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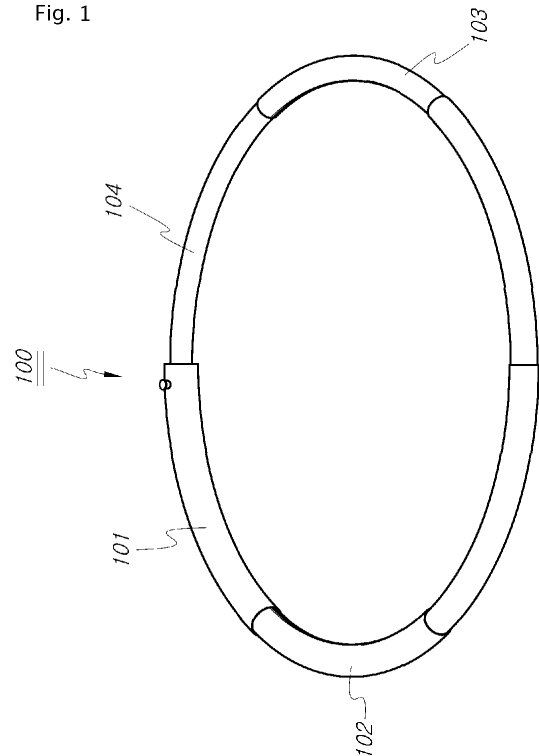
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(54) **HULA-HOOP**

(57) The present invention aims to provide portability and ease of storage and mobility by allowing housing when a hula-hoop is not in use and connection in a circular form by withdrawing when in use, so as to be utilized for exercise and play. The hula-hoop comprises: a main body capable of being divided into a plurality of parts having a circular cross-sectional shape and a two-dimensional arc shape; a plurality of middle bodies which are housed in and withdrawn from one side of the main body; and an end body housed or withdrawn by being coupled to the last middle body from among the middle bodies and which connects to the other side of the main body, wherein the main body, the middle bodies, and the end body are constituted so as to be housed and withdrawn in multi-steps as in the form of an antenna or a fishing rod.

Fig. 1



Description

[TECHNICAL FIELD]

[0001] The present invention relates to a hula-hoop, and more particularly, to provision of a hula-hoop which is improved such that the hula-hoop is folded when the hula-hoop is not in use to reduce a volume so as to provide ease of storage and mobility, and the hula-hoop is withdrawn and formed in a circular shape when the hula-hoop is in use.

[BACKGROUND ART]

[0002] A hula-hoop includes a ring body formed of a plastic material and having a diameter of about 1 m, the hula-hoop is a kind of play or exercise equipment used for putting a body in the ring body and shaking the body to rotate the hula-hoop without causing the hula-hoop from falling, and the hula-hoop has first become popular in Australia in 1957 to widely spread to United States, Japan, Korea, and the like.

[0003] Such a hula-hoop is widely used as an exercise and play equipment in which when the hula-hoop is rotated after being hung on a waist of a human body, and a predetermined rotation rebound is repeatedly applied to the waist, a centrifugal force is generated, and a peripheral region of the waist of a user is repeatedly pressed, so that flexibility and muscular strength of the waist are improved, and abdominal obesity is solved.

[0004] Such a hula-hoop has been initially used for the purpose of improving the flexibility and the muscular strength of the waist and solving the abdominal obesity. However, as time passes, efforts have been made to add more functions.

[0005] For example, there are provided hula-hoops in which acupressure protrusions are provided on an inner circumferential surface of the hula-hoop to achieve an acupressure effect so that blood circulation is promoted in addition to the acupressure effect and hula-hoops provided with a noctilucous or phosphorescent function to improve visibility of the hula-hoop upon exercise at night. Recently, with the development of technology, hula-hoops equipped with an LED which is turned on for a long time and flashes on and off by using a small battery have been provided.

[DETAILED DESCRIPTION OF THE INVENTION]

[TECHNICAL PROBLEM]

[0006] Since such a hula-hoop has a round ring shape, while at least one hula-hoop is provided in each household, the hula-hoop may not be easily stored due to bulkiness thereof, and it is difficult to store the hula-hoop in a trunk or the like of a vehicle when traveling outdoors.

[0007] When traveling outdoors, if only the hula-hoop is carried, it is not difficult to store the hula-hoop in the

trunk. However, when much luggage is carried correspondingly to the purpose of travel, camping, or the like, it seems obvious that it is not easy to store the hula-hoop.

[0008] In order to solve the above problem, various types of hula-hoops have been developed and distributed in the form of a detachably attached hula-hoop. The most representative example is a type of a hula-hoop in which a technique adapted to a frame constituting a tent is applied so that an elastic band or spring is provided within an inner diameter of the hula-hoop that is separated into several pieces, thereby facilitating separation and coupling.

[0009] Another example is a type of a hula-hoop in which the hula-hoop is separated into several pieces, and a separate bag is provided, so that the hula-hoop is put in the bag when moving and storing the hula-hoop, and is assembled to form a circular ring body when the hula-hoop is in use.

[0010] In the former case, since there is an elastic force of the elastic band in an initial stage, the hula-hoop is maintained in a circular shape when assembled. However, as the hula-hoop is repeatedly used and time passes, it is difficult to configure the hula-hoop in a circular shape after the assembly due to damage, abrasion, or reduced elasticity of the elastic band, and the hula-hoop is frequently disassembled in the process of use so that it becomes impossible to use the hula-hoop normally.

[0011] In the latter case, since the hula-hoop is simply disassembled and assembled, there is no problem as in the former case. However, it is impossible to prevent the hula-hoop from being unavailable due to abrasion and damage on a detachably attached region caused by frequent disassembly and assembly, and even though there is no problem when using the hula-hoop, repeated disassembly and assembly are required, which causes inconvenience in use.

[0012] In addition, since the hula-hoop in a disassembled state occupies a predetermined amount of volume, the hula-hoop requires a storage space. Since a main user is a child, one or more of several pieces of the hula-hoop are often lost in the process of disassembly and storage after use, so that various problems may occur such as becoming difficult to use the hula-hoop normally next time.

[TECHNICAL SOLUTION]

[0013] Accordingly, the present invention is made to solve the problems as described above, and provides a hula-hoop including: a main body divided into a plurality of parts having a circular sectional shape and having a circular arc shape when viewed from a plan view; a plurality of middle bodies received in and withdrawn from one side of the main body; and an end body coupled to a last middle body among the middle bodies so as to be received in and withdrawn from the last middle body and connected to another side of the main body, wherein the main body, the middle bodies, and the end body are re-

ceived and withdrawn in multi-steps in a form of an antenna or a fishing rod.

[0014] The objects of allowing a hula-hoop to be received when the hula-hoop is not in use to provide portability and ease of storage and mobility, and allowing the hula-hoop to be withdrawn and connected in a circular shape when the hula-hoop is in use to utilize the hula-hoop for exercise and play may be achieved.

[ADVANTAGEOUS EFFECTS OF THE INVENTION]

[0015] The present invention is configured to be foldable in the form of an antenna or a fishing rod to minimize a volume when folded so that portability and ease of storage can be provided without interfering with the use, and the risk of losing components of the hula-hoop is eliminated when the hula-hoop is folded while the hula-hoop is not in use so that various effects, such as increasing the convenience of users, providing a new hula-hoop, and improving the quality of the hula-hoop, can be achieved.

[DESCRIPTION OF THE DRAWINGS]

[0016]

FIG. 1 is a perspective view showing an overall configuration of a hula-hoop to which the technique of the present invention is applied.

FIG. 2 is a perspective view showing a folded state of the hula-hoop to which the technique of the present invention is applied.

FIG. 3 is a perspective view showing a broken section in the folded state of the hula-hoop to which the technique of the present invention is applied.

FIG. 4 is a sectional view taken along line A-A showing the hula-hoop to which the technique of the present invention is applied.

FIG. 5 is a sectional view showing a partially omitted connection state of the hula-hoop to which the technique of the present invention is applied.

[BEST MODE]

[0017] A hula-hoop 100 to which the technique of the present invention is applied includes: a main body 101 divided into a plurality of parts having a circular sectional shape and having a circular arc shape when viewed from a plan view; a plurality of middle bodies 102, 103, and the like received in and withdrawn from one side of the main body 101; and an end body 104 coupled to a last middle body 103 among the middle bodies 102, 103, and the like so as to be received in and withdrawn from the last middle body 103 and connected to another side of the main body 101.

[0018] The number of divisions of the hula-hoop 101 is at least three, preferably four to six, and more than six may not matter. However, when the number of divisions

of the hula-hoop 101 is unnecessarily large, it is not preferable because there may be difficulty in manufacturing as well as disassembly and assembly.

[0019] The main body 101, the middle bodies 102, 103, and the like, and the end body 104 may be preferably coupled to each other such that the main body 101, the middle bodies 102, 103, and the like, and the end body 104 are received and withdrawn in multi-steps in the form of an antenna or a fishing rod, wherein a diameter of the main body 101 is the largest, and diameters of the middle bodies 102, 103, and the like and the end body 104 sequentially become smaller.

[0020] Naturally, a front inner diameter side of the main body 101 may be slightly smaller than a rear outer diameter side of the middle body 102, a front inner diameter side of the middle body 102 may be slightly smaller than a rear outer diameter side of the next middle body 103, and a front inner diameter side of the middle body 103 may be slightly smaller than a rear outer diameter side of the end body 104, so that stopping may be possible due to a diameter difference upon the withdrawal.

[0021] As another example, each of the front inner diameter side of the main body 101, the front inner diameter sides of the middle bodies 102, 103, and the like and the rear outer diameter side of the end body 104 may be provided with a latching sill that may be engaged, so that the stopping may be possible upon the withdrawal.

[0022] In addition, the inner diameter side of the main body 101 may be provided with a partition wall 105 to prevent the received middle bodies 102, 103, and the like and the received end body 104 from being separated from the main body 101, and a connection device may be provided on a front side of the end body 104 and the other side of the main body 101 to maintain the withdrawn middle bodies 102, 103, and the like and the withdrawn end body 104 in a circular shape.

[0023] The connection device 106 includes a male body 107 formed on the side of the end body 104 and a female body 108 formed on the other side of the main body 101 so as to be coupled to the male body 107.

[0024] The male body 107 includes an elastic body 109, such as a spring, provided within a front inner diameter of the end body 104, and a protrusion 110 of the elastic body 109 is exposed through an elastic body hole 111 formed in the end body 104.

[0025] The female body 108 includes an end body hole 112 formed on the other side of the main body 101 to receive a front outer diameter of the end body 104, and a protrusion groove 113 formed on an inner side of the end body hole 112 to receive the protrusion 110 of the elastic body 109.

[0026] The protrusion 110 and the protrusion groove 113 may be forcibly disassembled by pulling. As another example, a release button 114 may be further provided on the main body 101 to facilitate the separation.

[0027] It may be preferable that the main body 101, the middle bodies 102, 103, and the like, and the end body 104 are provided with a concave groove 115 and

a protrusion 116 in a longitudinal direction, which are engaged with each other to maintain predetermined orientation at all times during the reception and the withdrawal, so that the hula-hoop may maintain a normal circular shape upon completion of the hula-hoop.

[0028] In addition, the hula-hoop may be further provided with a separate closing cap to prevent foreign substances and the like from being introduced into a front side of the end body 104 received in the main body 101 and the end body hole 112 formed on the other side of the main body.

[MODE FOR INVENTION]

[0029] When the hula-hoop 100 is not in use, the middle bodies 102, 103, and the like and the end body 104 are received in the main body 101 so as to make the volume corresponding to a size of the main body 101 and store or move the hula-hoop 100, and since the volume is small, it is possible to provide portability and ease of mobility as well as ease of storage.

[0030] When the hula-hoop 100 is to be used, the middle bodies 102, 103, and the like, and the end body 104 received in the main body 101 may be withdrawn and coupled in a circular shape so as to be used, wherein the middle bodies 102, 103, and the like are sequentially withdrawn when the front side of the end body 104 is gripped and pulled.

[0031] Naturally, when an entirety of the main body 101, the middle bodies 102, 103, and the like, and the end body 104 is withdrawn, the main body 101, the middle bodies 102, 103, and the like, and the end body 104 form a circular ring shape. In addition, when the connection devices 106 provided on the front side of the end body 104 and the other side of the main body 101 are coupled to each other, a circular connection state may be continuously maintained, so that exercise and play using the hula-hoop may not be interfered.

[0032] In particular, since the main body 101, the middle bodies 102, 103, and the like, and the end body 104 are provided with the concave groove 115 and the protrusion 116 to prevent orientation from being distorted upon the withdrawal and the reception, so that predetermined orientation may be maintained at all times during the reception and the withdrawal, which facilitates the completion of the hula-hoop and the reduction of the volume.

[0033] Upon the reception, when the end body 104 and the middle bodies 102, 103, and the like may be pushed into the main body 101, rear ends of the middle bodies 102, 103, and the like and the end body 104 may make close contact with the partition wall 105 provided on the main body 101, so that any further reception may stop. Upon the withdrawal, the withdrawn state may be maintained such that a rear side of the end body 104 is latched to front sides of the middle bodies 102, 103, and the like, and rear sides of the middle bodies 102, 103, and the like are latched to a front side of the main body 101.

[INDUSTRIAL APPLICABILITY]

[0034] The present invention as described above has advantages that the hula-hoop is received when the hula-hoop is not in use to provide portability and ease of storage and mobility, and the hula-hoop is withdrawn and connected in a circular shape when the hula-hoop is in use to utilize the hula-hoop for exercise and play.

Claims

1. A hula-hoop comprising:

a main body (101) divided into a plurality of parts having a circular sectional shape and having a circular arc shape when viewed from a plan view;

a plurality of middle bodies (102, 103, ...) received in and withdrawn from one side of the main body (101); and

an end body (104) coupled to a last middle body (103) among the middle bodies (102, 103, ...) so as to be received in and withdrawn from the last middle body (103) and connected to another side of the main body (101),

wherein the main body (101), the middle bodies (102, 103, ...), and the end body (104) are received and withdrawn in multi-steps in a form of an antenna or a fishing rod.

2. The hula-hoop of claim 1, further comprising a connection device (106) provided on a front side of the end body (104) and the other side of the main body (101) to maintain the withdrawn middle bodies (102, 103, ...) and the withdrawn end body (104) in a circular shape, and including a male body (107) formed on the front side of the end body (104) and a female body (108) formed on the other side of the main body (101) so as to be coupled to the male body (107),

wherein the male body (107) includes an elastic body (109) provided within a front inner diameter of the end body (104), an elastic body hole (111) formed in the end body (104), and a protrusion (110) of the elastic body (109) exposed through the elastic body hole (111), and

the female body (108) includes an end body hole (112) formed on the other side of the main body (101) to receive a front outer diameter of the end body (104), and a protrusion groove (113) formed on an inner side of the end body hole (112) to receive the protrusion (110) of the elastic body (109).

3. The hula-hoop of claim 1, wherein the main body (101), the middle bodies (102, 103, ...), and the end body (104) are provided with a concave groove (115)

and a protrusion (116) in a longitudinal direction, which are engaged with each other to maintain predetermined orientation at all times during the reception and the withdrawal.

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Fig. 1

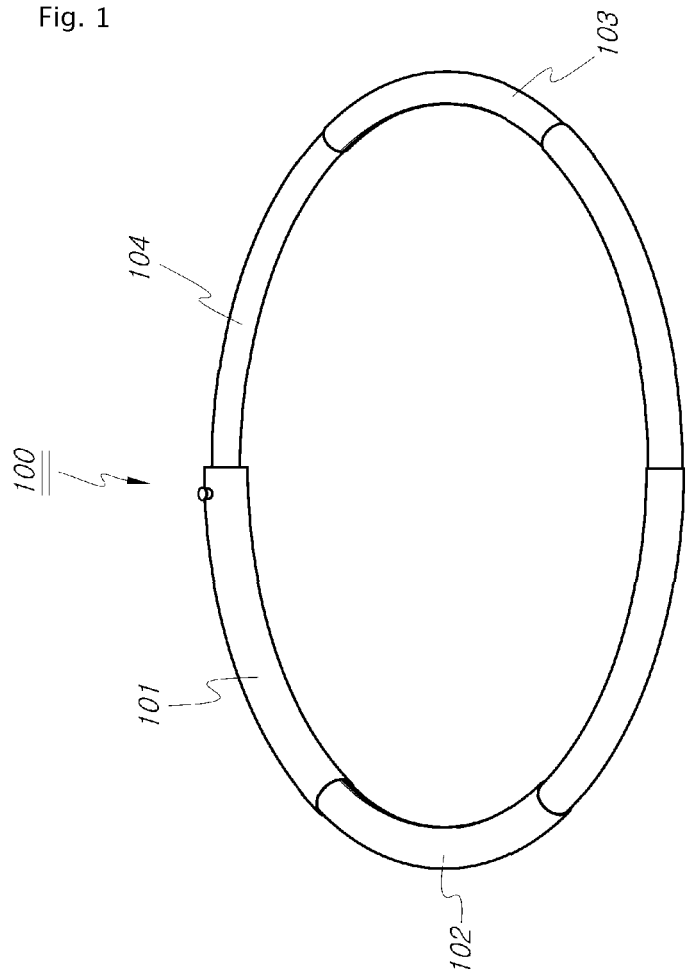


Fig. 2

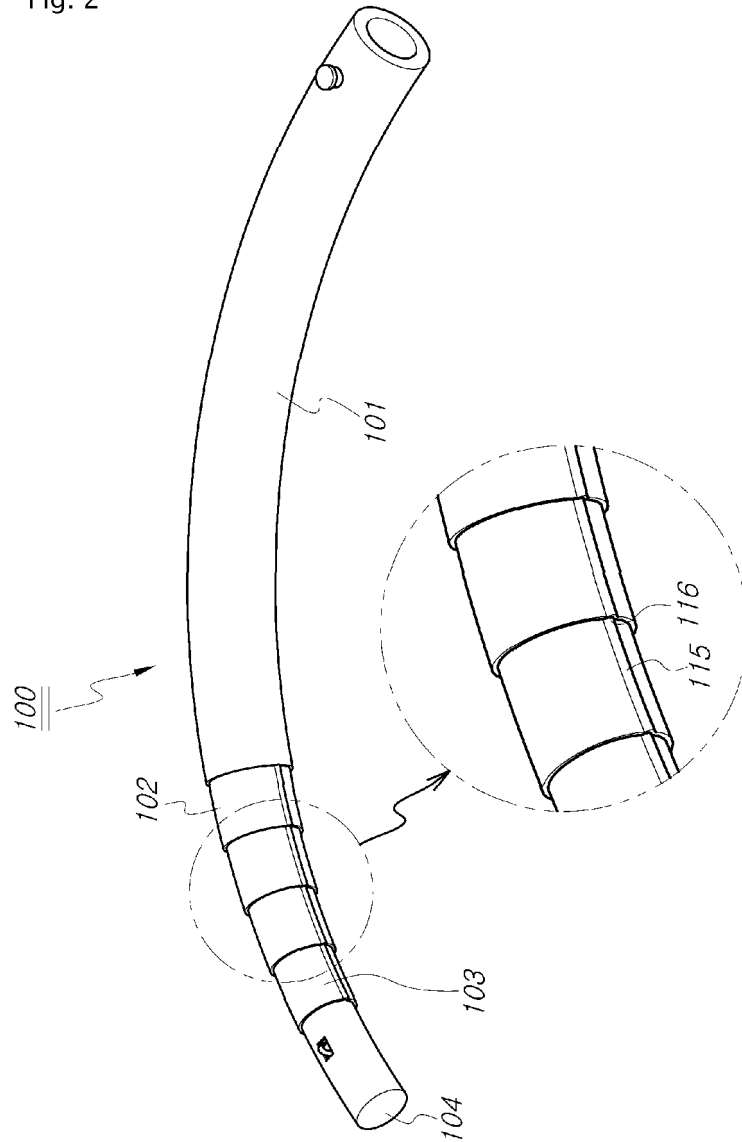


Fig. 3

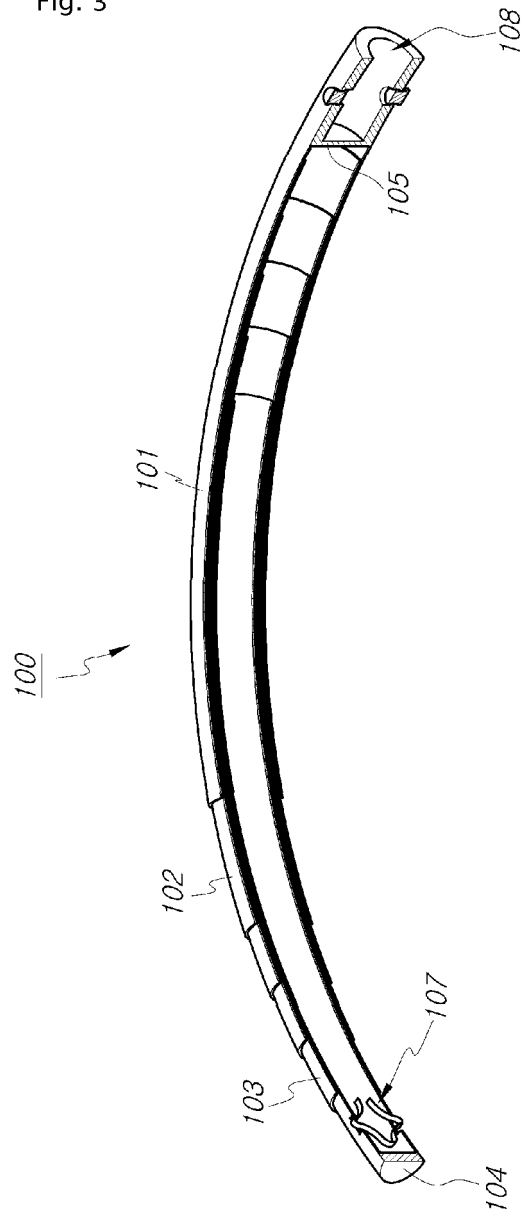


Fig. 4

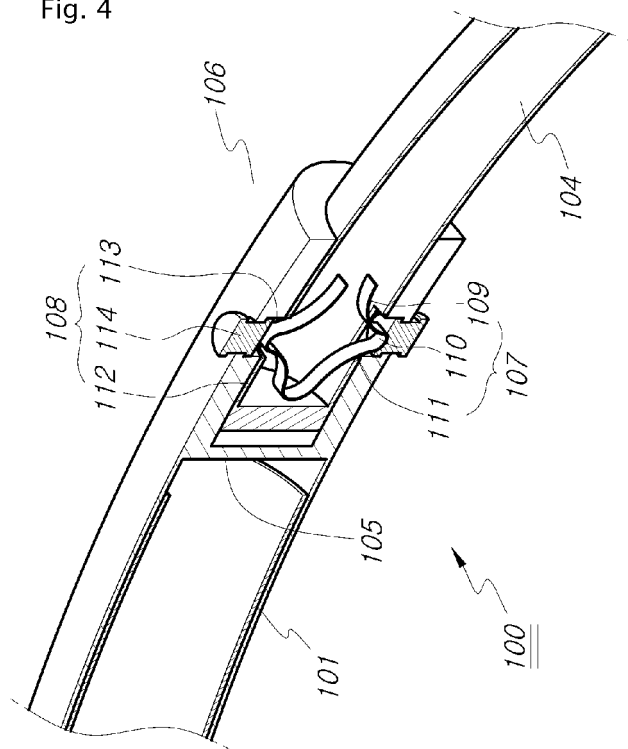
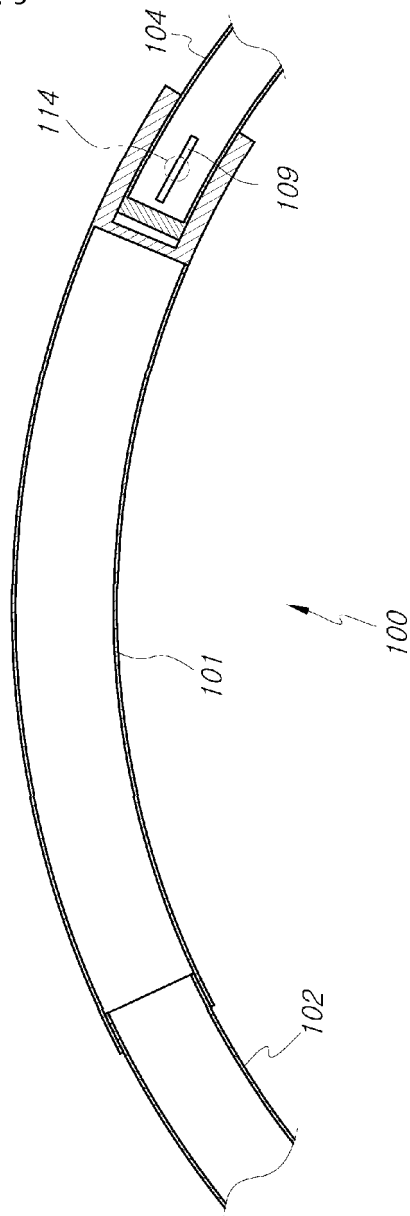


Fig. 5



INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2018/005950

A. CLASSIFICATION OF SUBJECT MATTER

A63B 19/02(2006.01); A63B 21/00(2006.01);

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A63B 19/02; A63B 19/00; A63B 21/00

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: hula hoop, main body, middle body, end body, multistep, storage

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
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| A | KR 20-0240619 Y1 (YU, Young Sil) 11 October 2001 See pages 2-3; and figures 1-6. | 1-3 |
| A | KR 10-2010-0087874 A (KIM, Jung Yoon) 06 August 2010 See paragraphs [0013]-[0022]; and figures 1-5. | 1-3 |
| A | JP 3089623 U (LYNN, Richard) 31 October 2002 See claim 1; and figures 1-3. | 1-3 |

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

* Special categories of cited documents:

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/KR2018/005950

| Patent document cited in search report | Publication date | Patent family member | Publication date |
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