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(71) Applicant: **Shengzhou Liwai Textile Co., Ltd.**
Shaoxing, Zhejiang 312400 (CN)

(72) Inventor: **LU, Lu**
Sanjiang Street, Shengzhou City (CN)

(74) Representative: **Herrero & Asociados, S.L.**
Edificio Aqua - Agustín de Foxá, 4-10
28036 Madrid (ES)

(54) OUTDOOR SHADING DEVICE

(57) An outdoor shading device, including a piece of sun shade cloth (1) and a supporting pole (2). The supporting pole includes a plurality of connecting rods (20) connected end to end. Two adjacent connecting rods are detachably connected to each other. The connecting rods are tough. One side of the sun shade cloth is provided with a through hole (11). One end of the supporting pole passes through the through hole. During use, the supporting pole is bent to form an arc. Under the action of wind, the sun shade cloth can be blown up. Therefore, the sun shade cloth can cooperate with the supporting pole to form a shading space, which plays a sunshading role.

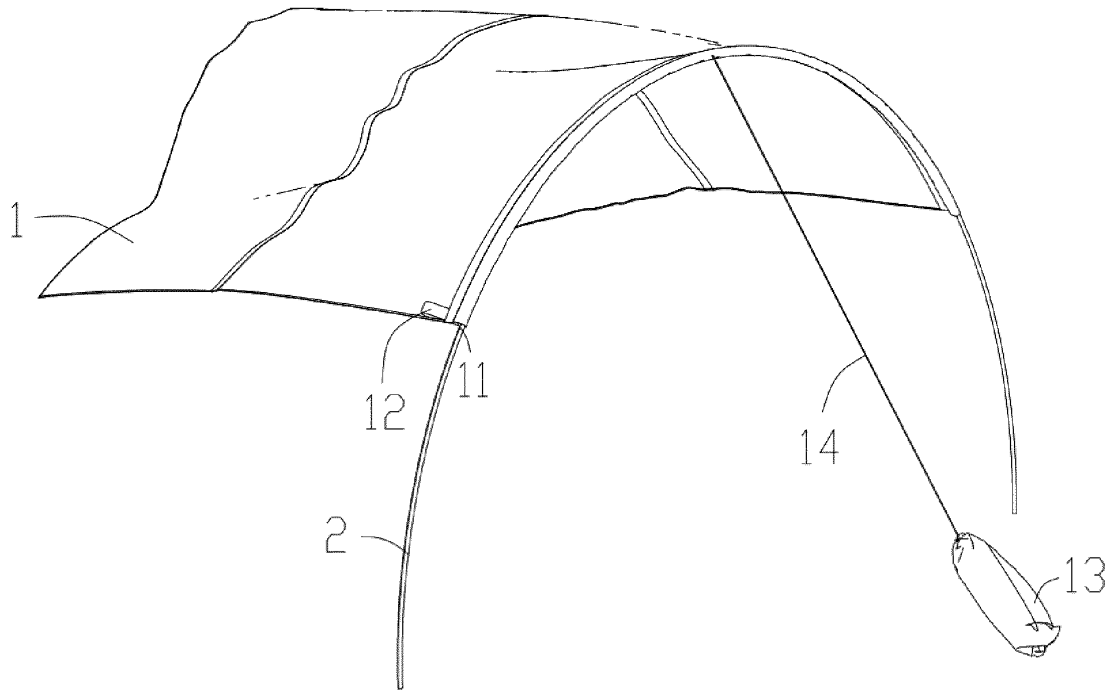

FIG. 1

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Description

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The application claims priority of Chinese patent application CN2023234839654, filed on 12/20/2023, which is incorporated herein by reference in its entireties.

TECHNICAL FIELD

[0002] The present disclosure relates to the technical field of outdoor supplies, and in particular, to an outdoor shading device.

BACKGROUND

[0003] As is well known, a canopy is a kind of shelter used for outdoor activities. It is usually configured to prevent direct sunlight, block weather factors such as rainwater and wind, and provide people with a comfortable space for shading. At present, the existing canopy is generally supported by at least two long poles to a certain height. Various corners of the canopy are usually fixed with ropes and pulled to a distance. Ends of the ropes that are far away from the canopy are fixed to the ground by tent pegs to support the canopy. In this way, the ropes need to be pulled to be fixed, the entire canopy will occupy a large area, and the ropes are not easily noticed by users. Especially in crowded outdoor areas, such as on the seaside or in a park, people trip over the ropes easily, which affects the user experience. Furthermore, the long poles are too long, so that the canopy is inconvenient to carry and transport.

SUMMARY

[0004] The present disclosure aims to provide an outdoor shading device for solving the problems that an existing canopy fixed using ropes occupies a large area and people easily trip over the ropes.

[0005] In order to overcome the shortcomings of the prior art, the present disclosure provides an outdoor shading device, including a piece of sun shade cloth and a supporting pole, wherein the supporting pole includes a plurality of connecting rods connected end to end; and two adjacent connecting rods are detachably connected to each other; the connecting rods are tough; one side of the sun shade cloth is provided with a through hole; one end of the supporting pole passes through the through hole; and during use, the supporting pole is bent to form an arc.

[0006] Further, a fixing band is arranged at positions of the sun shade cloth close to one end and/or two ends of the through hole; and the fixing band is configured to be wound on the supporting pole to prevent relative motion between the sun shade cloth and the supporting pole.

[0007] Further, the fixing band is an elastic band, and at least one adhesive tape configured to increase a friction force is arranged on the elastic band.

[0008] Further, the outdoor shading device further includes at least one anchoring member; and the anchoring member is connected to the supporting pole or a position of the sun shade cloth connected to the supporting pole through a rope.

[0009] Further, a length of the fixing band after stretching is greater than twice a perimeter of each of the connecting rods, and one end of the fixing band is detachably connected to a tail end position of the fixing band close to the through hole after being stretched and wound on the supporting pole for at least two turns.

[0010] Further, one end of the fixing band is fixed at the tail end position of the fixing band close to the through hole through a detachable structure after being stretched and wound on the supporting pole for at least two turns, and the detachable structure is a snap fastener or a hook and loop fastener.

[0011] Further, the fixing band is provided with a male buckle at the tail end position close to the through hole, and the fixing band is provided with a female buckle at one end away from the sun shade cloth.

[0012] Further, a position of the fixing band that is at least one-fifth of a length of the fixing band is sewn with the sun shade cloth, and the male buckle is located at a position where the fixing band overlaps the sun shade cloth.

[0013] Further, the plurality of connecting rods include a tubular first connecting rod, a tubular second connecting rod, and a plurality of tubular intermediate connecting rods; one end of the first connecting rod is sleeved with one end of the intermediate connecting rod, and two adjacent intermediate connecting rods are sleeved with each other; and one end of the second connecting rod is sleeved with one end of the intermediate connecting rod away from the first connecting rod.

[0014] Further, one end of the first connecting rod close to the intermediate connecting rod is a first insertion end; one end of the intermediate connecting rod away from the first connecting rod is a second insertion end; an outer diameter of the first insertion end is matched with an inner diameter of one end of the intermediate connecting rod away from the second insertion end; an outer diameter of the second insertion end is matched with an inner diameter of one end of the second connecting rod close to the intermediate connecting rod; the first insertion end is arranged inside one end of the intermediate connecting rod away from the second insertion end; the second insertion end close to the second connecting rod is arranged inside one end of the second connecting rod close to the intermediate connecting rod; and for two adjacent intermediate connecting rods, the second insertion end of one intermediate connecting rod is arranged at one end of the other intermediate connecting rod away from the first connecting rod.

[0015] Further, a first end cover is arranged at one end of the first connecting rod away from the first insertion end; a second end cover is arranged at one end of the

second connecting rod away from the intermediate connecting rod; a rope body is connected between the first end cover and the second end cover; the rope body is an elastic band; and the rope body passes through the first connecting rod, the second connecting rod, and the plurality of intermediate connecting rods.

[0016] Further, the sun shade cloth is square, and the through hole extends from one end of the sun shade cloth to the other end of the sun shade cloth.

[0017] Further, a length and width of the sun shade cloth are both greater than half of the length of the supporting pole.

[0018] Further, a ratio between the length of the sun shade cloth to the width of the sun shade cloth is greater than 1.2.

[0019] Further, a material of the supporting pole is aluminum alloy, and a material of the sun shade cloth is nylon.

[0020] The present disclosure has the following beneficial effects: compared with the prior art, in this present disclosure, the through hole is arranged on one side of the sun shade cloth to allow the supporting pole to pass through, so that the supporting pole is connected to the sun shade cloth. Furthermore, when the supporting pole is bent, and two ends of the supporting pole are fixed on a fixed plane, the sun shade cloth can be unfolded and supported. Under the action of wind, the sun shade cloth can be blown up. In this way, the sun shade cloth can cooperate with the supporting pole to form a shading space, which plays a sunshading role. The outdoor shading device has a simple structure and low cost, and is convenient for a user to form the shading space during outdoor use. Furthermore, the outdoor shading device does not need to be pulled to be fixed with ropes, and occupies a small space. The problems that an existing canopy fixed using ropes occupies a large area and people easily trip over the ropes are solved; and the user experience is improved. In addition, the supporting pole is formed by connecting the plurality of connecting rods, which is conveniently assembled by a user. Moreover, when the plurality of connecting rods are not assembled, the connecting rods can be convenient to store and package and convenient for transportation.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] In order to explain the technical solutions of the embodiments of the present disclosure more clearly, the following will briefly introduce the accompanying drawings used in the embodiments. Apparently, the drawings in the following description are only some embodiments of the present disclosure. Those of ordinary skill in the art can obtain other drawings based on these drawings without creative work.

FIG. 1 is a three-dimensional diagram according to the present disclosure;

FIG. 2 is a structural diagram of a fixing band according to the present disclosure;

FIG. 3 is a schematic diagram of winding a fixing band on a supporting pole according to the present disclosure; and

FIG. 4 is a structural diagram of a supporting pole according to the present disclosure.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0022] The accompanying drawings in the embodiment of the present disclosure are combined, The technical scheme in the embodiment of the present disclosure is clearly and completely described, Obviously, the described embodiment is only a part of the embodiment of the present disclosure, but not all embodiments are based on the embodiment of the present disclosure, and all other embodiments obtained by ordinary technicians in the field on the premise of not doing creative work belong to the protection range of the present disclosure.

[0023] Referring to FIG. 1 to FIG. 4, the embodiments of the present disclosure provide an outdoor shading device.

[0024] Referring to FIG. 1, the outdoor shading device includes a piece of sun shade cloth 1 and a supporting pole 2. The supporting pole 2 includes a plurality of connecting rods 20 connected end to end; and two adjacent connecting rods 20 are detachably connected to each other. The connecting rods 20 are tough. One side of the sun shade cloth 1 is provided with a through hole 11; one end of the supporting pole 2 passes through the through hole 11; and during use, the supporting pole 2 is bent to form an arc.

[0025] In this embodiment, the through hole 11 is arranged on one side of the sun shade cloth 1 to allow the supporting pole 2 to pass through, so that the supporting pole 2 is connected to the sun shade cloth 1. Furthermore, when the supporting pole 2 is bent, and two ends of the supporting pole 2 are fixed on a fixed plane, the sun shade cloth 1 can be unfolded and supported. Under the action of wind, the sun shade cloth 1 can be blown up. In this way, the sun shade cloth 1 can cooperate with the supporting pole 2 to form a shading space, which plays a sunshading role. The outdoor shading device has a simple structure and low cost, and is convenient for a user to form the shading space during outdoor use. Furthermore, the outdoor shading device does not need to be pulled to be fixed with ropes, and occupies a small space. The problems that an existing canopy fixed using ropes occupies a large area and people easily trip over the ropes are solved; and the user experience is improved. In addition, the supporting pole 2 is formed by connecting the plurality of connecting rods 20, which is conveniently assembled by a user. Moreover, when the plurality of connecting rods 20 are not assembled, the connecting rods can be convenient to store and package and convenient for transportation.

[0026] Specifically, an implementation process of the outdoor shading device of this embodiment is as follows:

Firstly, after the plurality of connecting rods 20 are connected end to end to form the supporting pole 2, and the supporting pole 2 is threaded through the through hole 11, in a case that a wind blowing direction is determined, two ends of the supporting pole 2 are respectively inserted into the beach or soil, so that the supporting pole 2 forms an arc with the ground, such as a semicircular shape. Therefore, the supporting pole 2 is perpendicular to the direction of the wind, and the sun shade cloth 1 floats in the direction of the wind, to form the shading space.

[0027] The side of the sun shade cloth 1 provided with the through hole 11 is folded backwards and sewn. In order to make the sun shade cloth 1 easily blown up successfully, the sun shade cloth 1 is made of a light material such as nylon. The supporting pole 2 has certain bendability due to its length. In order to improve the bending performance and strength of the supporting pole 2, a material of the supporting pole 2 is aluminum alloy, preferably, 7-series aviation aluminum alloy.

[0028] In practical applications, a fixing band 12 is arranged at positions of the sun shade cloth 1 close to one end and/or two ends of the through hole 11; and the fixing band 12 is configured to be wound on the supporting pole 2 to prevent relative motion between the sun shade cloth 1 and the supporting pole 2. In this way, the sun shade cloth 1 can be stably fixed on the supporting pole 2 to prevent such a phenomenon that the sun shade cloth 1 moves along the supporting pole 2 or is stacked with the supporting pole under the action of the wind, and the user experience is improved.

[0029] Specifically, referring to FIG. 2 and FIG. 3, the fixing band 12 is preferably an elastic band. The elastic band is provided with at least one adhesive tape 123 for increasing a friction force. The elastic band is elastic and stretchable. After being stretched, the elastic band is wound on the supporting pole 2, and the adhesive tape 123 can be tightly attached to an outer surface of the supporting pole 2, which effectively increases the friction force between the fixing band 12 and the supporting pole 2, prevents the sun shade cloth 1 from moving up and down along the supporting pole 2, and effectively fixes a relative position between the sun shade cloth 1 and the supporting pole 2. Specifically, the adhesive tape 123 is preferably made of silica gel or other soft rubber materials, and each adhesive tape 123 is arranged in a lengthwise direction of the fixing band 12. There may be one, two, three, four, or another number of adhesive tapes, a width of which can also be configured as required. Of course, in other embodiments, the adhesive tape 123 can also be arranged along a width of the fixing band 12 or tilt.

[0030] In practical applications, a length of the fixing band 12 after stretching is greater than twice a perimeter of each of the connecting rods 20, and one end of the fixing band 12 is detachably connected to a tail end position of the fixing band 12 close to the through hole 11 after being stretched and wound on the supporting pole 2 for at least two turns, so as to fix a free end of the fixing band 12 and tighten the sun shade cloth 1 on the supporting pole 2.

[0031] Specifically, one end of the fixing band 12 is fixed at the tail end position of the fixing band 12 close to the through hole 11 through a detachable structure 120 after being stretched and wound on the supporting pole 2 for at least two turns, and the detachable structure 120 is a snap fastener 122, a hook and loop fastener, or the like. That is, the detachable structure 120 can be used to fix the free end of the fixing band 12 at the tail end position close to the through hole 11.

[0032] In one embodiment, the fixing band 12 is provided with a male buckle 121 at the tail end position close to the through hole 11, and the fixing band 12 is provided with a female buckle 122 at one end away from the sun shade cloth 1. Or, the fixing band 12 is provided with a female buckle 122 at the tail end position close to the through hole 11, and the fixing band 12 is provided with a male buckle 121 at one end away from the sun shade cloth 1. The male buckle 121 and the female buckle 122 cooperate with each other, so that the free end of the fixing band 12 can be fixed at its tail end position close to the through hole 11.

[0033] In this embodiment, one end of the fixing band 12 is sewn on the sun shade cloth 1. Specifically, a position of the fixing band 12 that is at least one-fifth of a length of the fixing band is sewn with the sun shade cloth 1 to stably fix the fixing band 12 on the sun shade cloth 1, and the male buckle 121 is located at a position where the fixing band 12 overlaps the sun shade cloth 1, so that when the free end of the fixing band 12 fixes the other end of the fixing band 12, the sun shade cloth 1 is tightened on the supporting pole 2.

[0034] In practical applications, referring to FIG. 1, the outdoor shading device further includes at least one anchoring member 13; and the anchoring member 13 is connected to the supporting pole 2 or a position of the sun shade cloth 1 connected to the supporting pole 2 through a rope 14. Specifically, the anchoring member 13 can be a drawstring bag, and a user can put stones, sand, soil, or the like into the drawstring bag. When the rope 14 on the anchoring member 13 is tied to the supporting pole 2, the gravity of the anchoring member 13 is combined with a pulling force of the rope to effectively increase a downward acting force of the supporting pole 2, thus preventing blowing down by strong wind and effectively improving the stability of supporting. In other embodiments, the anchoring member 13 may also be a counterweight block or a piece of cloth, which is pressed by soil or sand to also improve the stability of mounting of the supporting pole 2.

[0035] Referring to FIG. 4, the plurality of connecting rods 20 include a tubular first connecting rod 21, a tubular second connecting rod 23, and a plurality of tubular intermediate connecting rods 22; one end of the first connecting rod 21 is sleeved with one end of the intermediate connecting rod 22, and two adjacent intermediate connecting rods 22 are sleeved with each other; and

one end of the second connecting rod 23 is sleeved with one end of the intermediate connecting rod 22 away from the first connecting rod 21. Thus, the supporting pole 2 is formed.

[0036] One end of the first connecting rod 21 close to the intermediate connecting rod 22 is a first insertion end 211; one end of the intermediate connecting rod 22 away from the first connecting rod 21 is a second insertion end 221; an outer diameter of the first insertion end 211 is matched with an inner diameter of one end of the intermediate connecting rod 22 away from the second insertion end 221; an outer diameter of the second insertion end 221 is matched with an inner diameter of one end of the second connecting rod 23 close to the intermediate connecting rod 22; the first insertion end 211 is arranged inside one end of the intermediate connecting rod 22 away from the second insertion end 221; and the second insertion end 221 close to the second connecting rod 23 is arranged inside one end of the second connecting rod 23 close to the intermediate connecting rod 22. For two adjacent intermediate connecting rods 22, the second insertion end 221 of one intermediate connecting rod 22 is arranged at one end of the other intermediate connecting rod 22 away from the first connecting rod 21, so as to assemble the first connecting rod 21, the second connecting rod 23, and the plurality of intermediate connecting rods 22 to form the supporting pole 2. Specifically, a length of the first insertion end 211 can be at least one-fifth of a length of the first connecting rod 21, and a length of the second insertion end 221 can be at least one-fifth of a length of the intermediate connecting rod 22, so as to improve the stability of connection between the first connecting rod 21 and the intermediate connecting rod 22, connection between two adjacent intermediate connecting rods 22, and connection between the second connecting rod 23 and the intermediate connecting rod 22, and to prevent the supporting pole 2 from falling off during bending.

[0037] In practical applications, a first end cover 212 is arranged at one end of the first connecting rod 21 away from the first insertion end 211; a second end cover 222 is arranged at one end of the second connecting rod 23 away from the intermediate connecting rod 22; a rope body 24 is connected between the first end cover 212 and the second end cover 222; the rope body 24 is an elastic band; and the rope body 24 passes through the first connecting rod 21, the second connecting rod 23, and the plurality of intermediate connecting rods 22. After the first connecting rod 21, the second connecting rod 23, and the plurality of intermediate connecting rods 22 are assembled to form the supporting pole 2, the rope body 24 is stretched. An acting force of the stretching of the rope body 24 can be used to effectively improve the stability of connection between the first connecting rod 21 and the intermediate connecting rod 22, connection between two adjacent intermediate connecting rods 22, and connection between the second connecting rod 23 and the intermediate connecting rod 22.

[0038] In practical applications, referring to FIG. 1, the sun shade cloth 1 can be square, and the through hole 11 extends from one end of the sun shade cloth 1 to the other end of the sun shade cloth 1. Of course, in other embodiments, the sun shade cloth 1 can also be elliptical, circular, triangular, irregularly shaped, or the like.

[0039] In one embodiment, a length and width of the sun shade cloth 1 are both greater than half of the length of the supporting pole 2, so that the sun shade cloth 1 can occupy the longer arc-shaped supporting pole 2 when supported by the supporting pole 2, and the two ends of the sun shade cloth 1 can be as close as possible to the two ends of the supporting pole 2, that is, as close as possible to a bottom surface, which further increases the probability that the sun shade cloth 1 will not move relative to the supporting pole 2 when blown by the wind, and improves the stability of mounting of the outdoor shading device in this embodiment.

[0040] A ratio between the length of the sun shade cloth 1 to the width of the sun shade cloth is greater than 1.2. The through hole 11 is arranged along a longer edge of the sun shade cloth 1 to increase a supporting force for supporting the sun shade cloth 1, and it is convenient for the sun shade cloth 1 to floats up with the wind.

[0041] In practical applications, the sun shade cloth 1 can have the width of 2.3 m and the length of 3 m, and the supporting pole 2 can have the length of 5.6 m. In one embodiment, the sun shade cloth 1 can also have the width of 2.65 m and the length of 5.05 m, and the supporting pole 2 can have the length of 7.85 m or the like. A manufacturer can limit the size of the sun shade cloth 1 and the length, radius, and the like of the supporting pole 2 according to a size of the shading space formed by the outdoor shading device. The size of the sun shade cloth 1 and the length of the supporting pole 2 will not be limited here.

[0042] It should be noted that all directional indications (such as up, down, left, right, front, back...) in the embodiments of the present disclosure are only used to explain a relative positional relationship between components, motion situations, etc. at a certain specific attitude (as shown in the figures). If the specific attitude changes, the directional indication also correspondingly changes.

[0043] In addition, the descriptions of "first", "second", etc. in the present disclosure are only used for descriptive purposes, and cannot be understood as indicating or implying its relative importance or implicitly indicating the number of technical features indicated. Therefore, features defined by "first" and "second" can explicitly instruct or impliedly include at least one feature. In addition, "and/or" in the entire text includes three solutions. A and/or B is taken as an example, including technical solution A, technical solution B, and technical solutions that both A and B satisfy. In addition, the technical solutions between the various embodiments can be combined with each other, but it needs be based on what can be achieved by those of ordinary skill in the art. When the combination of the technical solutions is contradictory

or cannot be achieved, it should be considered that such a combination of the technical solutions does not exist, and is not within the scope of protection claimed by the present disclosure.

[0044] The above descriptions are only preferred embodiments of the present disclosure, and are not intended to limit the patent scope of the present disclosure. Any equivalent structural transformation made by using the content of the specification and the drawings of the present disclosure under the invention idea of the present disclosure, directly or indirectly applied to other related technical fields, shall all be included in the scope of patent protection of the present disclosure.

Claims

1. An outdoor shading device, comprising a piece of sun shade cloth and a supporting pole, wherein the supporting pole comprises a plurality of connecting rods connected end to end; and two adjacent connecting rods are detachably connected to each other;
   the connecting rods are tough; one side of the sun shade cloth is provided with a through hole; one end of the supporting pole passes through the through hole; and during use, the supporting pole is bent to form an arc.

2. The outdoor shading device according to claim 1, wherein a fixing band is arranged at positions of the sun shade cloth close to one end and/or two ends of the through hole; and the fixing band is configured to be wound on the supporting pole to prevent relative motion between the sun shade cloth and the supporting pole.

3. The outdoor shading device according to claim 2, wherein the fixing band is an elastic band, and at least one adhesive tape configured to increase a friction force is arranged on the elastic band.

4. The outdoor shading device according to claim 2, wherein the outdoor shading device further comprises at least one anchoring member; and the anchoring member is connected to the supporting pole or a position of the sun shade cloth connected to the supporting pole through a rope.

5. The outdoor shading device according to claim 3, wherein a length of the fixing band after stretching is greater than twice a perimeter of each of the connecting rods, and one end of the fixing band is detachably connected to a tail end position of the fixing band close to the through hole after being stretched and wound on the supporting pole for at least two turns.

6. The outdoor shading device according to claim 5, wherein one end of the fixing band is fixed at the tail end position of the fixing band close to the through hole through a detachable structure after being stretched and wound on the supporting pole for at least two turns, and the detachable structure is a snap fastener or a hook and loop fastener.

7. The outdoor shading device according to claim 6, wherein the fixing band is provided with a male buckle at the tail end position close to the through hole, and the fixing band is provided with a female buckle at one end away from the sun shade cloth.

8. The outdoor shading device according to claim 7, wherein a position of the fixing band that is at least one-fifth of a length of the fixing band is sewn with the sun shade cloth, and the male buckle is located at a position where the fixing band overlaps the sun shade cloth.

9. The outdoor shading device according to claim 8, wherein the plurality of connecting rods comprise a tubular first connecting rod, a tubular second connecting rod, and a plurality of tubular intermediate connecting rods; one end of the first connecting rod is sleeved with one end of the intermediate connecting rod, and two adjacent intermediate connecting rods are sleeved with each other; and one end of the second connecting rod is sleeved with one end of the intermediate connecting rod away from the first connecting rod.

10. The outdoor shading device according to claim 9, wherein one end of the first connecting rod close to the intermediate connecting rod is a first insertion end; one end of the intermediate connecting rod away from the first connecting rod is a second insertion end; an outer diameter of the first insertion end is matched with an inner diameter of one end of the intermediate connecting rod away from the second insertion end; an outer diameter of the second insertion end is matched with an inner diameter of one end of the second connecting rod close to the intermediate connecting rod; the first insertion end is arranged inside one end of the intermediate connecting rod away from the second insertion end; the second insertion end close to the second connecting rod is arranged inside one end of the second connecting rod close to the intermediate connecting rod; and for two adjacent intermediate connecting rods, the second insertion end of one intermediate connecting rod is arranged at one end of the other intermediate connecting rod away from the first connecting rod.

11. The outdoor shading device according to claim 10, wherein a first end cover is arranged at one end of the

first connecting rod away from the first insertion end; a second end cover is arranged at one end of the second connecting rod away from the intermediate connecting rod; a rope body is connected between the first end cover and the second end cover; the rope body is an elastic band; and the rope body passes through the first connecting rod, the second connecting rod, and the plurality of intermediate connecting rods.

12. The outdoor shading device according to claim 1, wherein the sun shade cloth is square, and the through hole extends from one end of the sun shade cloth to the other end of the sun shade cloth.

13. The outdoor shading device according to claim 1, wherein a length and width of the sun shade cloth are both greater than half of the length of the supporting pole.

14. The outdoor shading device according to claim 1, wherein a ratio between the length of the sun shade cloth to the width of the sun shade cloth is greater than 1.2.

15. The outdoor shading device according to claim 1, wherein a material of the supporting pole is aluminum alloy, and a material of the sun shade cloth is nylon.

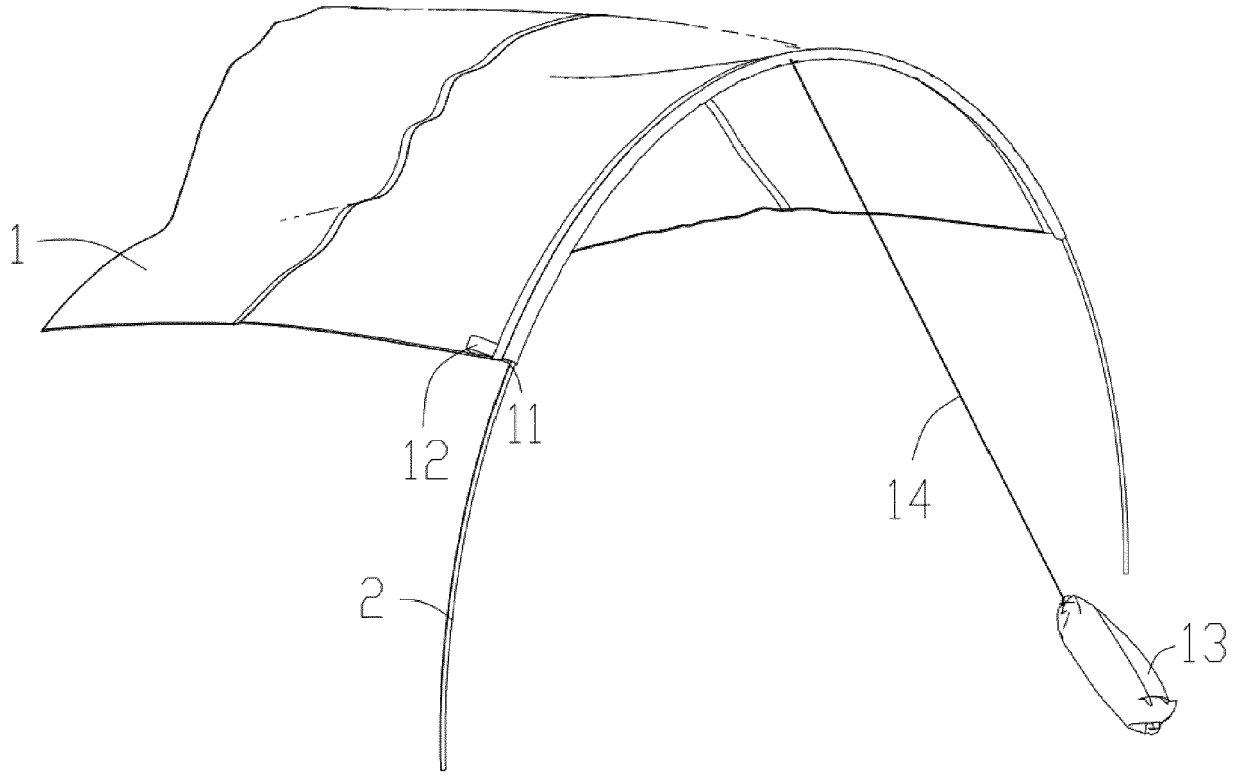

FIG. 1

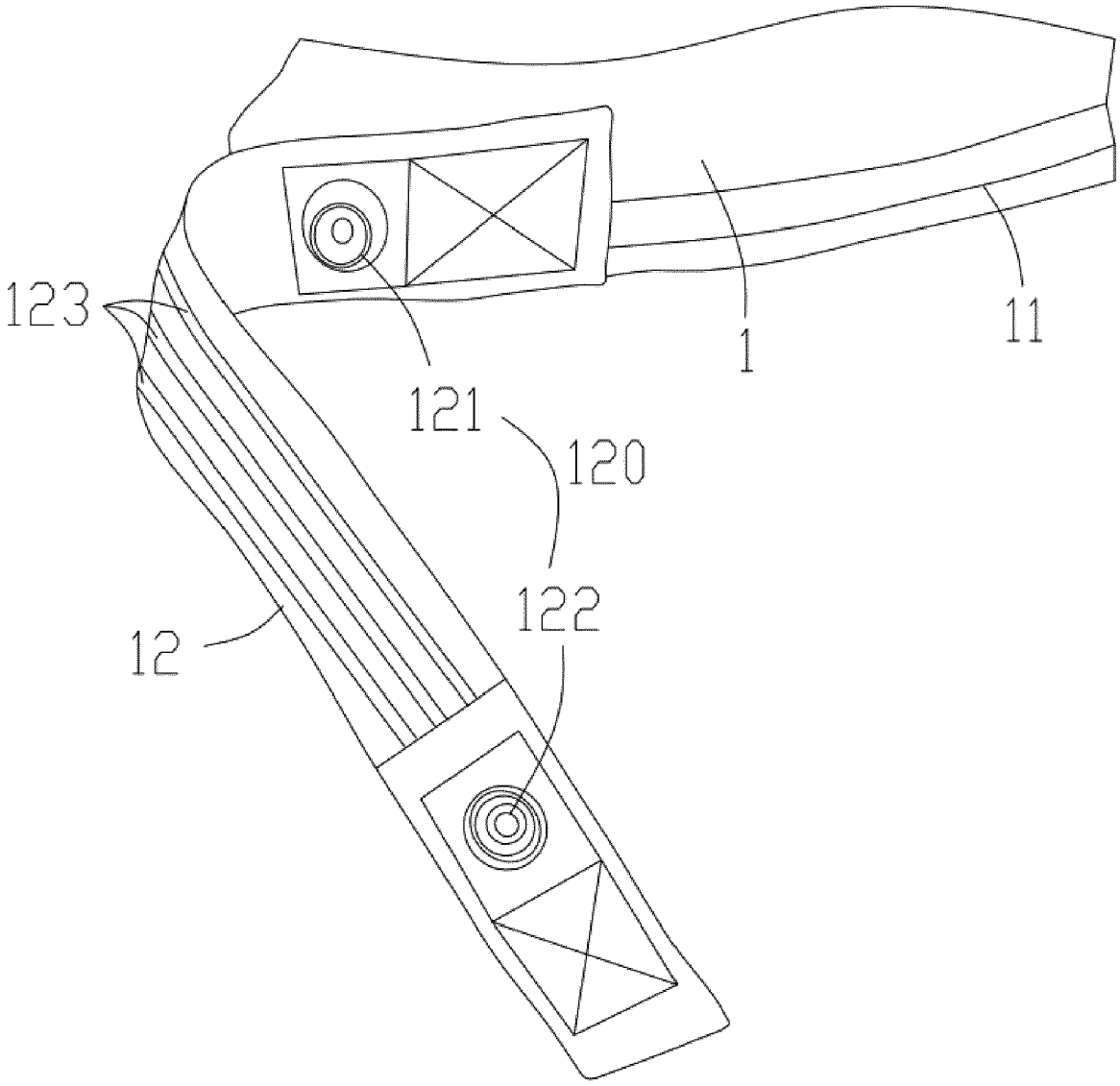

FIG. 2

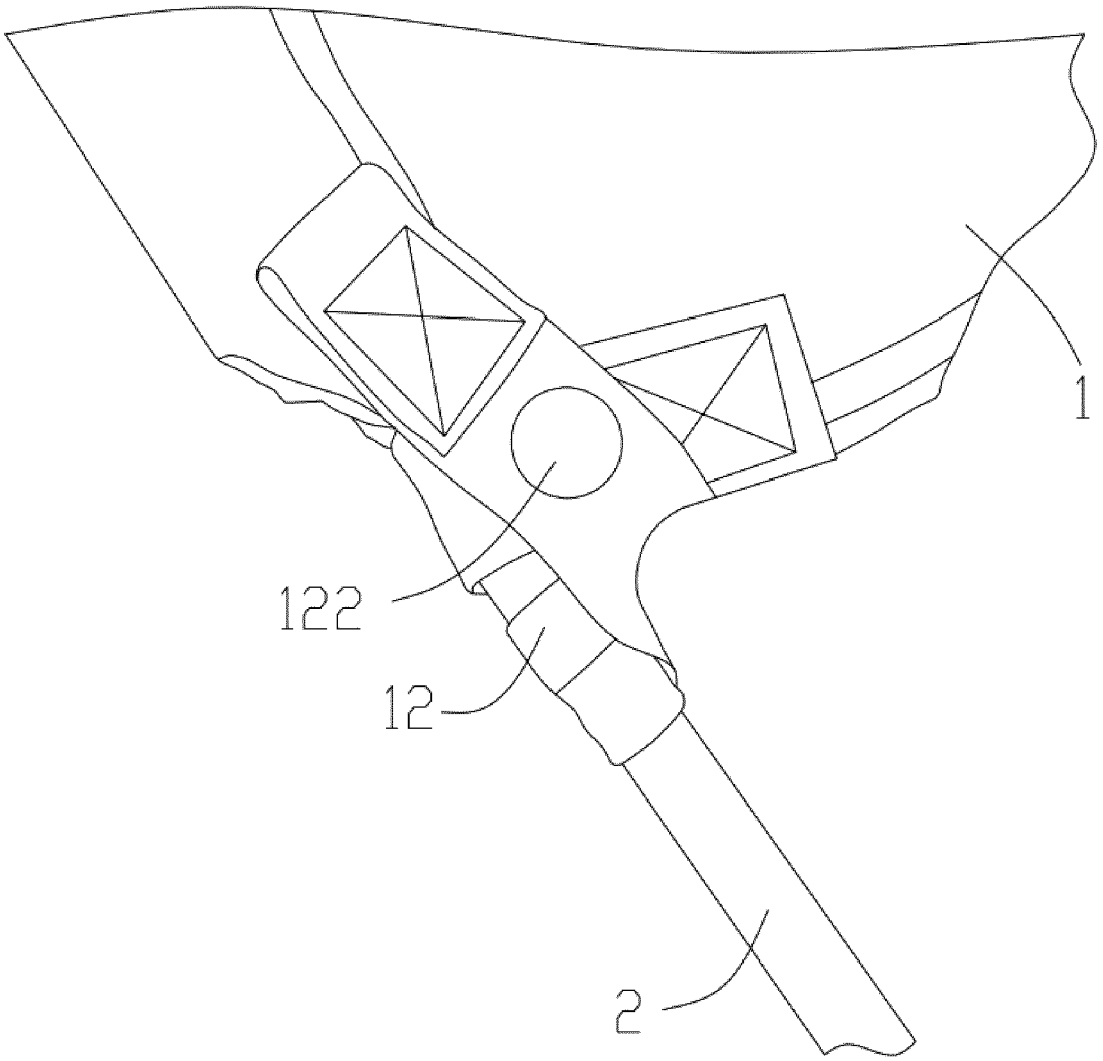

FIG. 3

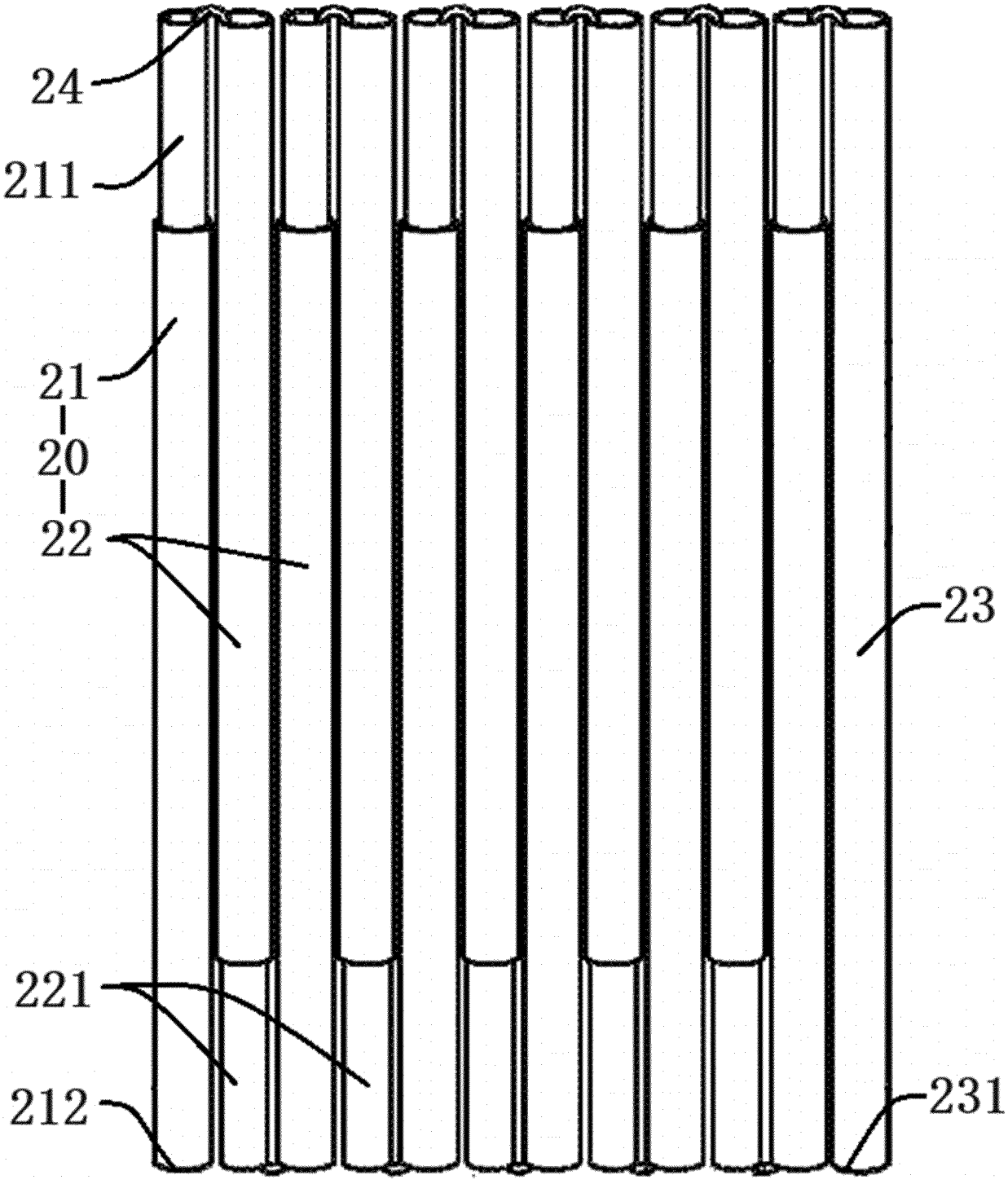

FIG. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 23 22 0324

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2023/126867 A1 (BARNES DANE BROOKS [US] ET AL) 27 April 2023 (2023-04-27) * paragraphs [0082] - [0088]; figures 1-3 * -----	1-15	INV. E04H15/00 E04H15/36 E04H15/64
X	CN 218 668 796 U (DONGGUAN GAOLING TECH CO LTD) 21 March 2023 (2023-03-21) * the whole document * -----	1-15	ADD. A45B23/00

TECHNICAL FIELDS SEARCHED (IPC)

E04H
A45F
A45B

The present search report has been drawn up for all claims

1

Place of search	Date of completion of the search	Examiner
Munich	15 May 2024	Rosborough, John

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 23 22 0324

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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