **ABSTRACT**

A spherical chair structure includes: a chair frame having a seat frame and an arc containing space in the seat frame; a cushion installed on the seat frame and including a spherical mat, and the bottom of the spherical mat being contained in the containing space, and the spherical mat being protruded from the seat frame to form a seat pad; and a positioning device having a plurality of binder for surrounding and positioning the spherical mat, and an end of the binder being fixed to the chair frame, so that the spherical chair can be used as a chair and a fitness equipment safely and comfortably to provide excellent leisure and fitness exercises. The spherical chair structure can be packed with less packaging material and transportation space to achieve the effects of reducing the transportation cost and protecting our environment.

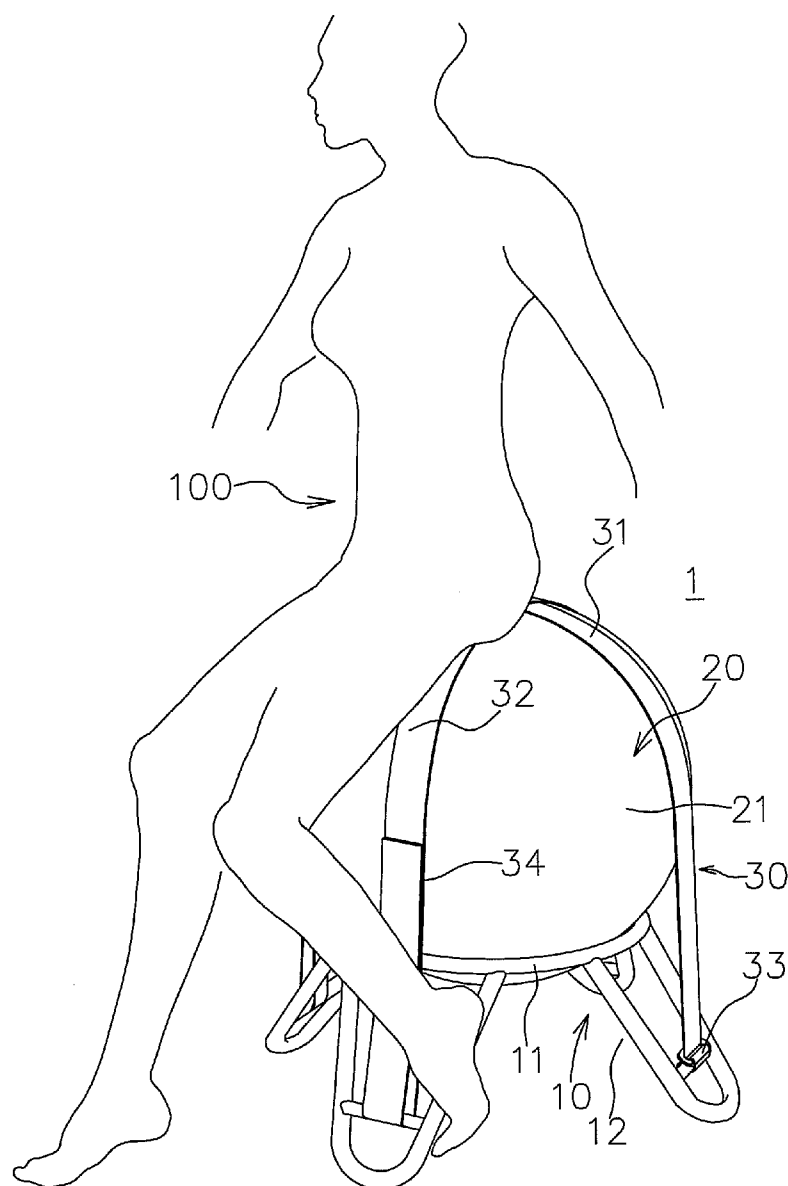


FIG. 1

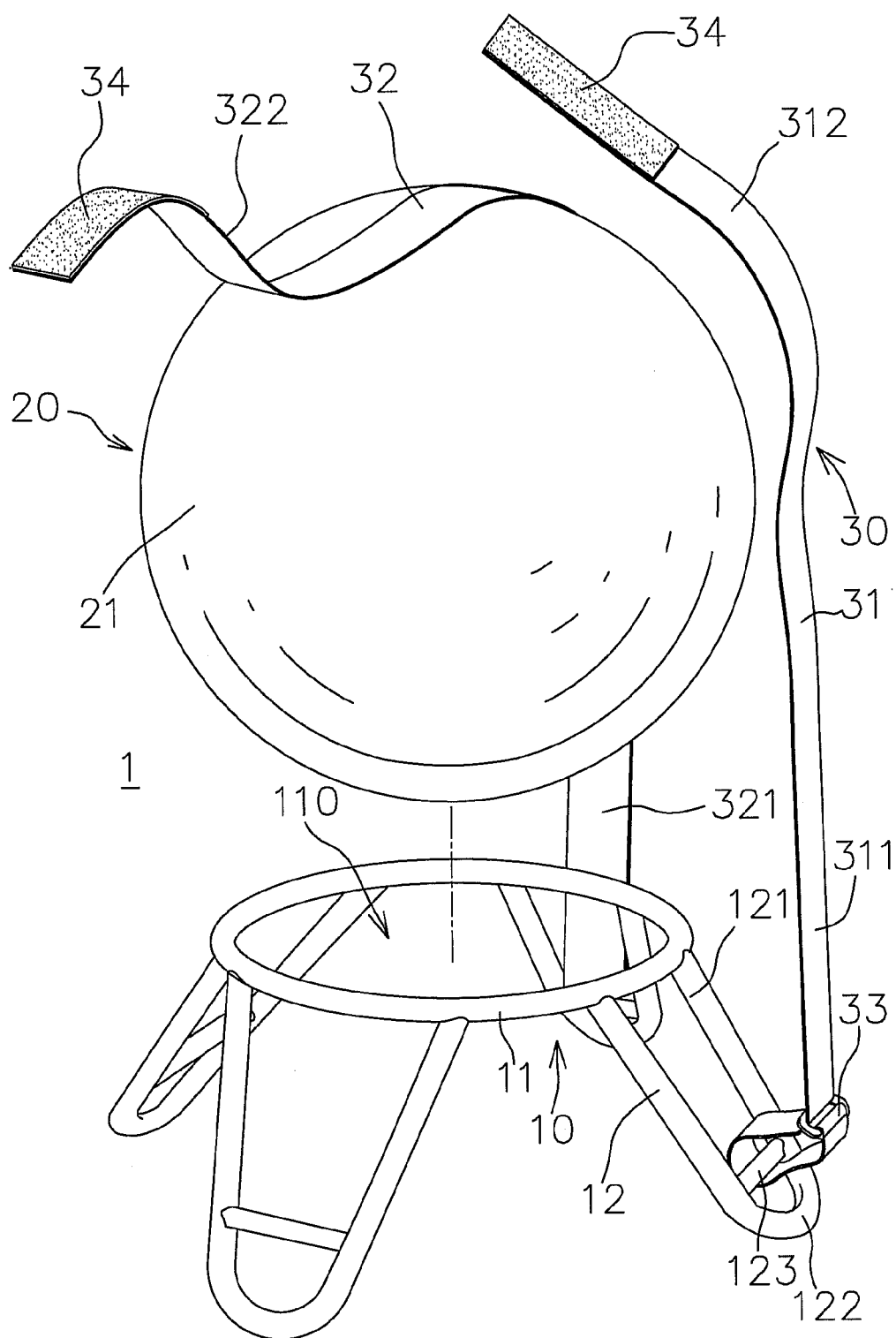


FIG. 2

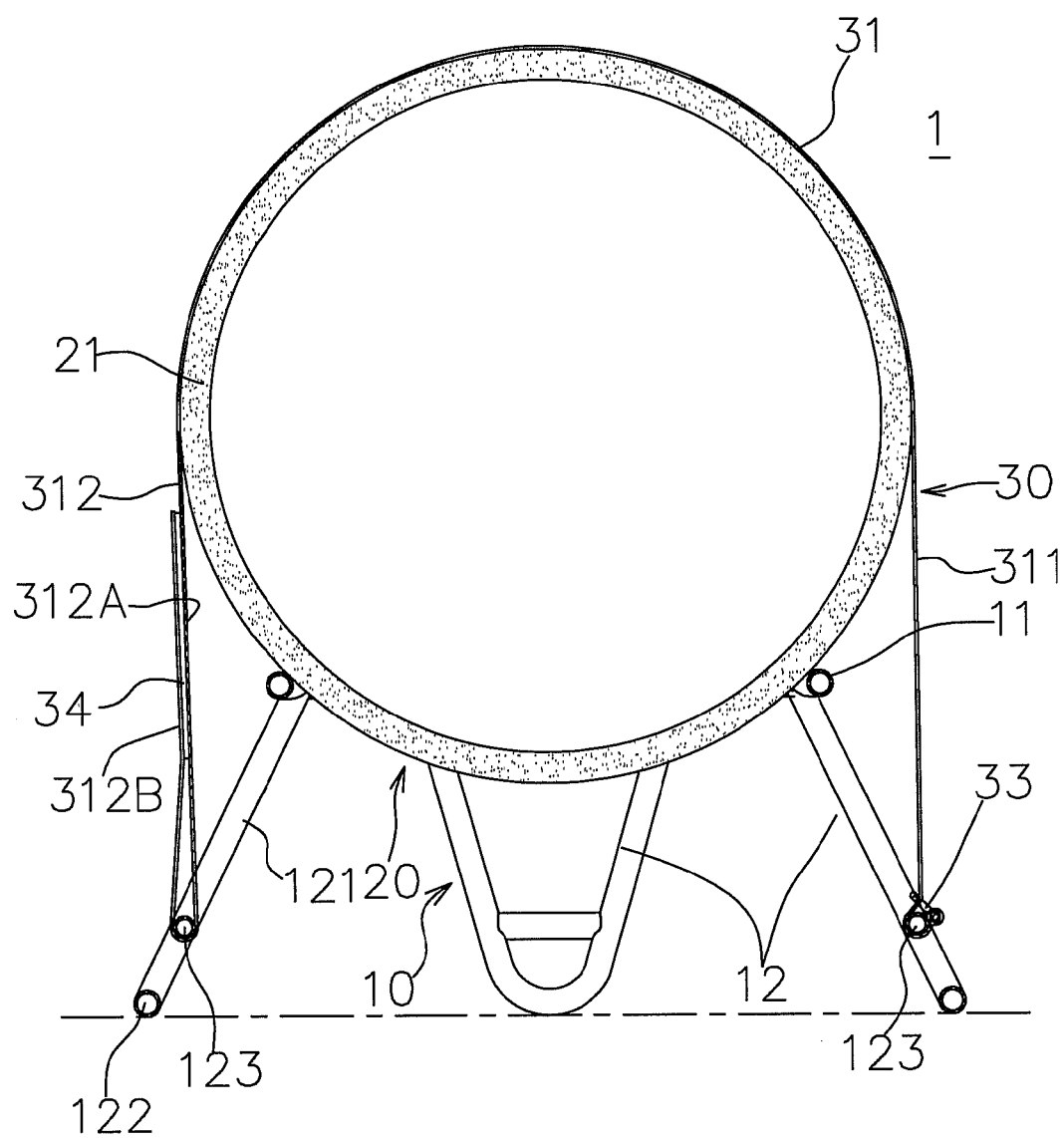


FIG. 3

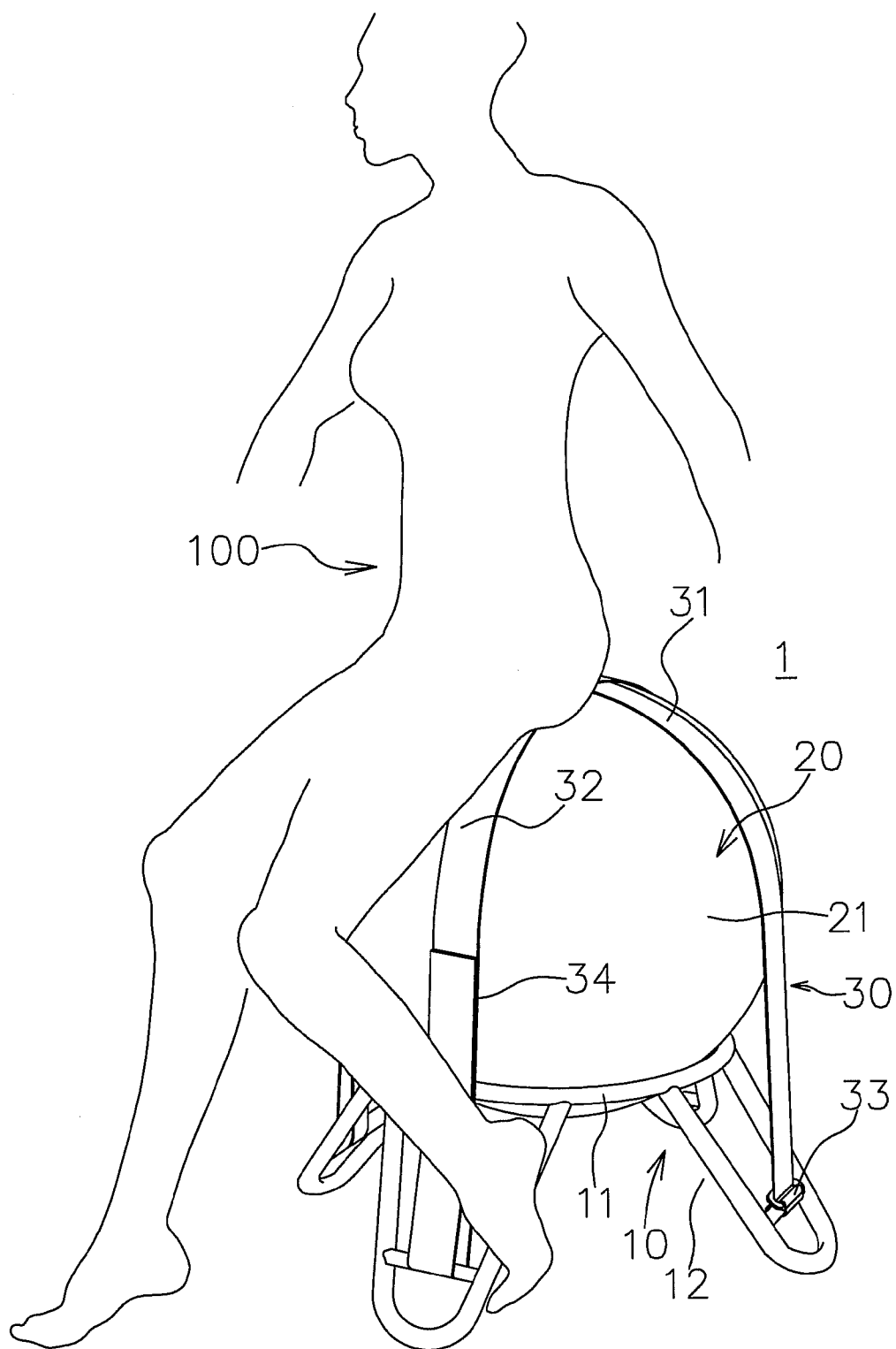


FIG. 4

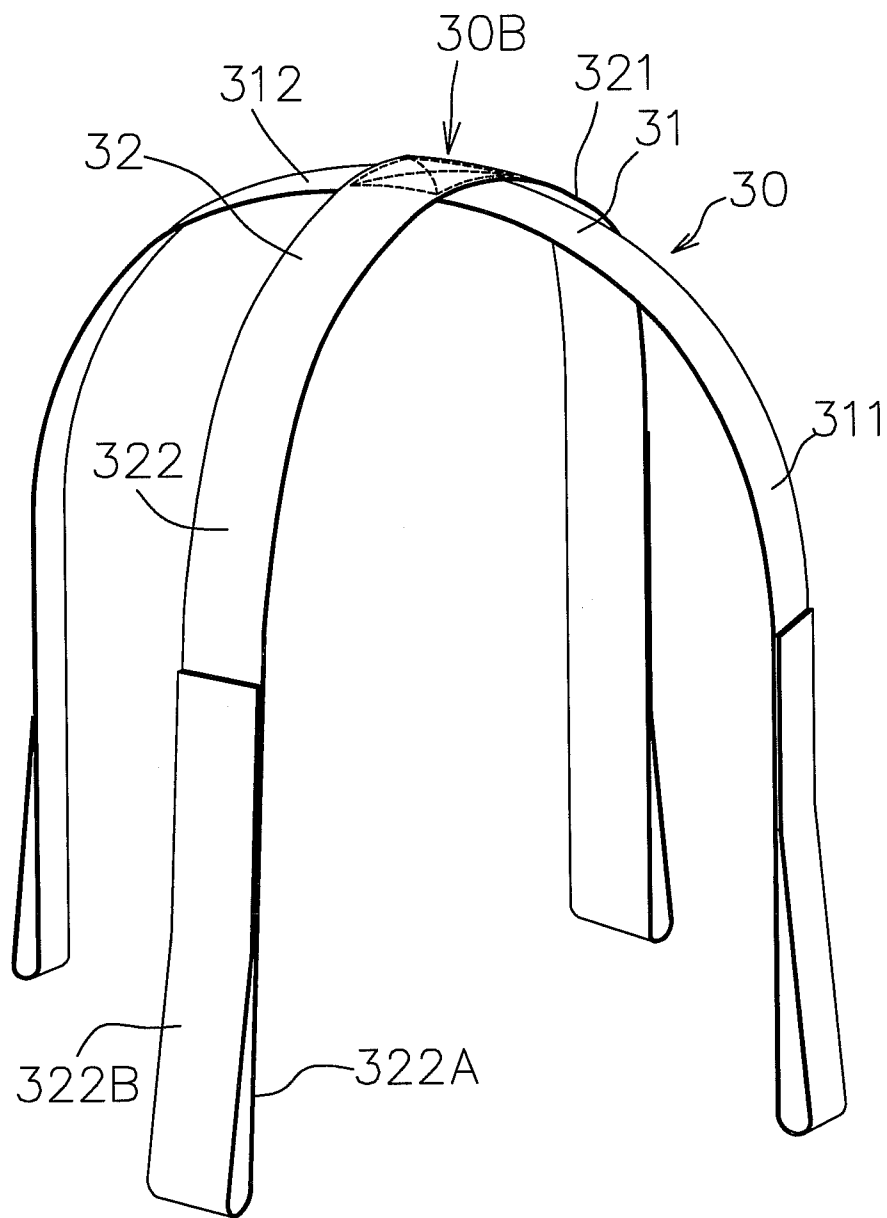


FIG. 5

FIG. 6

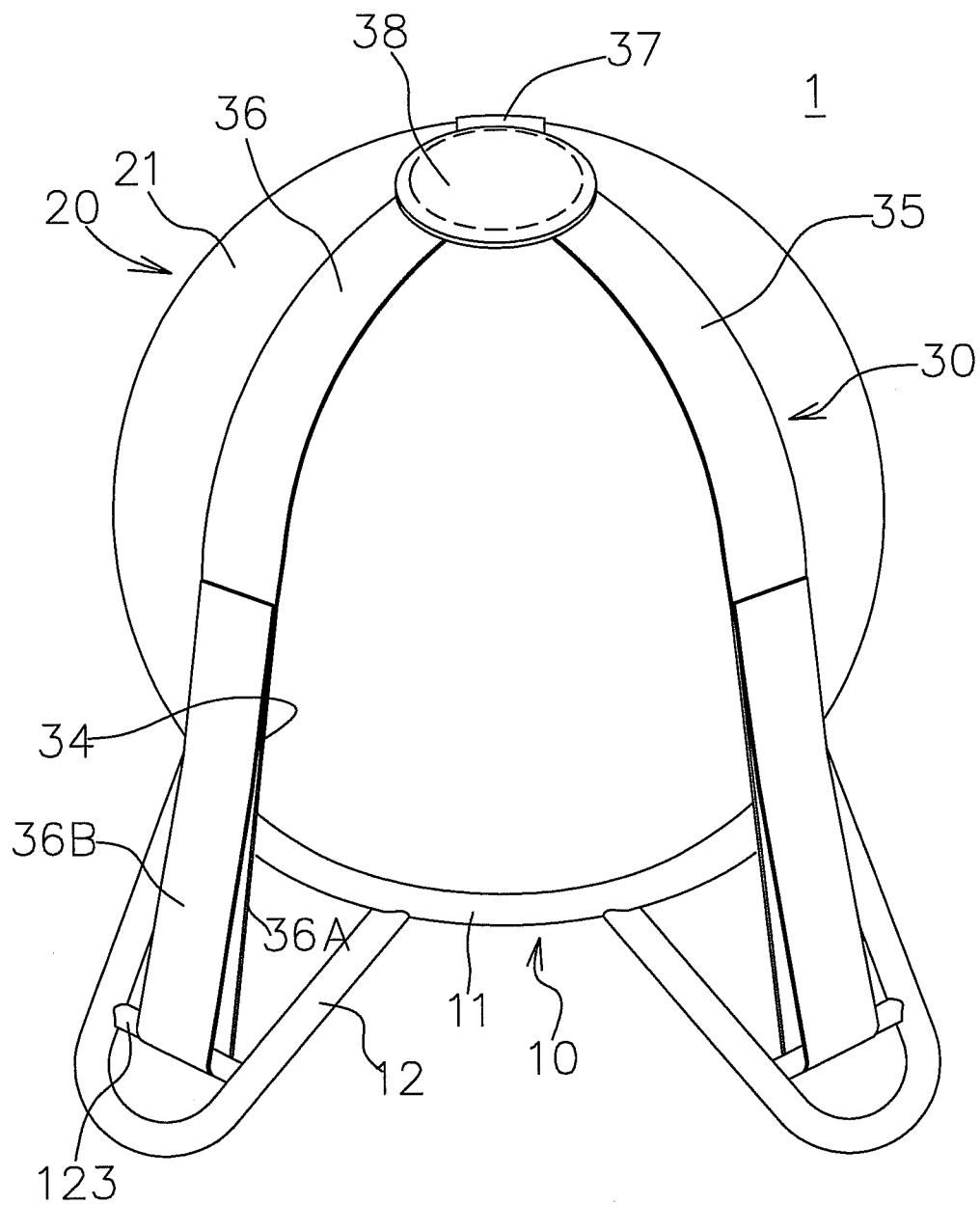


FIG. 7

SPHERICAL CHAIR STRUCTURE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a chair structure, particularly to the spherical chair structure of a chair having a spherical cushion to provide a fitness function and sitting fun, and users can remove a ball for fitness exercise while sitting in the chair comfortably, and the packaging material and the transportation space of the spherical chair structure can be reduced to save the transportation cost.

[0003] 2. Brief Description of the Related Art

[0004] As people nowadays pay increasingly more attentions to healthcare but fail to do exercises at a fixed exercise place on a regular daily basis due to their busy work, doing appropriate exercises daily or using simple furniture at home for the fitness exercise is one of the feasible solutions. Chairs are necessary items to our daily life, and various kinds of chairs including sofas, dining chairs, backed chairs, high stools and low stools are available in office or at home. A chair usually provides a planar fixed seat for users to sit, but a general chair can provide the sitting function only and usually does not provide any fitness exercise function. In addition, gym ball has become a recently popular fitness ball which is also a good tool for stretching muscles, and the curve of the ball is used to stretch our spine, thigh, hip, waist, abdomen and other parts of muscles, and the gym ball is suitable for men and women and all ages. Exercisers can relax the whole body easily, and thus the gym ball provides a more comfortable and safer way of stretching our muscles. Therefore, it is a very important subject for related manufacturers and designer to improve over the conventional chair with the sitting function only, and provide a way for users to do exercises similar to those related to the gym ball and stretch their muscles.

[0005] In view of the shortcoming and the single function of the conventional chair structure, the inventor of the present invention developed a safe, comfortable and cost-effective spherical chair structure that integrates the exercise of removing a ball for the fitness exercise while sitting on the chair comfortably. In addition, the spherical chair structure can be packed and transported separately to reduce the packaging material and the transportation space, so as to achieve the effects of saving the transportation cost and protecting our environment.

SUMMARY OF THE INVENTION

[0006] Therefore, it is a primary objective of the present invention to provide a spherical chair structure serving as a chair as well as a fitness equipment, and its use is very safe and comfortable and provides a leisure activity and a fitness exercise to users.

[0007] To achieve the foregoing objectives, the technical measure taken by the present invention comprises: a chair frame, including a seat frame, and the seat frame having an arc containing space; a cushion, installed on the seat frame, and including a spherical mat, and the bottom of the spherical mat being contained in the containing space, and the spherical mat being upwardly protruded out of the seat frame to form a seat pad; and a positioning device, including a plurality of binders surrounding and positioning the spherical mat, and an end of each binder being fixed to the chair frame.

[0008] The technical characteristics and effects of the present invention will become apparent by the detailed description of the preferred embodiments together with the illustration of related drawings as follows:

BRIEF DESCRIPTION OF THE INVENTION

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

[0010] FIG. 2 is an exploded view of the first preferred embodiment of the present invention;

[0011] FIG. 3 is a cross-sectional view of the first preferred embodiment of the present invention;

[0012] FIG. 4 is a schematic view of an application of the first preferred embodiment of the present invention;

[0013] FIG. 5 is a partial exploded view of a second preferred embodiment of the present invention;

[0014] FIG. 6 is a perspective view of the second preferred embodiment of the present invention; and

[0015] FIG. 7 is a perspective view of a third preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] With reference to FIGS. 1 to 3 for a spherical chair structure in accordance with the first preferred embodiment of the present invention, the spherical chair structure comprises a spherical chair 1, and the spherical chair 1 further comprises a chair frame 10, a cushion 20 and a positioning device 30. Wherein, the chair frame 10 includes a seat frame 11 and a plurality of legs 12 coupled to one another, and the seat frame 11 is substantially an arc frame containing an arc containing space 110 therein, and the leg 12 includes a leg body 121 and a foot 122 coupled to one another, wherein the leg body 121 is coupled to the seat frame 11, and the foot 122 is provided for supporting the chair on the ground and has a fixing portion 123. In a preferred embodiment, the leg 12 is formed by bending a rod, and the fixing portion 123 is a rod coupled between both sides of the foot 122.

[0017] The cushion 20 is installed on the seat frame 11, and the cushion 20 includes a spherical mat 21, and the bottom of the spherical mat 21 is contained in the containing space 110 of the seat frame 11 and protruded to form a seat pad provided for the sitting and fitness exercise functions. In a preferred embodiment, the spherical mat 21 is substantially a hollow sphere.

[0018] The positioning device 30 includes a plurality of binding elements 31, 32, and the positioning device 30 of this preferred embodiment has two binding elements 31, 32, and the binding elements 31, 32 are substantially binder bodies preferably having a stretching elasticity, and the two binding elements 31, 32 are arranged perpendicularly with each other and surrounded to position the spherical mat 21. If the two binding elements 31, 32 are used as a boundary of an intersected area 30A of the spherical mat 21, the binding element 31 and the binding element 32 have the binders 311, 312 and the binders 321, 322 on both sides respectively, and the binding elements 31, 32 are the same positioning assembly, and the binders 311, 312 are used for illustrating the present invention. A fastener 33 such as a buckle or any other equivalent latch device is installed at an end of the binder 311, and the binder 311 is fixed onto the fixing portion 123 of the leg 12 by the fastener 33, and an end of the binder 312 is surrounded and fixed to another corresponding fixing portion 123 of the

leg 12, and the surrounded and fixed end of the binder 312 includes an inner fixing strip 312A and an outer fixing strip 312B, and a fixing element 34 is installed separately on opposite fixing surfaces of the inner fixing strip 312A and the outer fixing strip 312B (which is the same as between the inner fixing strip 322A and the outer fixing strip 322B), wherein the fixing element 34 is an adhesive tape (such as a Velcro tape or a latch device) for fixing the inner fixing strip 312A with the outer fixing strip 312B to fix an end of the binder 312 to the fixing portion 123 of the leg 12, so that both ends of the binding element 31 can be fixed to the legs 12 to position the spherical mat 21 onto the seat frame 11. Wherein, both ends of the binding element 31 (or the binders 311, 312) can be designed with both ends having the fasteners 33 (such as buckles or other latch device), or both ends having the fixing elements 34 (such as Velcro tapes or latch devices), or one end having the fastener 33 (or buckle) and the other end having the fixing element 34 (or Velcro tape), but the invention is not limited to the aforementioned arrangements only.

[0019] With reference to FIG. 4, the binding elements 31, 32 are arranged perpendicular to each other to position the spherical mat 21, so that a user 100 can sit on the spherical mat 21. When the spherical chair structure is used as a general chair, or as a fitness equipment for exercising the user's thigh, hip, waist, abdomen and other parts of muscles, the spherical mat 21 provides an appropriate elasticity to touch and support the user 100 comfortably and safely, and the bottom of the spherical mat 21 is contained and positioned in the seat frame 11 only, while maintaining an appropriate flexibility for the rotation and movement to achieve the fitness exercise function and fun. In other words, the present invention allows users to do exercise while sitting, and people who need to work while sitting for a long time can use the elasticity of the sphere to stretch their spines and muscles and the spherical chair structure adds more fun to its use. Further, both ends of the binding element 31, 32 have the fasteners 33 (such as the buckles or other latch devices) or the fixing elements 34 (such as the adhesive tapes, Velcro tapes or latch devices) for fixing the spherical mat 21, so that the users can remove the spherical mat 21 easily, and use the spherical mat 21 separately for the fitness exercise, or the spherical mat 21 can be fixed easily when the spherical chair structure is used as a general chair. The aforementioned detachable design of the present invention has dual functions including the sitting function and the fitness exercise function of removing a ball. Further, the detachable design facilitates the planning of the interior space and save the using space. In the meantime, the spherical mat 21 can be removed and then packaged or transported separately, so as to reduce the packaging material and the transportation space, and achieve the effects of saving the transportation cost and protecting our environment.

[0020] With reference to FIGS. 5 and 6 for a spherical chair structure in accordance with the second preferred embodiment of the present invention, the structure of this preferred embodiment is based on the first preferred embodiment and a changed is made in the application, and their difference resides on that the binding elements 31, 32 form an overlapped and attached fixing area 30B on the spherical mat 21, and the overlapped and attached fixing area 30B is used as the center to separate the binding elements 31, 32 into the binders 311, 312 and the binders 321, 322 on both sides, and an end of each of the binders 311, 312, 321, 322 is fixed to the leg 12 (or the fixing portion 123) by the fixing element 34 (such as the adhesive tape) to position the spherical mat 21. Of course, an

end of each of the binders 311, 312, 321, 322 can be fixed onto the leg 12 (or the fixing portion 123) by the fastener 33 (such as the buckle).

[0021] With reference to FIG. 7 for a spherical chair structure in accordance with the third preferred embodiment of the present invention, the structure of this preferred embodiment is based on the first preferred embodiment and a changed is made in the application, and their difference resides on that the binding elements 31, 32 form an overlapped and attached fixing area 38 on the spherical mat 21, and three binders 35, 36, 37 are extended outwardly and radially from the spherical mat 21. An end of each of the binders 35, 36, 37 can be fixed to the legs 12 (or the fixing portions 123) by the fixing elements 34 (such as the adhesive tapes). In FIG. 7, the binders 36 are used as an example, and the fixing elements 34 are installed at opposite fixing surfaces of the inner fixing strip 36A and the outer fixing strip 36B respectively for positioning the spherical mat 21. Similarly, an end of each of the binders 35, 36, 37 can be fixed onto the legs 12 (or the fixing portions 123) by the fasteners 33 (such as the buckles). In addition, the binders are extended outwardly from the overlapped and attached fixing area 38, and the quantity of the binders can be changed, (preferably at least three binders), but the invention is not limited to any particular quantity.

[0022] With the aforementioned assembly, the binders of the spherical chair structure of the present invention can position the spherical mat, and adjustments can be made conveniently and quickly, so that the spherical mat can be used on the chair and on a fitness exercise equipment safely and comfortably, and the invention can achieve the leisure and fitness exercise functions.

[0023] In summation of the description above, the present invention complies with the patent application requirements, and is thus duly filed for patent application. While the invention has been described with reference to a preferred embodiment thereof, it is to be understood that modifications or variations may be easily made without departing from the spirit of this invention, which is defined in the appended claims.

What is claimed is:

1. A spherical chair structure, comprising:
 - a chair frame, including a seat frame, and the seat frame having an arc containing space;
 - a cushion, installed on the seat frame, and including a spherical mat, and the bottom of the spherical mat being contained in the containing space, and the spherical mat being upwardly protruded out of the seat frame to form a seat pad; and
 - a positioning device, including a plurality of binders surrounding and positioning the spherical mat, and an end of each binder being fixed to the chair frame.
2. The spherical chair structure of claim 1, wherein the seat frame is substantially an arc frame having a plurality of legs coupled to the seat frame.
3. The spherical chair structure of claim 2, wherein the leg includes a leg body and a foot coupled to each other, and the foot has a fixing portion.
4. The spherical chair structure of claim 3, wherein the leg is formed by bending a rod and the fixing portion is a rod coupled between both sides of the foot.
5. The spherical chair structure of claim 1, wherein the spherical mat is substantially a hollow sphere.

6. The spherical chair structure of claim 3, wherein the binder has a fastener installed at an end fixed to the chair frame, and the fastener is fixed to the fixing portion of the leg.

7. The spherical chair structure of claim 6, wherein the fastener is a buckle.

8. The spherical chair structure of claim 3, wherein the binder has an end fixed to the chair frame and surrounded and fixed to the fixing portion of the leg, and the binder has an inner fixing strip and an outer fixing strip at the surrounded and fixed end of the binder, and a fixing element is installed separately at opposite fixing surfaces of the inner fixing strip and the outer fixing strip.

9. The spherical chair structure of claim 8, wherein the fixing element is an adhesive tape or a latch module.

10. The spherical chair structure of claim 1, wherein the plural binders form an overlapped and attached fixing area on the spherical mat.

11. The spherical chair structure of claim 1, wherein the plural binders are at least two binder bodies surrounded and installed to the spherical mat.

12. The spherical chair structure of claim 1, wherein the binders preferably have a stretching elasticity.

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