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(72) Inventor: **HUANG, Shuiyong**
Shanghai, 201812 (CN)

(74) Representative: **Inchingalo, Simona**
Bugnion S.p.A.
Viale Lancetti, 17
20158 Milano (IT)

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(71) Applicant: **Bestway Inflatables & Material Corp.**
Shanghai 201812 (CN)

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(54) **INFLATABLE ARCH AND WATER SLIDE FOR ENTERTAINMENT**

(57) An inflatable arch and a water slide are provided in the present disclosure. The inflatable arch includes at least one arcuate component, comprising a first end portion and a second end portion, and having a first air chamber; and more than one accommodating chamber, disposed at the first end portion and the second end portion

of the at least one arcuate component respectively and configured to be filled with a weight. Therefore, the inflatable arch provided by the embodiments of the present disclosure has a high stability and is not likely to tilt or fall down in use.

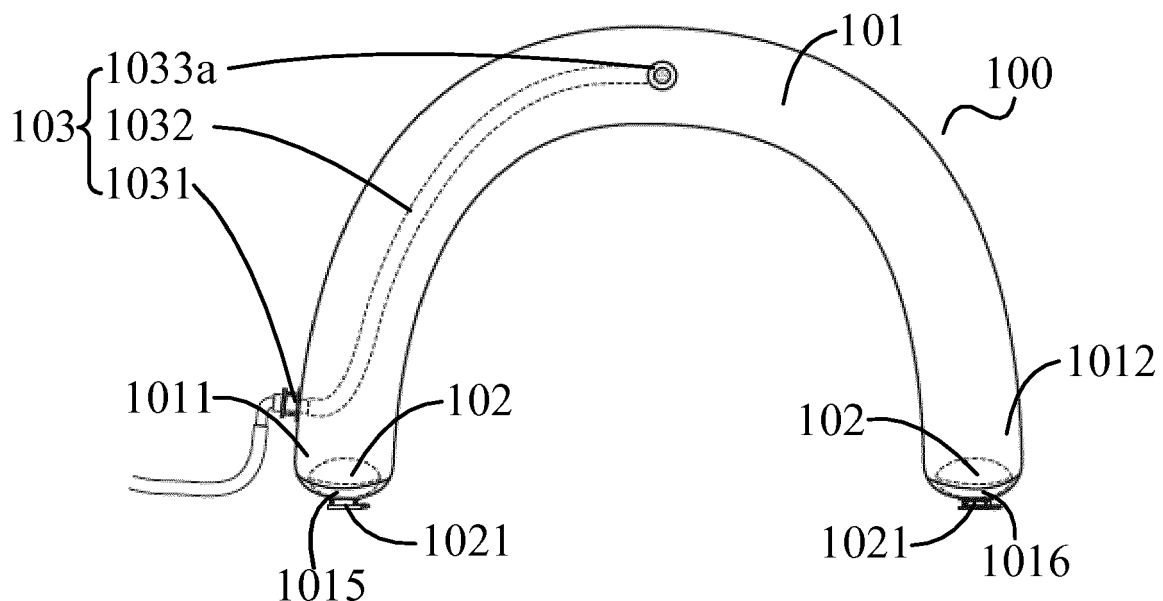


Fig. 1

Description

TECHNICAL FIELD

[0001] The present disclosure relates to entertainment facility field, and more particularly, to an inflatable arch and a water slide for entertainment.

BACKGROUND

[0002] Nowadays, inflatable arches in a conventional technology are made of a flexible material and inflated in use. As the inflatable arches are light in weight, the inflatable arches are likely to tilt or fall down under wind or human touch when being used in the open air, which may affect their application.

[0003] Therefore, there is a need for a new type of inflatable arch.

SUMMARY

[0004] In order to solve the aforementioned problems, an inflatable arch is provided according to an embodiment of the present disclosure. The inflatable arch may include: at least one arcuate component which includes a first end portion and a second end portion, and has a first air chamber; and more than one accommodating chamber, disposed at the first end portion and the second end portion of the at least one arcuate component respectively and configured to be filled with a weight.

[0005] In some embodiments, the at least one arcuate component comprises two side pieces and two end pieces, the two side pieces are connected with each other so as to form a tubular structure, and two end portions of the tubular structure are respectively connected with the two end pieces to form the first air chamber.

[0006] In some embodiments, the more than one accommodating chamber are disposed in the first air chamber of the at least one arcuate component.

[0007] In some embodiments, the more than one accommodating chamber are disposed outside the first air chamber of the at least one arcuate component.

[0008] In some embodiments, each of the more than one accommodating chamber has an annular shape, and each of the more than one accommodating chamber surrounds and is connected with the first end portion or the second end portion of the at least one arcuate component.

[0009] In some embodiments, the more than one accommodating chamber include a top piece and a bottom piece, and an edge of the top piece is connected with an edge of the bottom piece.

[0010] In some embodiments, the bottom piece of the more than one accommodating chamber is connected with an end piece of the at least one arcuate component.

[0011] In some embodiments, an edge of a first sheet piece is connected with an end piece of the at least one arcuate component to form the more than one accom-

modating chamber.

[0012] In some embodiments, an edge of a second sheet piece is connected with the two side pieces, and each of the more than one accommodating chamber is defined by a portion of the two side pieces, one of the two end pieces and the second sheet piece.

[0013] In some embodiments, a valve component is disposed on the more than one accommodating chamber, so that the weight can be filled into the more than one accommodating chamber through the valve component.

[0014] In some embodiments, a bottom piece of the more than one accommodating chamber is connected with an end piece of the at least one arcuate component, an opening is disposed at a connection position of the bottom piece and the end piece, and the valve component is connected with an edge of the opening.

[0015] In some embodiments, a water spray device is disposed on the at least one arcuate component, where the water spray device is configured to be communicated with a water source for spraying water.

[0016] In some embodiments, the water spray device includes a water inlet portion, a water outlet portion and a connection pipe, the water inlet portion is configured to be connected with the water source, at least one water outlet is disposed on the water outlet portion, and the water inlet portion is communicated with the water outlet portion by the connection pipe.

[0017] In some embodiments, the water inlet portion and the water outlet portion are disposed on an outer surface of the at least one arcuate component, and the connection pipe is disposed in the first air chamber of the at least one arcuate component.

[0018] In some embodiments, the water outlet portion includes a jet disposed between the first end portion and the second end portion of the at least one arcuate component.

[0019] In some embodiments, the water outlet portion includes a water spray pipe connected with the at least one arcuate component.

[0020] In some embodiments, the water outlet portion includes a third piece, an edge of the third piece is connected with the at least one arcuate component to form a water spray pipe, and a plurality of water outlets are disposed on the water spray pipe for spraying water.

[0021] In some embodiments, there are a plurality of arcuate components and a plurality of accommodating chambers, and the plurality of accommodating chambers are respectively disposed at the first end portions and the second end portions of the plurality of arcuate components; and the plurality of the arcuate components are connected by at least one connection portion.

[0022] In some embodiments, the at least one connection portion includes a support portion, and the support portion has a second air chamber.

[0023] In some embodiments, the at least one connection portion includes an upper piece and a lower piece, a first edge of the lower piece and a second edge of the

lower piece opposite to the first edge are respectively connected with two adjacent arcuate components, and an edge of the upper piece is connected with the lower piece to form the second air chamber of the support portion.

[0024] A water slide for entertainment is also provided according to an embodiment of the present disclosure. The water slide for entertainment includes: a sliding portion; and the inflatable arch; wherein the sliding portion includes a sliding surface for sliding, and the inflatable arch is configured to cross over the sliding portion when the first air chamber of the inflatable arch is inflated.

[0025] In some embodiments, the sliding apparatus for entertainment further includes a bumper portion connected with an end of the sliding portion, where the bumper portion has a third chamber configured to be inflated or filled with water.

[0026] In some embodiments, a water pipe is disposed on the sliding portion, and a plurality of water outlets are disposed on the water pipe. Therefore, when the water pipe is communicated with the water source, the plurality of water outlets can spray water to wet the sliding surface of the sliding portion.

[0027] Compared with the conventional technology, the present disclosure has the following advantages.

[0028] The inflatable arch provided in the present disclosure includes more than one accommodating chamber disposed at the first end portion and the second end portion of the at least one arcuate component. When in use, stability of the inflatable arch can be increased by filling the more than one accommodating chamber with the weight, such as water, sand or the like, which may lower the center of gravity of the inflatable arch.

[0029] Further, the water spray device is disposed on the inflatable arch and communicated with the water source to realize spraying water, therefore the functionality and entertainment of the inflatable arch can be enhanced.

[0030] Further, the inflatable arch can be applied in conjunction with the sliding portion, and the inflatable arch is configured to cross over the sliding portion, which can enhance the entertainment of the sliding portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031]

Fig. 1 schematically illustrates a front view of an inflatable arch according to an embodiment of the present disclosure;

Fig. 2 schematically illustrates a side view of an inflatable arch according to an embodiment of the present disclosure;

Fig. 3 schematically illustrates a side view of an inflatable arch according to another embodiment of the present disclosure;

Fig. 4 schematically illustrates a front view of an inflatable arch according to another embodiment of

the present disclosure;

Fig. 5 schematically illustrates a front view of an inflatable arch according to another embodiment of the present disclosure; and

Fig. 6 schematically illustrates a three-dimensional structural diagram of a water slide for entertainment according to an embodiment of the present disclosure.

10 DETAILED DESCRIPTION

[0032] As described in the background, inflatable arches in a conventional technology are made of a flexible material and inflated when in use. As the inflatable arches are light in weight, the inflatable arches are likely to tilt or fall down under effect of wind or human touch when being used in the open air, which may affect their application.

[0033] In view of foregoing, an inflatable arch is provided according to an embodiment of the present disclosure. The inflatable arch includes: at least one arcuate component including a first end portion and a second end portion and having a first air chamber; and more than one accommodating chamber, disposed at the first end portion and the second end portion of the at least one arcuate component respectively and configured to be filled with a weight. Thus, when in use, stability of the inflatable arch can be increased by filling the more than one accommodating chamber of the inflatable arch with the weight, such as water, sand or the like.

[0034] In order to make the above-mentioned objects, features and advantages of the utility model more easily understood, specific embodiments of the utility model will be described in detail with reference to the accompanying drawings.

[0035] Referring to Figs. 1 and 2, an inflatable arch 100 is provided according to an embodiment of the present disclosure. The inflatable arch 100 includes at least one arcuate component 101 and more than one accommodating chamber 102. It should be noted that, for convenience of description, the arcuate component 101 and the accommodating chamber 102 described below as an example refer to any one of the at least one arcuate component 101 and any one of the more than one accommodating chamber 102.

[0036] In some embodiments, the arcuate component 101 includes a first end portion 1011 and a second end portion 1012. The arcuate component 101 is extended between the first end portion 1011 and the second end portion 1012 and forms an outward arch. For example, the arcuate component 101 may be C-shaped as shown in Fig.1. In some embodiments, the arcuate component 101 may also be semicircle-shaped, U-shaped or the like. When in use, the first end portion 1011 and the second end portion 1012 are in contact with a support surface (e.g., ground) to make the inflatable arch stand on the support surface.

[0037] In some embodiments, the arcuate component

101 has a first air chamber. When the first air chamber is inflated, the arcuate component 101 is in an expanded state to stand on the support surface; and when the first air chamber is deflated, the arcuate component 101 is in a contraction state so as to facilitate folding, carriage or storage.

[0038] In some embodiments, the arcuate component 101 includes a first side piece 1013, a second side piece 1014, a first end piece 1015 and a second end piece 1016, where the first side piece 1013 and the second side piece 1014 are connected with each other so as to form a tubular structure, and two end portions of the tubular structure are respectively connected with the first end piece 1015 and the second end piece 1016 to form the first air chamber. Specifically, an inner side edge of the first side piece 1013 is connected with an inner side edge of the second side piece 1014, an outer side edge of the first side piece 1013 is connected with an outer side edge of the second side piece 1014, an edge of the first end piece 1015 is connected with a first end edge of the first side piece 1013 and a first end edge of the second side piece 1014, and an edge of the second end piece 1016 is connected with a second end edge of the first side piece 1013 and a second end edge of the second side piece 1014. As such, first corresponding edges of the first side piece 1013 and the second side piece 1014 (i.e. the inner side edge of the first side piece 1013 and the inner side edge of the second side piece 1014, and the outer side edge of the first side piece 1013 and the outer side edge of the second side piece 1014) are connected with each other to form the tubular structure, and the first end piece 1015 and the second end piece 1016 are respectively connected with second corresponding edges of the first side piece 1013 and the second side piece 1014 (i.e. the first end edge of the first side piece 1013 and the first end edge of the second side piece 1014, and the second end edge of the first side piece 1013 and the second end edge of the second side piece 1014), so as to form a closed chamber, that is, the first air chamber of the arcuate component 101. In some embodiments, the inner side edge of the first side piece 1013 is a first long edge of the first side piece 1013, the inner side edge of the second side piece 1014 is a first long edge of the second side piece 1014, the outer side edge of the first side piece 1013 is a second long edge of the first side piece 1013, and the outer side edge of the second side piece 1014 is a second long edge of the second side piece 1014.

[0039] In some embodiments, the first side piece 1013, the second side piece 1014, the first end piece 1015 and the second end piece 1016 may be made of a flexible thermoplastic material, such as PVC (PolyVinyl Chloride), PU (Polyurethane) or the like.

[0040] In some embodiments, the first side piece 1013, the second side piece 1014, the first end piece 1015 and the second end piece 1016 are connected by high frequency welding.

[0041] In some embodiments, a gas valve is disposed

on the arcuate component 101 so as to inflate or deflate the first air chamber. In addition, the gas valve may be welded to the arcuate component 101.

[0042] In some embodiments, the more than one accommodating chamber 102 are disposed at end portions of the arcuate component 101. Specifically, there may be two accommodating chambers 102 respectively disposed at the first end portion 1011 and the second end portion 1012 of the arcuate component 101. Further, the more than one accommodating chamber 102 are configured to be filled with a weight, such as water, sand or the like. In this way, when the first air chamber of the arcuate component 101 of the inflatable arch is inflated with gas and stands on the support surface through the first end portion 1011 and the second end portion 1012, since the more than one accommodating chamber 102 are respectively disposed at the first end portion 1011 and the second end portion 1012, and the more than one accommodating chamber 102 are filled with the weight, the inflatable arch has a light weight in an upper part and a heavy weight in a lower part, that is, the inflatable arch has a low center of gravity and a high stability. In addition, even if the inflatable arch will be shaken under external forces, they will not fall down. Therefore, the inflatable arch in the present disclosure has a high stability and will not accidentally fall down in use.

[0043] In some embodiments, the accommodating chamber 102 may be formed by connecting a top piece and a bottom piece. Specifically, an edge of the top piece is connected with an edge of the bottom piece so as to form the accommodating chamber 102 configured to be filled with the weight. In other words, the accommodating chamber 102 includes a two-piece (i.e., the top piece and the bottom piece) material, where edges of the two pieces are connected together.

[0044] Further, the bottom piece may be connected with an end piece (i.e., the first end piece 1015 or the second end piece 1016) of the arcuate component 101, so that the accommodating chamber 102 can be fixed to an end portion of the arcuate component 101 (such as, the first end portion 1011 or the second end portion 1012).

[0045] In some embodiments, the top piece and the bottom piece of the accommodating chamber 102 may be made of a flexible thermoplastic material, such as PVC, PU or the like. In addition, an edge of the top piece and an edge of the bottom piece may be connected by high frequency welding.

[0046] In some embodiments, a valve component 1021 is disposed on the accommodation chamber 102, so that a weight can be filled into the accommodation chamber 102 through the valve component 1021. Specifically, the valve component 1021 may include a filling port and a plug, when the plug is inserted into the filling port, the valve component 1021 is in a blocked state so that the weight can be prevented from flowing out from the accommodation chamber 102; and when the plug is pulled out from the filling port, the valve component 1021 is in an open state so that the weight can be poured out

of the accommodating chamber 102 or be filled into the accommodating chamber 102 through the filling port.

[0047] In some embodiments, when the accommodating chamber 102 is disposed in the first air chamber of the arcuate component 101, and the bottom piece of the accommodating chamber 102 is connected with an end piece of the arcuate component 101, an opening is disposed at a connection position of the bottom piece of the accommodating chamber 102 and the end piece of the arcuate component 101, and the valve component 1021 is connected with an edge of the opening. For example, the valve component 1021 may be welded to the edge of the opening through a flange on the valve component 1021, the bottom piece of the accommodating chamber 102, the end piece of the arcuate component 101 and the flange are welded together around the opening, so that the weight can be poured out of the accommodating chamber 102 or be filled into the accommodating chamber 102 through the valve component 1021.

[0048] In some embodiments, an end piece (e.g., the first end piece 1015 or the second end piece 1016) of the arcuate component 101 may be connected with an edge of a first sheet piece so as to form the accommodating chamber 102.

[0049] In some embodiments, the edge of the first sheet piece is connected with the edge of the end piece. Whereby the entire end piece is connected with the first sheet piece to define the accommodating chamber 102.

[0050] In some embodiments, the first sheet piece may be connected with a portion of the end piece within the edge of the end piece, thereby the accommodating chamber 102 is defined by the portion of the end piece and the first sheet piece.

[0051] In some embodiments, the first sheet piece may be made of a flexible thermoplastic material, such as PVC, PU, or the like. The first sheet piece and the end piece may be connected with each other by high frequency welding.

[0052] In some embodiments, two side pieces (e.g., the first side piece 1013 and the second side piece 1014) of the arcuate component 101 may be connected with an edge of a second sheet piece so as to form the accommodating chamber 102.

[0053] Specifically, the second sheet piece of the accommodating chamber 102 is spaced from an end piece of the arcuate component 101, and an edge of the second sheet piece is connected with two side pieces (e.g., the first side piece 1013 and the second side piece 1014) of the arcuate component 101. Therefore, the accommodating chamber 102 is defined by the second sheet piece, the end piece, and a portion of the two side pieces between the second sheet piece and the end piece.

[0054] In some embodiments, the second sheet piece of the accommodating chamber 102 may be attached to a side piece of the arcuate component 101, and an edge of the second sheet piece is connected with the side piece. As such, the accommodating chamber 102 is defined by the second sheet piece and a partial surface of

the side piece.

[0055] In some embodiments, the second sheet piece may be made of a flexible thermoplastic material, such as PVC, PU, or the like. The second sheet piece and the side piece may be connected with each other by high frequency welding.

[0056] It should be noted that, the "first" and the "second" in the first sheet piece and the second sheet piece are only applied to distinguish pieces disposed at different locations, and materials, shapes or the like of the first sheet piece and the second sheet piece may be the same.

[0057] In some embodiments, the accommodating chamber 102 may be disposed in the first air chamber of the arcuate component 101, as shown in Figs. 1 and 2. It should be noted that, since the accommodating chamber 102 is disposed in the arcuate component 101, the accommodating chamber 102 is shown in dotted lines in Fig. 1 and not visible in Fig. 2.

[0058] In some embodiments, the accommodating chamber 102 may also be disposed outside the first air chamber of the arcuate component 101 as shown in Fig. 3. For example, the accommodating chamber 102 may be disposed on an outer surface of the arcuate component 101.

[0059] In some embodiments, the accommodating chamber 102 may have an annular shape. As shown in Fig. 3, the annular accommodating chamber 102 is disposed outside the first air chamber of the arcuate component 101, and the accommodating chamber 102 is configured to surround and be connected with the first end portion 1011 or the second end portion 1012 of the arcuate component 101.

[0060] In some embodiments, the accommodating chamber 102 may also be circle-shaped or oval-shaped.

[0061] In some embodiments, the accommodating chamber 102 may also have an irregular shape.

[0062] It should be noted that, the shape of the accommodating chamber 102 described herein refers to a shape of the accommodating chamber 102 being filled with a weight. In absence of the weight, the accommodating chamber 102 is in a contraction state.

[0063] It can thus be seen that, the center of gravity of the inflatable arch can be lowered when the more than one accommodating chamber 102 of the inflatable arch in the present disclosure are filled with a weight such as water, sand or the like. The weight may also increase weight of the inflatable arch, thereby preventing the inflatable arch from tilting or falling down under effect of external forces such as wind blowing.

[0064] In some embodiments, a water spray device 103 is further disposed on the inflatable arch for spraying water.

[0065] In some embodiments, the water spray device 103 may include a water inlet portion 1031, a water outlet portion and a connection pipe 1032, where the water inlet portion 1031 is configured to be communicated with a water source, at least one water outlet is disposed on the

water outlet portion, and the connection pipe 1032 connects the water inlet portion 1031 and the water outlet portion. Therefore, the water outlet portion can be communicated with the water source for spraying water.

[0066] In some embodiments, the water inlet portion 1031 and the water outlet portion are disposed on an outer surface of the arcuate component 101, and the connection pipe 1032 is disposed in the first air chamber of the arcuate component 101.

[0067] In some embodiments, the water inlet portion 1031 may be a water pipe connector. The water inlet portion 1031 may be welded to the arcuate component 101.

[0068] In some embodiments, the water outlet portion may be a water outlet portion 1033a shown in Fig. 1. The water outlet portion 1033a includes a jet disposed between the first end portion 1011 and the second end portion 1012 of the arcuate component 101.

[0069] As shown in Fig. 4, an inflatable arch according to another embodiment of the present disclosure may include a water outlet portion 1033b, where the water outlet portion 1033b may include a water spray pipe connected to the arcuate component 101. The water spray pipe may be a hose pipe.

[0070] As shown Fig. 5, an inflatable arch according to another embodiment of the present disclosure may include a water outlet portion 1033c. Specifically, the water outlet portion 1033c includes a third piece, an edge of the third piece is connected with the arcuate component 101 to form a water spray pipe, and a plurality of water outlets are disposed on the water spray pipe for spraying water. Therefore, the water outlet portion 1033c is a water spray pipe defined by a portion of an outer surface of the arcuate component 101 and the third piece, which can realize spraying water by virtue of the plurality of water outlets.

[0071] In some embodiments, the third piece is made of a flexible thermoplastic material, such as PVC, PU, or the like. In addition, the third piece may be connected with the outer surface of the arcuate component 101 by high frequency welding.

[0072] In some embodiments, there are two arcuate components 101 as shown in Figs. 2 and 3, and the two arcuate components 101 are arranged in parallel and connected through a connection portion 104 to form an integral structure. Correspondingly, there are four accommodating chambers 102 respectively disposed at the first end portion 1011 and the second end portion 1012 of the two arcuate components 101.

[0073] In some embodiments, there are more than two arcuate components 101 which are sequentially arranged in parallel.

[0074] Therefore, when there are a plurality of arcuate components 101, a range covered by the plurality of arcuate components 101 is increased compared with a range covered by only one arcuate component 101. For example, when the water spray device 103 is disposed on each of the plurality of arcuate component 101, the

plurality of arcuate components 101 arranged in parallel can increase the coverage area of the water spray device 103.

[0075] In some embodiments, the connection portion 104 may be made of a flexible thermoplastic material.

[0076] In some embodiments, the connection portion 104 includes a support portion 1041, where the support portion 1041 has a second air chamber. When the second air chamber of the support portion 1041 is inflated, the support portion 1041 can prevent a relative movement between adjacent arcuate components 101, so that a relative stability between the adjacent arcuate components 101 can be increased.

[0077] In some embodiments, the connection portion 104 includes an upper piece 1042 and a lower piece 1043, a first edge of the lower piece 1043 and a second edge of the lower piece 1043 opposite to the first edge are connected with two adjacent arcuate components 101 respectively, and an edge of the upper piece 1042 is connected with the lower piece 1043 to form the second air chamber of the support portion 1041. In the embodiment shown in Fig. 2, the upper piece 1042 has a toothed structure, thus the support portion 1041 is also tooth-shaped. In other embodiments, the upper piece 1042 may have other shapes.

[0078] Referring to Fig. 6, a water slide for entertainment is also provided according to an embodiment of the present disclosure. The water slide for entertainment includes the inflatable arch 100 and a sliding portion 200. Where the sliding portion 200 includes a sliding surface 201 for sliding. When the first air chamber of the inflatable arch 100 is inflated, the inflatable arch 100 is configured to cross over the sliding portion 200.

[0079] In some embodiments, the sliding portion 200 may have a one-piece structure. For example, the sliding portion 200 may be made of a flexible film.

[0080] In some embodiments, the sliding portion 200 may include an upper piece and a lower piece. An edge of the upper piece is connected with the lower piece to form a chamber configured to be inflated or filled with water.

[0081] In some embodiments, the water slide further includes a bumper portion 300, connected with an end of the sliding portion 200, where the bumper portion 300 has a third chamber configured to be inflated or filled with water.

[0082] In some embodiments, the bumper portion 300 may be connected with one end of the sliding portion 200. Therefore, when a user slides from the other end of the sliding portion 200 to the one end of the sliding portion 200, the bumper portion 300 can provide a cushion to prevent the user from sliding out of the sliding portion 200.

[0083] In some embodiments, a water pipe 202 is disposed on the sliding portion 200, and a plurality of water outlets are disposed on the water pipe 202. When the water pipe 202 is communicated with a water source, the plurality of water outlets on the water pipe 202 start to spray water to wet the sliding surface 201 of the sliding

portion 200, which can facilitate sliding.

[0084] It can thus be seen that, when the inflatable arch 100 is applied in conjunction with the sliding portion 200, the inflatable arch 100 may cross over the sliding portion 200. The inflatable arch 100 according to the embodiments of the present disclosure has a high stability and is not likely to tilt or fall down. In addition, when the water spray device (for example, the water spray device 103) is disposed on the inflatable arch 100, the water spray device can be applied to wet the sliding surface 201 of the sliding portion 200, and further to enhance entertainment of the sliding portion 200.

[0085] Although the present disclosure is disclosed as above, the present disclosure is not limited thereto. Any person skilled in the art will be able to make various changes and modifications without departing from the scope of the utility model, and therefore the scope of the present invention should be limited by the scope of the claims.

Claims

1. An inflatable arch, comprising:

at least one arcuate component, comprising a first end portion and a second end portion, and having a first air chamber; and
more than one accommodating chamber, disposed at the first end portion and the second end portion of the at least one arcuate component respectively and configured to be filled with a weight.

2. The inflatable arch according to claim 1, **characterized in that**, the at least one arcuate component comprises two side pieces and two end pieces, the two side pieces are connected with each other so as to form a tubular structure, and two end portions of the tubular structure are respectively connected with the two end pieces to form the first air chamber.

3. The inflatable arch according to claim 1, **characterized in that**, the more than one accommodating chamber are disposed in the first air chamber of the at least one arcuate component.

4. The inflatable arch according to claim 1, **characterized in that**, the more than one accommodating chamber are disposed outside the first air chamber of the at least one arcuate component.

5. The inflatable arch according to claim 4, **characterized in that**, each of the more than one accommodating chamber has an annular shape, and each of the more than one accommodating chamber surrounds and is connected with the first end portion or the second end portion of the at least one arcuate

component.

6. The inflatable arch according to claim 1, **characterized in that**, the more than one accommodating chamber comprises a top piece and a bottom piece, and an edge of the top piece is connected with an edge of the bottom piece.

7. The inflatable arch according to claim 6, **characterized in that**, the bottom piece of the more than one accommodating chamber is connected with an end piece of the at least one arcuate component.

8. The inflatable arch according to claim 1, **characterized in that**, an edge of a first sheet piece is connected with an end piece of the at least one arcuate component to form the more than one accommodating chamber.

9. The inflatable arch according to claim 2, **characterized in that**, an edge of a second sheet piece is connected with the two side pieces, and each of the more than one accommodating chamber is defined by a portion of the two side pieces, one of the two end pieces and the second sheet piece.

10. The inflatable arch according to claim 1, **characterized in that**, a valve component is disposed on the more than one accommodating chamber, so that the weight can be filled into the more than one accommodating chamber through the valve component; and
a bottom piece of the more than one accommodating chamber is connected with an end piece of the at least one arcuate component, an opening is disposed at a connection position of the bottom piece and the end piece, and the valve component is connected with an edge of the opening.

11. The inflatable arch according to claim 1, **characterized in that**, a water spray device is disposed on the at least one arcuate component, and the water spray device is configured to be communicated with a water source for spraying water; and
the water spray device comprises a water inlet portion, a water outlet portion and a connection pipe, the water inlet portion is configured to be connected with the water source, at least one water outlet is disposed on the water outlet portion, and the water inlet portion is communicated with the water outlet portion through the connection pipe.

12. The inflatable arch according to claim 11, **characterized in that**, the water inlet portion and the water outlet portion are disposed on an outer surface of the at least one arcuate component, and the connection pipe is disposed in the first air chamber of the at least one arcuate component.

13. The inflatable arch according to claim 11, **characterized in that**, the water outlet portion comprises a jet disposed between the first end portion and the second end portion of the at least one arcuate component.
14. The inflatable arch according to claim 11, **characterized in that**, the water outlet portion comprises a water spray pipe connected with the at least one arcuate component.
15. The inflatable arch according to claim 11, **characterized in that**, the water outlet portion comprises a third piece, an edge of the third piece is connected with the at least one arcuate component to form a water spray pipe, and a plurality of water outlets are disposed on the water spray pipe for spraying water.
16. The inflatable arch according to claim 1, **characterized in that**, there are a plurality of arcuate components and a plurality of accommodating chambers, and the plurality of accommodating chambers are respectively disposed at the first end portion and the second end portion of the plurality of arcuate components; and the plurality of the arcuate components are connected by at least one connection portion.
17. The inflatable arch according to claim 16, **characterized in that**, the at least one connection portion comprises a support portion, and the support portion has a second air chamber; and the at least one connection portion comprises an upper piece and a lower piece, a first edge of the lower piece and a second edge of the lower piece opposite to the first edge are respectively connected with two adjacent arcuate components, and an edge of the upper piece is connected with the lower piece to form the second air chamber of the support portion.
18. A water slide for entertainment, comprising:
a sliding portion; and
the inflatable arch according to claim 1;
wherein the sliding portion comprises a sliding surface for sliding, and the inflatable arch is configured to cross over the sliding portion when the first air chamber of the inflatable arch is inflated.
19. The water slide for entertainment according to claim 18, further comprising: a bumper portion connected with an end of the sliding portion, where the bumper portion has a third chamber configured to be inflated or filled with water; and a water pipe is disposed on the sliding portion, and a plurality of water outlets are disposed on the water pipe.

Amended claims in accordance with Rule 137(2) EPC.

1. An inflatable arch (100), comprising:
at least one arcuate component (101), comprising a first end portion (1011) and a second end portion (1012), and having a first air chamber; and
characterized by further comprising: more than one accommodating chamber (102), disposed at the first end portion (1011) and the second end portion (1012) of the at least one arcuate component (101) respectively and configured to be filled with a weight, wherein the more than one accommodating chamber (102) are disposed in the first air chamber of the at least one arcuate component (101).
2. The inflatable arch (100) according to claim 1, **characterized in that**, the at least one arcuate component (101) comprises two side pieces (1013, 1014) and two end pieces (1015, 1016), the two side pieces (1013, 1014) are connected with each other so as to form a tubular structure, and two end portions of the tubular structure are respectively connected with the two end pieces (1015, 1016) to form the first air chamber.
3. The inflatable arch (100) according to claim 1, **characterized in that**, the more than one accommodating chamber (102) comprises a top piece and a bottom piece, and an edge of the top piece is connected with an edge of the bottom piece.
4. The inflatable arch (100) according to claim 3, **characterized in that**, the bottom piece of the more than one accommodating chamber (102) is connected with an end piece (1015, 1016) of the at least one arcuate component (101).
5. The inflatable arch (100) according to claim 1, **characterized in that**, an edge of a first sheet piece is connected with an end piece (1015, 1016) of the at least one arcuate component (101) to form the more than one accommodating chamber (102).
6. The inflatable arch (100) according to claim 2, **characterized in that**, an edge of a second sheet piece is connected with the two side pieces (1013, 1014), and each of the more than one accommodating chamber (102) is defined by a portion of the two side pieces (1013, 1014), one of the two end pieces (1015, 1016) and the second sheet piece.
7. The inflatable arch (100) according to claim 1, **characterized in that**, a valve component (1021) is disposed on the more than one accommodating cham-

ber (102), so that the weight can be filled into the more than one accommodating chamber (102) through the valve component (1021); and a bottom piece of the more than one accommodating chamber (102) is connected with an end piece (1015, 1016) of the at least one arcuate component (101), an opening is disposed at a connection position of the bottom piece and the end piece (1015, 1016), and the valve component (1021) is connected with an edge of the opening.

8. The inflatable arch (100) according to claim 1, **characterized in that**, a water spray device (103) is disposed on the at least one arcuate component (101), and the water spray device (103) is configured to be communicated with a water source for spraying water; and the water spray device (103) comprises a water inlet portion (1031), a water outlet portion (1033a, 1033b, 1033c) and a connection pipe (1032), the water inlet portion (1031) is configured to be connected with the water source, at least one water outlet is disposed on the water outlet portion (1033a, 1033b, 1033c), and the water inlet portion (1031) is communicated with the water outlet portion (1033a, 1033b, 1033c) through the connection pipe (1032).
9. The inflatable arch (100) according to claim 8, **characterized in that**, the water inlet portion (1031) and the water outlet portion (1033a, 1033b, 1033c) are disposed on an outer surface of the at least one arcuate component (101), and the connection pipe (1032) is disposed in the first air chamber of the at least one arcuate component (101).
10. The inflatable arch (100) according to claim 8, **characterized in that**, the water outlet portion (1033a) comprises a jet disposed between the first end portion (1011) and the second end portion (1012) of the at least one arcuate component (101).
11. The inflatable arch (100) according to claim 8, **characterized in that**, the water outlet portion (1033b) comprises a water spray pipe connected with the at least one arcuate component (101).
12. The inflatable arch (100) according to claim 8, **characterized in that**, the water outlet portion (1033c) comprises a third piece, an edge of the third piece is connected with the at least one arcuate component (101) to form a water spray pipe, and a plurality of water outlets are disposed on the water spray pipe for spraying water.
13. The inflatable arch (100) according to claim 1, **characterized in that**, there are a plurality of arcuate components (101) and a plurality of accommodating chambers (102), and the plurality of accommodating

chambers (102) are respectively disposed at the first end portion (1011) and the second end portion (1012) of the plurality of arcuate components (101); and the plurality of the arcuate components (101) are connected by at least one connection portion (104).

14. The inflatable arch (100) according to claim 13, **characterized in that**, the at least one connection portion (104) comprises a support portion (1041), and the support portion (1041) has a second air chamber; and the at least one connection portion (104) comprises an upper piece (1042) and a lower piece (1043), a first edge of the lower piece (1043) and a second edge of the lower piece (1043) opposite to the first edge are respectively connected with two adjacent arcuate components (101), and an edge of the upper piece (1042) is connected with the lower piece (1043) to form the second air chamber of the support portion (104).

15. A water slide for entertainment, comprising:

a sliding portion (200); and
an inflatable arch (100);
wherein the inflatable arch (100) comprises:

at least one arcuate component (101), comprising a first end portion (1011) and a second end portion (1012), and having a first air chamber; and
more than one accommodating chamber (102), disposed at the first end portion (1011) and the second end portion (1012) of the at least one arcuate component (101) respectively and configured to be filled with a weight, wherein the more than one accommodating chamber (102) are disposed in the first air chamber of the at least one arcuate component (101);

wherein the sliding portion (200) comprises a sliding surface (201) for sliding, and the inflatable arch (100) is configured to cross over the sliding portion (200) when the first air chamber of the inflatable arch (100) is inflated.

16. The water slide for entertainment according to claim 15, further comprising: a bumper portion (300) connected with an end of the sliding portion (200), where the bumper portion (300) has a third chamber configured to be inflated or filled with water; and a water pipe (202) is disposed on the sliding portion (200), and a plurality of water outlets are disposed on the water pipe (202).

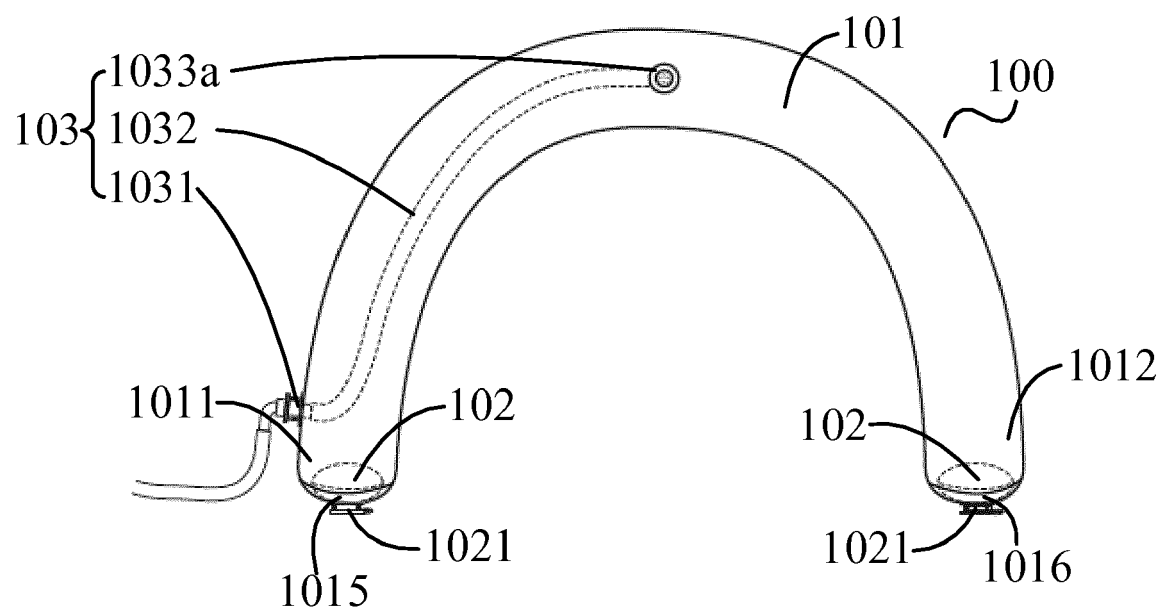


Fig. 1

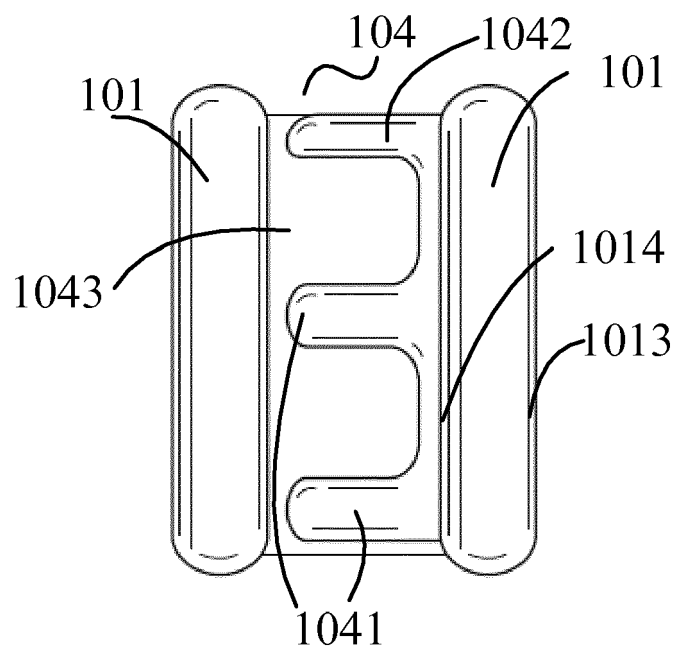


Fig. 2

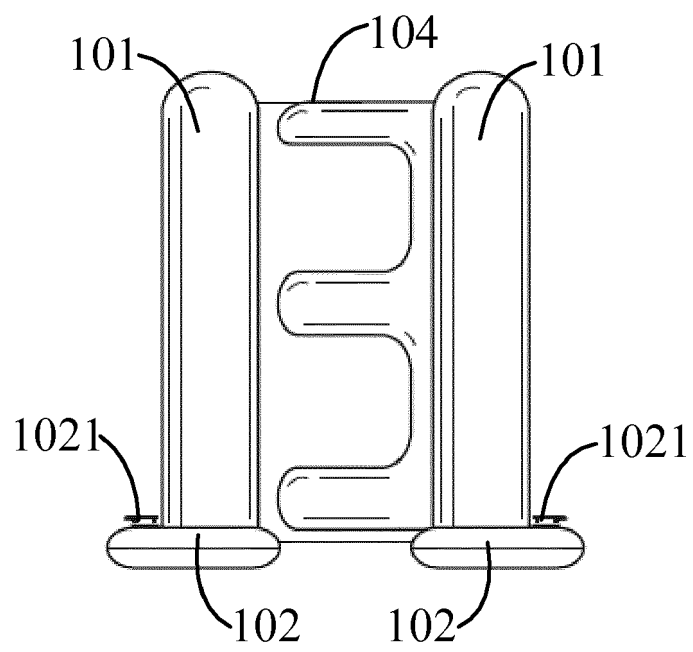


Fig. 3

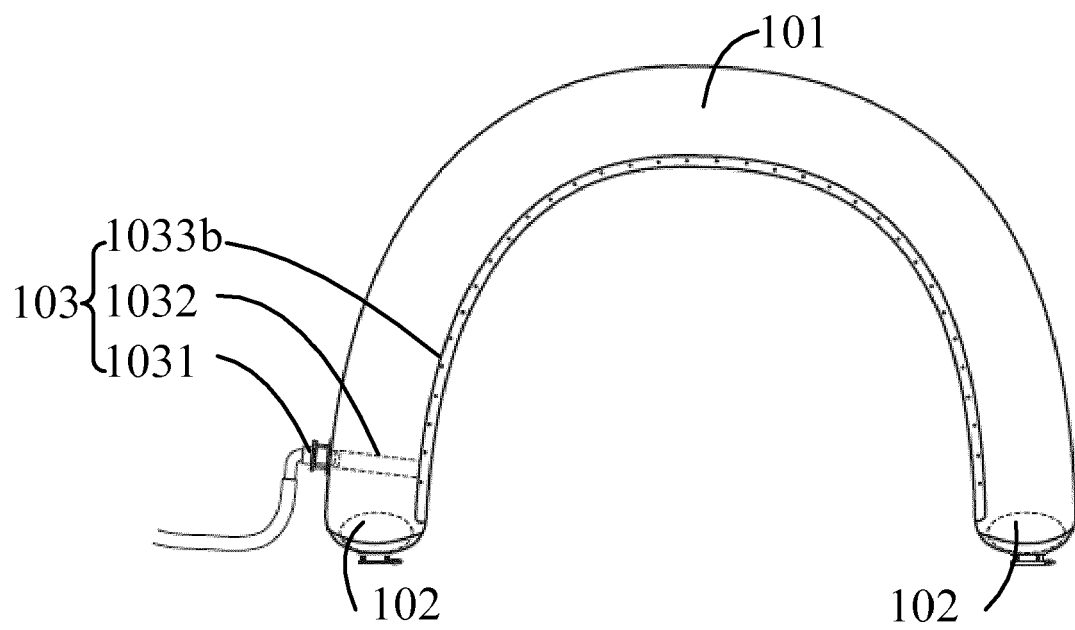


Fig. 4

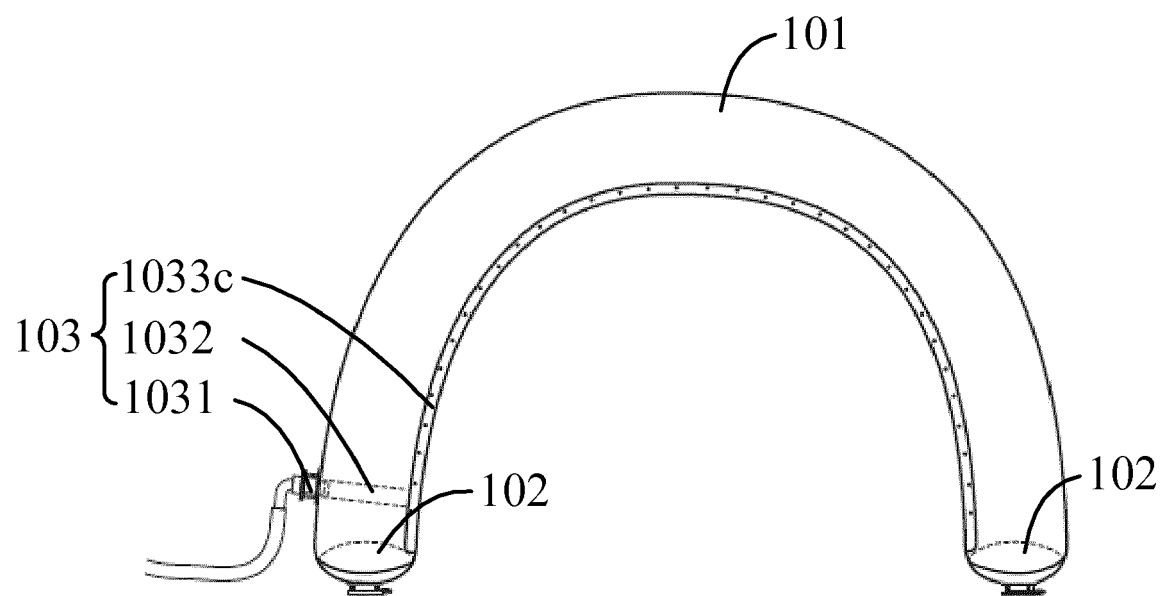


Fig. 5

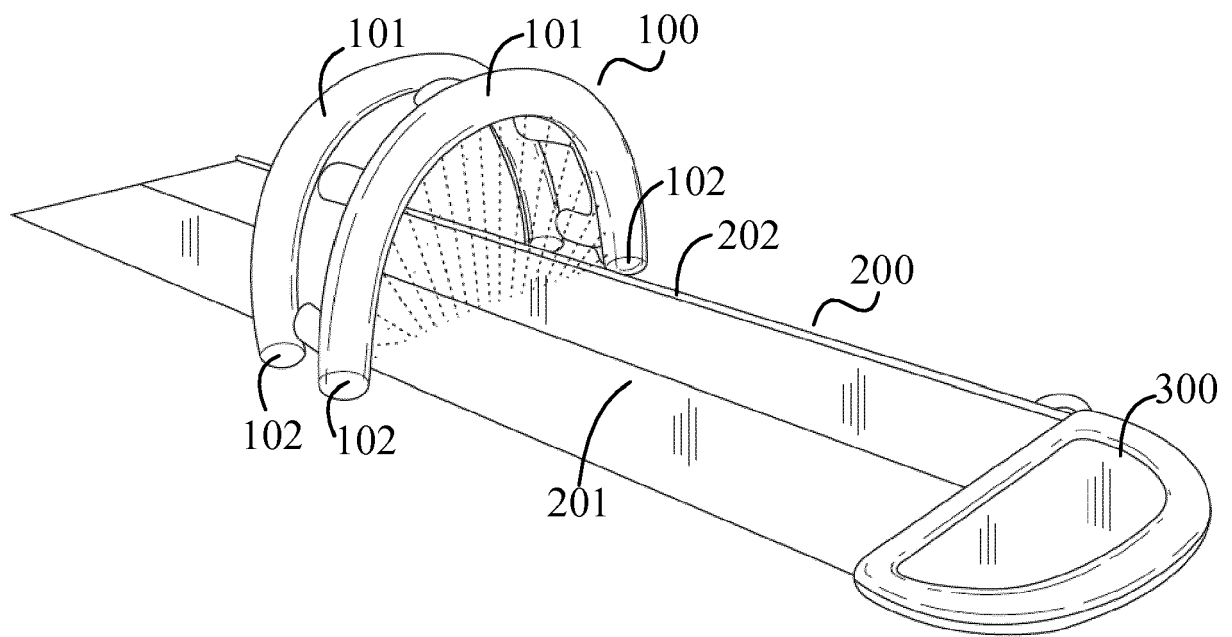


Fig. 6



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Application Number
EP 17 17 6901

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Place of search Munich		Date of completion of the search 15 December 2017	Examiner Lucas, Peter
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