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(54) **QUICK OPENING AND CLOSING SUNSHADE**

(57) The present application discloses a quick opening and closing sunshade, including an umbrella column and an umbrella disk assembly, the umbrella disk assembly including an upper umbrella disk and a lower umbrella disk, the upper umbrella disk being hingedly fitted with the umbrella column and arranged at the top end of the umbrella column, the lower umbrella disk being hingedly fitted with the upper umbrella disk and moving up and down along the umbrella column, wherein the umbrella column is provided with an umbrella opening mechanism, the umbrella opening mechanism includes a rocker handle, a winding assembly, and a cord, a through hole is provided in the side wall of the umbrella column, the position of the through hole is higher than the maximum rising height of the lower umbrella disk, one end of the cord is fixedly connected to the winding assembly, and the other end extends upward along the inner cavity of the umbrella column, passes through the through hole, and is then fixedly connected to the lower umbrella disk, and the rocker handle is in driving connection with the winding assembly. The sunshade can be easily opened by opening and closing through a rocker handle. At the same time, the rocker handle will not move and is fixed to the umbrella column. The canopy can be opened and closed only by rotating the rocker handle, and the opening and closing speed is high and the operation is simple. It is convenient for petite people to use, which improves the practicability of the sunshade.

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Description

Technical field

[0001] The present application belongs to the technical field of sunshades, in particular to a quick opening and closing sunshade.

Background

[0002] Sunshades, as outdoor leisure appliances, are widely used in leisure places such as squares, beaches, parks, and courtyards, providing people with a comfortable cool space. An existing sunshade generally consists of an umbrella pole, an umbrella frame, and umbrella cloth. The umbrella frame is connected to the top of the umbrella pole. The umbrella pole mainly supports the umbrella frame, and the umbrella cloth is connected to the umbrella frame. When the umbrella frame is opened, the umbrella cloth is supported to open accordingly, so that the sunshade is opened. Sunshades need to achieve different shade areas in different occasions. Large sunshades used outdoors are usually large and high, and are generally opened and closed by hand pushing, pulling cord, rocker handle, etc.

[0003] For a conventional rocker handle type sunshade, its rocker handle is arranged on an armrest shell, and the rocker handle will move up along the umbrella column together with the armrest shell during the opening process of a canopy, which makes it extremely inconvenient for those petite people to use the sunshade. Moreover, the umbrella body cannot be fully opened or the umbrella needs to be closed by means of tools, which reduces the practicability of the product.

Summary

[0004] In order to make up for the deficiencies of the prior art, the present application provides a technical solution of a quick opening and closing sunshade, which is stable in opening and closing, and simple and convenient to operate.

[0005] The quick opening and closing sunshade includes an umbrella column and an umbrella disk assembly, the umbrella disk assembly including an upper umbrella disk and a lower umbrella disk, wherein the upper umbrella disk is hingedly fitted with the umbrella column and arranged at the top end of the umbrella column, the lower umbrella disk is hingedly fitted with the upper umbrella disk and moves up and down along the umbrella column, the umbrella column is provided with an umbrella opening mechanism, the umbrella opening mechanism includes a rocker handle, a winding assembly, and a cord, a through hole is provided in the side wall of the umbrella column, the position of the through hole is higher than the maximum rising height of the lower umbrella disk, one end of the cord is fixedly connected to the winding assembly, and the other end extends upward along the inner cavity of the umbrella column, passes through the through hole, and is then fixedly connected to the lower umbrella disk, and the rocker handle is in driving connection with the winding assembly.

[0006] Further, the winding assembly includes paired shells, a rocker handle shaft is provided between the paired shells, the rocker handle shaft is sleeved with a spool, and the cord is fixedly installed on the spool.

[0007] Further, the paired shells are fixedly installed in the inner cavity of the umbrella column, and the rocker handle is fixedly connected to the rocker handle shaft; the front end of the rocker handle shaft is provided with a torsion spring, the rocker handle shaft is sleeved with the torsion spring, and the position of the torsion spring is limited in the paired shell on the front side; and the rear end of the rocker handle shaft is provided with a flange bearing, the flange bearing is arranged in the paired shell on the rear side, and the rocker handle is inserted into the inner ring of the flange bearing.

[0008] Further, a pulley frame is also arranged on the outer wall of the umbrella column, the pulley frame is embedded and installed in the through hole, two groups of pulleys are arranged on the pulley frame, one group of pulleys is arranged in the inner cavity of the umbrella column, the other group of pulleys is arranged outside the umbrella column, and the cord is guided by the pulleys.

[0009] Further, a guide tube is inserted at the top end of the umbrella column, the guide tube rises or falls on the umbrella column during the opening and closing process, the upper umbrella disk includes long ribs and a notch, the notch is fixedly installed on the guide tube, the long ribs are hinged on the notch, and the top end of the guide tube is also fixedly provided with an umbrella cap.

[0010] Further, the umbrella column is also provided with an auxiliary runner, the position of the auxiliary runner is limited between the upper umbrella disk and the lower umbrella disk, stretchers are hingedly arranged on the auxiliary runner, and the other ends of the stretchers are hingedly fitted with the upper umbrella disk.

[0011] Further, the lower umbrella disk includes short ribs and a runner, one ends of the short ribs are hingedly arranged on the runner, and the other ends are hinged with the upper umbrella disk.

[0012] Further, the umbrella column is sleeved with the runner, the runner is fixedly provided with a snap ring, a tension spring is arranged on the snap ring, and the cord is fixedly connected to the tension spring.

[0013] Further, fixing seats are arranged on each long rib; and
the end of each long rib is provided with a tube plug.

[0014] Further, an umbrella nest is arranged on the umbrella column, the umbrella nest includes an umbrella nest aluminum disk, screws, and rib hanging clamping heads, and the rib hanging clamping heads are fixedly installed on the upper side and/or the lower side of the umbrella nest aluminum disk through the screws.

[0015] Compared with prior art, the present application

has the following advantages. The sunshade can be easily opened by opening and closing through a rocker handle. At the same time, the rocker handle will not move and is fixed to the umbrella column. By rotating the rocker handle to tighten the cord, the runner moves up and the notch moves down at the same time to open the canopy, and the upper umbrella disk moves down together with the guide tube. The canopy can be opened and closed only by rotating the rocker handle, and the opening and closing speed is high and the operation is simple. It is convenient for petite people to use, and the opening and closing process is smooth with moderate strength, which improves the practicability of the sunshade.

Brief Description of Drawings

[0016]

FIG. 1 is a schematic structural diagram of the sunshade of the present application in a closed state;
FIG. 2 is a schematic structural diagram 1 of the sunshade of the present application in an open state;
FIG. 3 is a schematic structural diagram 2 of the sunshade of the present application in an open state;
FIG. 4 is a schematic diagram of the exploded structure of the sunshade of the present application in an open state;
FIG. 5 is a schematic diagram of an umbrella nest structure; and
FIG. 6 is a schematic assembly diagram of the umbrella nest.

Detailed Description

[0017] The present application will be further described below in conjunction with the accompanying drawings.

[0018] As shown in FIGs. 1-6, a quick opening and closing sunshade includes an umbrella column 1 and an umbrella disk assembly 2, the umbrella disk assembly 2 including an upper umbrella disk 201 and a lower umbrella disk 202, wherein the upper umbrella disk 201 is hingedly fitted with the umbrella column 1 and arranged at the top end of the umbrella column 1, the lower umbrella disk 202 is hingedly fitted with the upper umbrella disk 201 and moves up and down along the umbrella column 1. The umbrella column 1 is provided with an umbrella opening mechanism 3, the umbrella opening mechanism 3 includes a rocker handle 301, a winding assembly 302, and a cord 303, a through hole 101 is provided in the side wall of the umbrella column 1, the position of the through hole 101 is higher than the maximum rising height of the lower umbrella disk 202, one end of the cord 303 is fixedly connected to the winding assembly 302, and the other end extends upward along the inner cavity of the umbrella column 1, passes through the through hole 101, and is then fixedly connected to the lower umbrella disk 202, and the rocker handle 301 is in driving connection with the winding assembly 302.

[0019] The winding assembly 302 includes paired shells 3021, a rocker handle shaft 3022 is provided between the paired shells 3021, the rocker handle shaft 3022 is sleeved with a spool 3023, and the cord 303 is fixedly installed on the spool 3023. The paired shells 3021 are fixedly installed in the inner cavity of the umbrella column 1, and the rocker handle 301 is fixedly connected to the rocker handle shaft 3022. The front end of the rocker handle shaft 3022 is provided with a torsion spring 3024, the rocker handle shaft 3022 is sleeved with the torsion spring 3024, and the position of the torsion spring 3024 is limited in the paired shell 3021 on the front side. The rear end of the rocker handle shaft 3022 is provided with a flange bearing 3025, the flange bearing 3025 is arranged in the paired shell 3021 on the rear side, and the rocker handle 301 is inserted into the inner ring of the flange bearing 3025.

[0020] A pulley frame 104 is also arranged on the outer wall of the umbrella column 1, the pulley frame 104 is embedded and installed in the through hole 101, two groups of pulleys 105 are arranged on the pulley frame 104, one group of pulleys 105 is arranged in the inner cavity of the umbrella column 1, the other group of pulleys is arranged outside the umbrella column 1, and the cord is guided by the pulleys 105.

[0021] A guide tube 102 is inserted at the top end of the umbrella column 1, the guide tube 102 rises or falls on the umbrella column 1 during the opening and closing process, the upper umbrella disk 201 includes long ribs 2011 and a notch 2012, the notch 2012 is fixedly installed on the guide tube 102, the long ribs 2011 are hinged on the notch 2012, and the top end of the guide tube 102 is also fixedly provided with an umbrella cap 103. The end of each long rib 2011 is provided with a tube plug 2014. The lengths of the long ribs 2011 are the same or different, and are adjusted according to the shape of the sunshade after opened.

[0022] The umbrella column 1 is also provided with an auxiliary runner 203, the position of the auxiliary runner 203 is limited between the upper umbrella disk 201 and the lower umbrella disk 202, stretchers 2031 are hingedly arranged on the auxiliary runner 203, and the other ends of the stretchers 2031 are hingedly fitted with the upper umbrella disk 201. The stretchers 2031 are arranged to enhance the stability of the sunshade after opened. The lower umbrella disk 202 includes short ribs 2021 and a runner 2022, one ends of the short ribs 2021 are hingedly arranged on the runner 2022, and the other ends are hinged with the upper umbrella disk 201. The umbrella column 1 is sleeved with the runner 2022, the runner 2022 is fixedly provided with a snap ring 2023, a tension spring 2024 is arranged on the snap ring 2023, and the cord 303 is fixedly connected to the tension spring 2024. Fixing seats 2013 are arranged on the long rib 2011. The short ribs 2021 on the lower umbrella disk 202 and the stretchers 2031 on the auxiliary runner 203 are hinged on the fixing seats 2013 respectively.

[0023] An umbrella nest is arranged on the umbrella

column 1. The umbrella nest includes the notch 2012, the auxiliary runner 203, and the runner 2022. The umbrella nest includes an umbrella nest aluminum disk 401, screws 402, and rib hanging clamping heads 403, and the rib hanging clamping heads 403 are fixedly installed on the upper side and/or the lower side of the umbrella nest aluminum disk 401 through the screws 402. The umbrella nest aluminum disk 401 sleeves the umbrella column 1, each rib hanging clamping head 403 is provided with a pin shaft, and the long ribs 2011, the stretchers 2031, and the short ribs 2021 are hingedly fitted in corresponding rib hanging clamping heads 403 respectively.

[0024] The bottom of the umbrella column 1 is provided with a base 4, and the umbrella column 1 is sleeved with the base 4. The base 4 is provided with a turntable, and the umbrella column 1 is fixedly connected with the turntable. The umbrella column 1 is rotated through the turntable.

[0025] The sunshade can be easily opened by opening and closing through a rocker handle. At the same time, the rocker handle will not move and is fixed to the umbrella column 1. By rotating the rocker handle 301 to tighten the cord 303, the runner 2022 moves up and the notch 2012 moves down at the same time to open the canopy, and the upper umbrella disk 201 moves down together with the guide tube 102. The canopy can be opened and closed only by rotating the rocker handle 301, and the opening and closing speed is high and the operation is simple. It is convenient for petite people to use, and the opening and closing process is smooth with moderate strength, which improves the practicability of the sunshade.

Claims

1. A quick opening and closing sunshade, comprising an umbrella column (1) and an umbrella disk assembly (2), the umbrella disk assembly (2) comprising an upper umbrella disk (201) and a lower umbrella disk (202), the upper umbrella disk (201) being hingedly fitted with the umbrella column (1) and arranged at the top end of the umbrella column (1), the lower umbrella disk (202) being hingedly fitted with the upper umbrella disk (201) and moving up and down along the umbrella column (1), wherein the umbrella column (1) is provided with an umbrella opening mechanism (3), the umbrella opening mechanism (3) comprises a rocker handle (301), a winding assembly (302), and a cord (303), a through hole (101) is provided in the side wall of the umbrella column (1), the position of the through hole (101) is higher than the maximum rising height of the lower umbrella disk (202), one end of the cord (303) is fixedly connected to the winding assembly (302), and the other end extends upward along the inner cavity of the umbrella column (1), passes through the through hole (101), and is then fixedly connected to the lower umbrella disk (202), and the rocker handle (301) is in driving connection with the winding assembly (302).

2. The quick opening and closing sunshade according to claim 1, wherein the winding assembly (302) comprises paired shells (3021), a rocker handle shaft (3022) is provided between the paired shells (3021), the rocker handle shaft (3022) is sleeved with a spool (3023), and the cord (303) is fixedly installed on the spool (3023).

3. The quick opening and closing sunshade according to claim 2, wherein the paired shells (3021) are fixedly installed in the inner cavity of the umbrella column (1), and the rocker handle (301) is fixedly connected to the rocker handle shaft (3022);

   the front end of the rocker handle shaft (3022) is provided with a torsion spring (3024), the rocker handle shaft (3022) is sleeved with the torsion spring (3024), and the position of the torsion spring (3024) is limited in the paired shell (3021) on the front side; and
   the rear end of the rocker handle shaft (3022) is provided with a flange bearing (3025), the flange bearing (3025) is arranged in the paired shell (3021) on the rear side, and the rocker handle (301) is inserted into the inner ring of the flange bearing (3025).

4. The quick opening and closing sunshade according to claim 1, wherein a pulley frame (104) is also arranged on the outer wall of the umbrella column (1), the pulley frame (104) is embedded and installed in the through hole (101), two groups of pulleys (105) are arranged on the pulley frame (104), one group of pulleys (105) is arranged in the inner cavity of the umbrella column (1), the other group of pulleys is arranged outside the umbrella column (1), and the cord is guided by the pulleys (105).

5. The quick opening and closing sunshade according to claim 1, wherein a guide tube (102) is inserted at the top end of the umbrella column (1), the guide tube (102) rises or falls on the umbrella column (1) during the opening and closing process, the upper umbrella disk (201) comprises long ribs (2011) and a notch (2012), the notch (2012) is fixedly installed on the guide tube (102), the long ribs (2011) are hinged on the notch (2012), and the top end of the guide tube (102) is also fixedly provided with an umbrella cap (103).

6. The quick opening and closing sunshade according to claim 1, wherein the umbrella column (1) is also provided with an auxiliary runner (203), the position of the auxiliary runner (203) is limited between the

upper umbrella disk (201) and the lower umbrella disk (202), stretchers (2031) are hingedly arranged on the auxiliary runner (203), and the other ends of the stretchers (2031) are hingedly fitted with the upper umbrella disk (201).

7. The quick opening and closing sunshade according to claim 1, wherein the lower umbrella disk (202) comprises short ribs (2021) and a runner (2022), one ends of the short ribs (2021) are hingedly arranged on the runner (2022), and the other ends are hinged with the upper umbrella disk (201).

8. The quick opening and closing sunshade according to claim 7, wherein the umbrella column (1) is sleeved with the runner (2022), the runner (2022) is fixedly provided with a snap ring (2023), a tension spring (2024) is arranged on the snap ring (2023), and the cord (303) is fixedly connected to the tension spring (2024).

9. The quick opening and closing sunshade according to claim 5, wherein fixing seats (2013) are arranged on each long rib (2011); and the end of each long rib (2011) is provided with a tube plug (2014).

10. The quick opening and closing sunshade according to claim 1, wherein an umbrella nest is arranged on the umbrella column (1), the umbrella nest comprises an umbrella nest aluminum disk (401), screws (402), and rib hanging clamping heads (403), and the rib hanging clamping heads (403) are fixedly installed on the upper side and/or the lower side of the umbrella nest aluminum disk (401) through the screws (402).

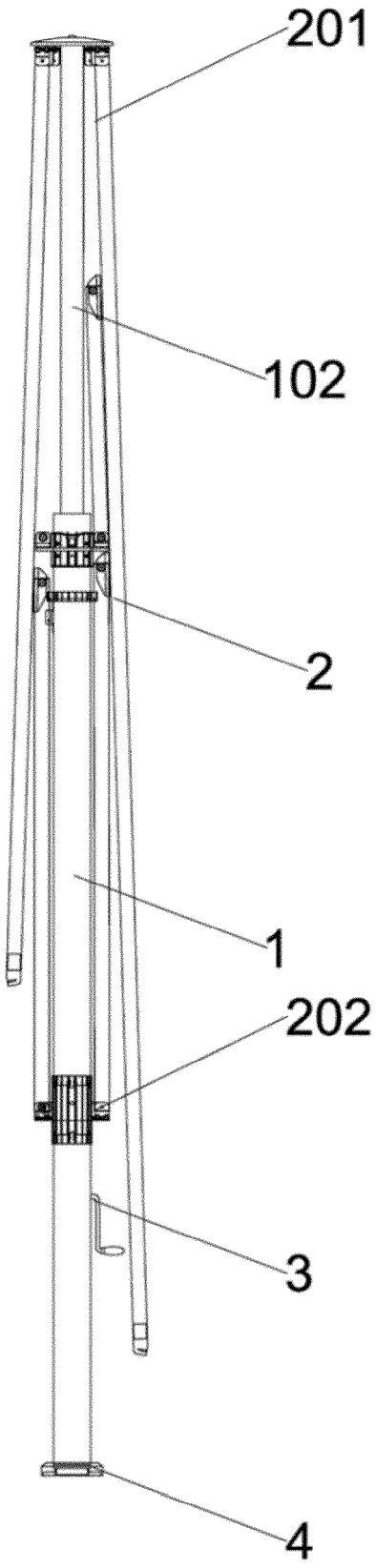

FIG. 1

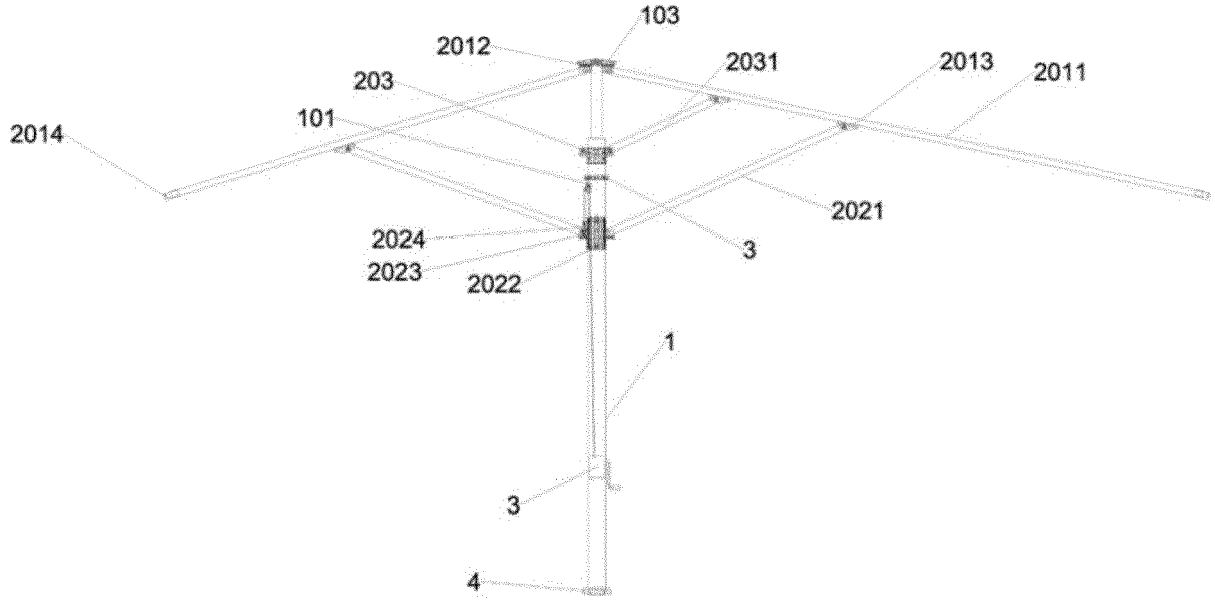
103
2012
2031
2013
2011
203
101
2014
2021
2024
3
2023
2022
1
3
4

FIG. 2

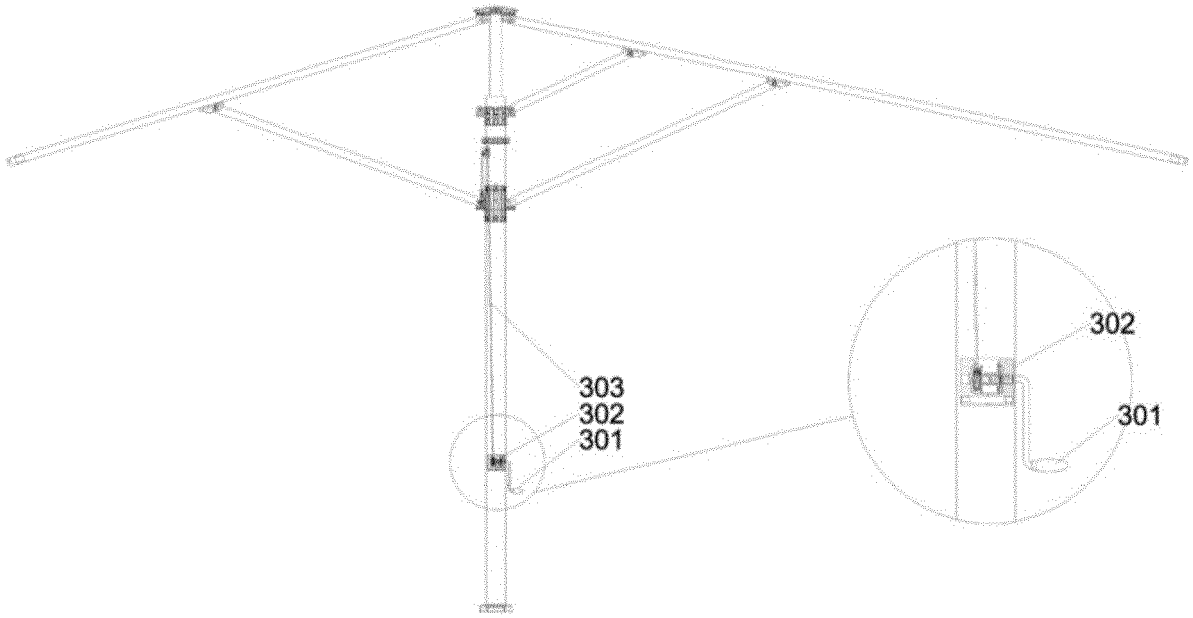
303
302
301
302
301

FIG. 3

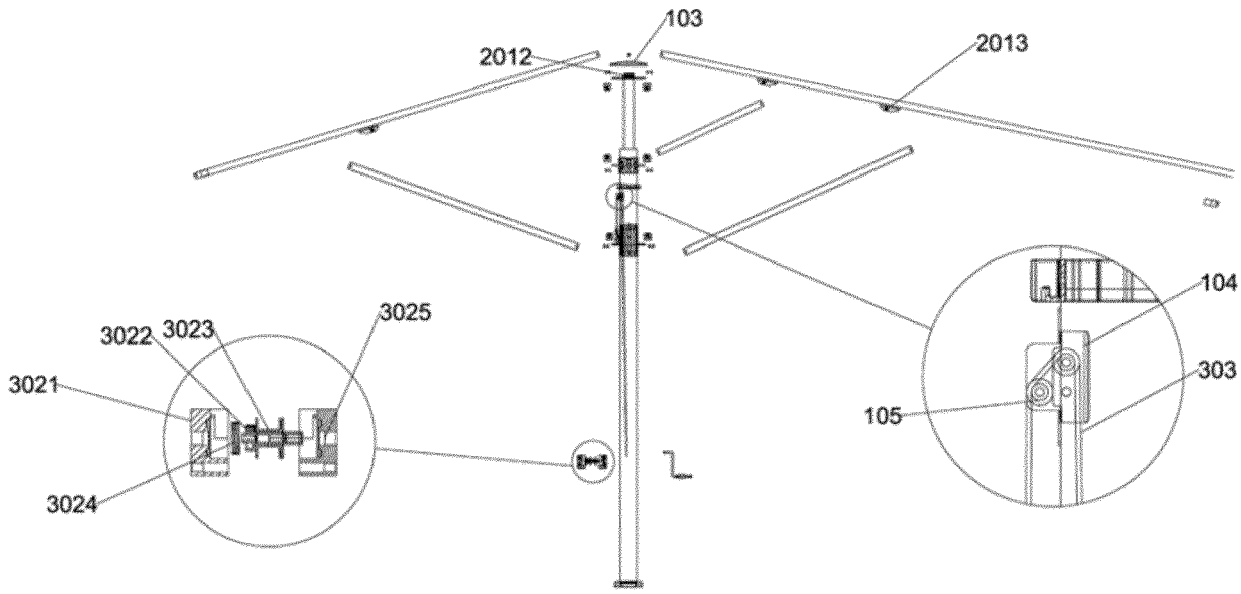

FIG. 4

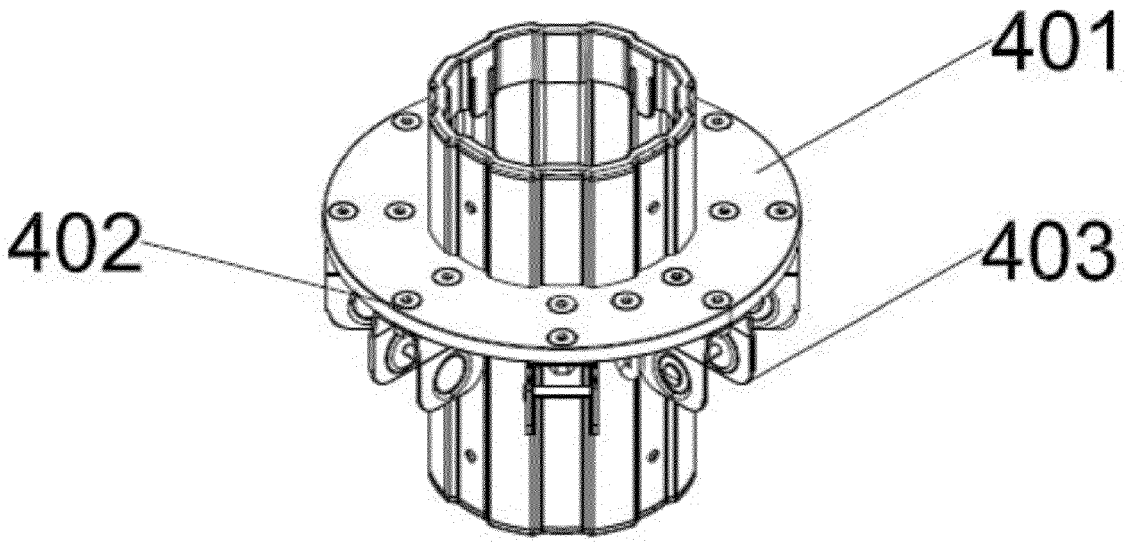

FIG. 5

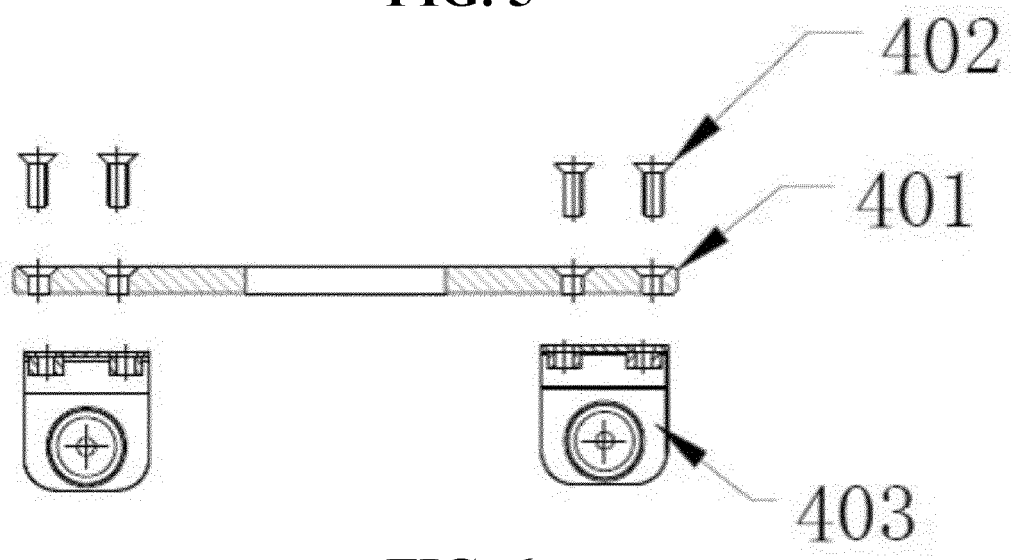

FIG. 6

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	26 May 2023	Frank, Lucia

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EUROPEAN SEARCH REPORT

Application Number
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X : particularly relevant if taken alone
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