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(54) **Base of Sunshade Umbrella**

(57) The present invention is a large-sized sunshade umbrella which is used at fixed site outdoor. The interior of the base is divided into several independent portions, a protection case which is mated with the base is brought to cover the base, and the devices of caster wheel which can be stretched-out and drawn-back are provided in the holes at the corners of the base. Sand or water as the counterweight in the base can be added or reduced freely. When the base needs to fix, the caster wheels are drawn-back into the base through manual regulation to make the base rest on the ground to increase the attaching force; when the umbrella needs to move, the four caster wheels are stretched-out from the base to contact with the ground, so that a man or woman can push the umbrella smoothly to the site where he or she intends to place it.

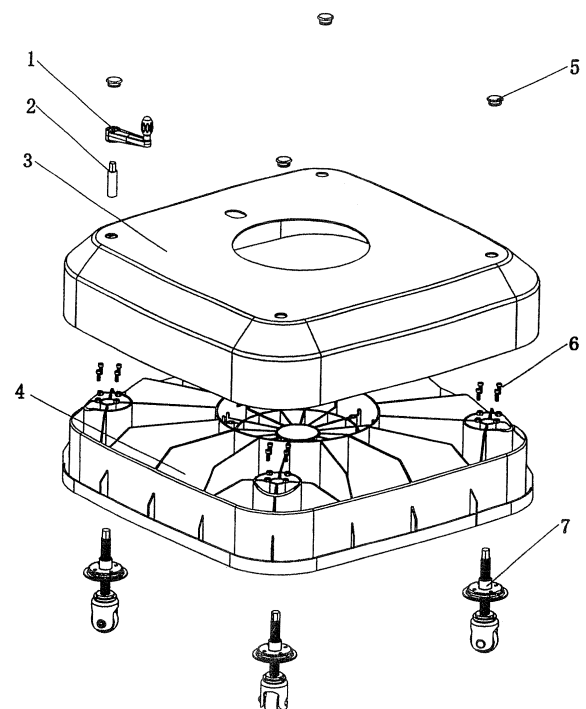


Fig. 1

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Description

Technical Field

[0001] The present invention relates to a large-sized sunshade umbrella used at fixed site outdoor, in particular, to a base of the sunshade umbrella.

Background Art

[0002] A large-sized sunshade umbrella used at fixed site outdoor, in particular a pendent umbrella, has very poor steadiness, because its umbrella face is so large as to catch wind easily. In order to steady an umbrella as a whole, its base must be very heavy in weight or have a large counterweight. A base of sunshade umbrella with a conventional structure has some problems, for example, its counterweight can not be regulated arbitrarily to make the base difficult to be attached to the ground more firmly; the umbrella as a whole is too heavy to move at will, etc.

Summary

[0003] The object of the present invention is to overcome the defects of the prior art and provide a base of umbrella, as a result, not only its counterweight can be regulated arbitrarily to make the base preferably attached to the ground, but also the umbrella as a whole can be move easily.

[0004] In order to achieve the object, the technical solution of the present invention is a base of umbrella, characterized in that the interior thereof is divided into several independent portions, a protecting case which is mated with the base is brought to cover it over, and the devices of caster wheel which can be stretched-out and drawn-back are provided in the holes at the corners of the base.

[0005] Said device of caster wheel which can be stretched-out and drawn-back comprises a lead screw, a holder of lead screw and a caster wheel, the caster wheel is fixed to the lead screw, the lead screw is thread-engaged with its holder, and the holder of lead screw is fixed to the base.

[0006] Said caster wheel comprises a fixing frame, a retainer ring, a plurality of steel balls, a riveted member, a positioning plate and a wheel. Based on the fixing frame, the upper steel balls are provided in the annular groove on the fixing frame, and the lead screw is inserted into the center hole of the fixing frame; the lower steel balls are supported by the positioning plate, and the wheel is rotatably fixed in the notch of the fixing frame with the riveted member as a shaft which is retained with the retaining ring at its tail.

[0007] A link rod is linked to the upper end of the lead screw, and a rotating handle is connected to the link rod.

[0008] Four caps are used to cover the holes for the lead screws on the protection case.

[0009] The advantageous effects of the present inven-

tion are as follows: sand or water as the counterweight of the base can be added or reduced freely; when the base needs to fix, the caster wheels are drawn-back into the base through manual regulation so as to make the base rest on the ground to increase the attaching force; when the umbrella needs to move, the four caster wheels are stretched-out from the base to contact with the ground, so that a man or woman can push the umbrella smoothly to the site where he or she intends to place it.

Brief Description of Drawings

[0010] An embodiment of the present invention will be described in detail in conjunction with the drawings.

Fig.1 is a general structural diagram of the present invention.

Fig.2 is an exploded view of the regulating device for caster wheel.

In these drawings, the reference numbers as follows :

[0011]

- | | |
|----|--------------------------|
| 1 | rotating handle |
| 2 | link rod |
| 3 | protecting case for base |
| 4 | base |
| 5 | caps |
| 6 | bolts and nuts |
| 7 | caster wheels |
| 8 | lead screw |
| 9 | holder for lead screw |
| 10 | fixing frame |
| 11 | retaining ring |
| 12 | steel balls |
| 13 | riveted member |
| 14 | positioning plate |
| 15 | wheel |

Detail Description of Preferred Embodiment

[0012] As shown in drawings, a through-hole for insertion of the umbrella pole is provided in the center of the rectangular base 4, with the hole as a center, the interior of base 4 is divided radially into several independent portions, and four through-holes for caster wheels are provided at the corners of base 4; a through-hole for insertion of the umbrella pole is provided in the center of protection case 3 which is mated with base 4, four through-holes for insertion of link rod 2 are provided at the corners, and protection case 3 is brought to cover over base 4. Holder 9 of lead screw has the female thread which is engaged with lead screw 8, so that lead screw 8 is screwed into its holder 9, and each of these four holders 9 of lead screw is fixed to base 4 by four sets of socket cap bolts and nuts which pass through the holes on holder 9, so that it can bear the heavy burden of 100Kg; then lead

screw 8 with a caster wheel is inserted to the corresponding hole on base 4, thereafter, the independent portions of base 4 are filled with a certain amount of sand or water as required, finally, protection case 3 is brought to cover base 4, and caps 5 are brought to cover the respective holes on case 3.

[0013] The device 7 of caster wheel which can be stretched-out and drawn-back is composed of the caster wheel assemblies such as lead screw 8, fixing frame 10, retaining ring 11, riveted member 13, positioning plate 14, wheel 15, etc. Based on fixing frame 10, upper steel balls 12 are provided in annular groove on fixing frame 10, lead screw 8 is inserted into the center hole of fixing frame 10, so that the flange at its lower end is pressed against upper steel balls 12; lower steel balls 12 are supported by positioning plate 14 which is fixed to the lower end of lead screw 8, wheel 15 is positioned in the rectangular notch of fixing frame 10 with riveted member 13 as a shaft which passes through the center hole, and the riveted member 13 is retained with retaining ring 11 at its tail.

[0014] During being used, when base 4 needs to move, the procedure is as follows: removing caps 5 from protection case 3, inserting link rod 2 into hex-hollow-head at upper end of lead screw 8, putting rotating handle 1 around link rod 2 and rotating it in clockwise direction until caster wheel 7 is stretched-out from base 4 by sufficient distance, and doing such for all of four caster wheels 7 to make them on the same plane, in this way, the umbrella with the base can be pushed smoothly. When the umbrella reaches the desired site, handle 1 and link rod 2 are rotated in counterclockwise direction until all of four caster wheels 7 are drawn-back into base 4, so that base 4 can be fixed firmly on the ground by the aid of the weight of sand or water in its several independent portions.

[0015] One of the preferred embodiments of the present invention has been described in the above, however, it should be apparent for those skilled in the art that various variations and improvements can be done without departure from the principle of the present invention when they fall in the scope defined by the appendant claims.

Claims

1. A base of sunshade umbrella, **characterized in that** the interior of the base is divided into several independent portions, a protection case which is mated with the base is brought to cover over the base, and devices of caster wheel which can be stretched-out and drawn-back are provided in the holes at the corners of the base.
2. The base of sunshade umbrella according to claim 1, **characterized in that** said device of caster wheel which can be stretched-out and drawn-back com-

prises a lead screw, a holder of lead screw and a caster wheel, the caster wheel is fixed to the lead screw, the lead screw is thread-engaged with its holder, and the holder of lead screw is fixed to the base.

3. The base of sunshade umbrella according to claim 2, **characterized in that** said caster wheel comprises a fixing frame, a retainer ring, a plurality of steel balls, a riveted member, a positioning plate and a wheel, based on the fixing frame, the upper steel balls are provided in the annular groove on the fixing frame, and the lead screw is inserted into the center hole of the fixing frame; the lower steel balls are supported by the positioning plate, and the wheel is rotatably fixed in the notch of the fixing frame with the riveted member as a shaft which is retained with the retaining ring at its tail.
4. The base of sunshade umbrella according to claim 1 or 2, **characterized in that** the link rod is linked to the upper end of the lead screw, and the rotating handle is connected to the link rod.
5. The base of sunshade umbrella according to claim 1 or 2, **characterized in that** the holes for lead screw on the protection case are covered with caps.

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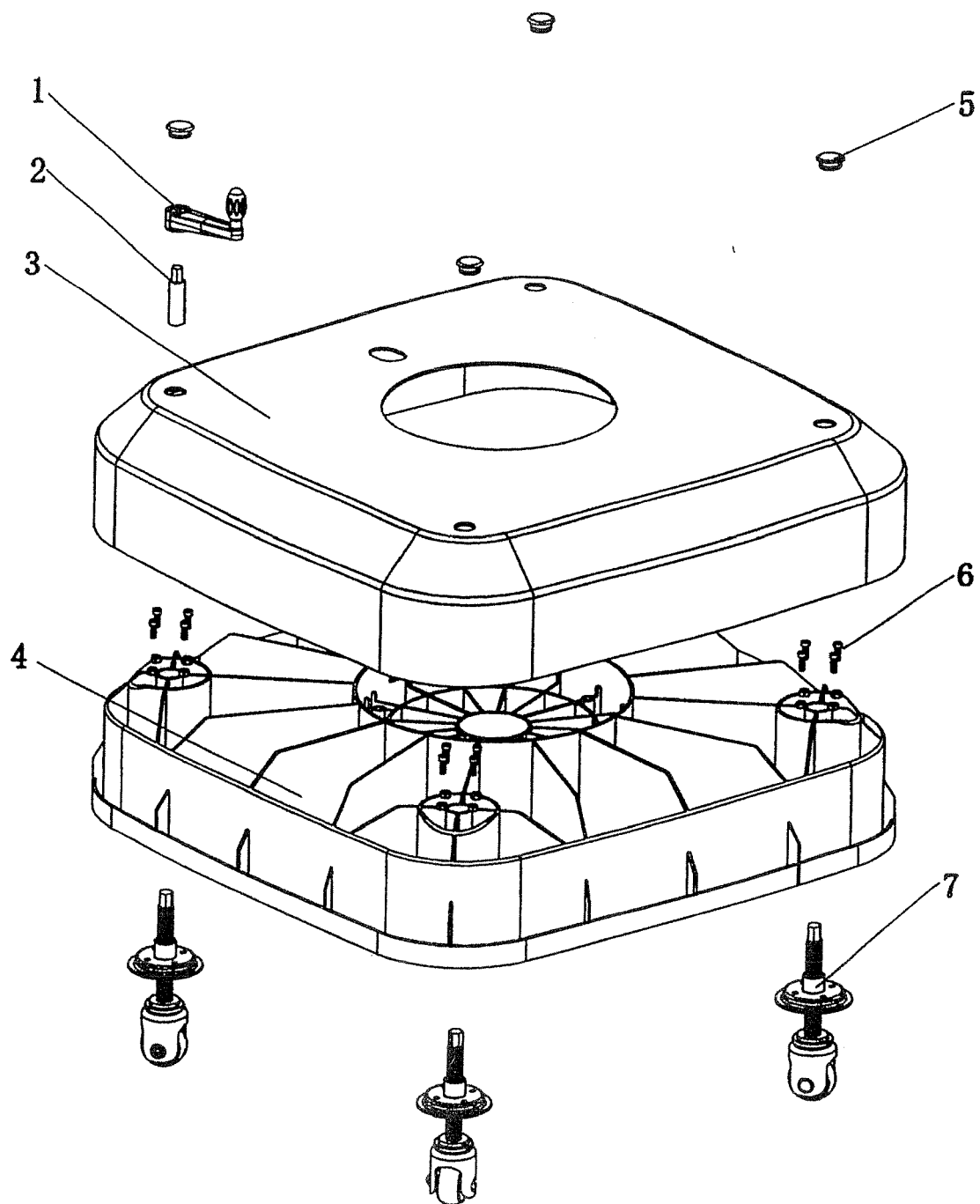


Fig. 1

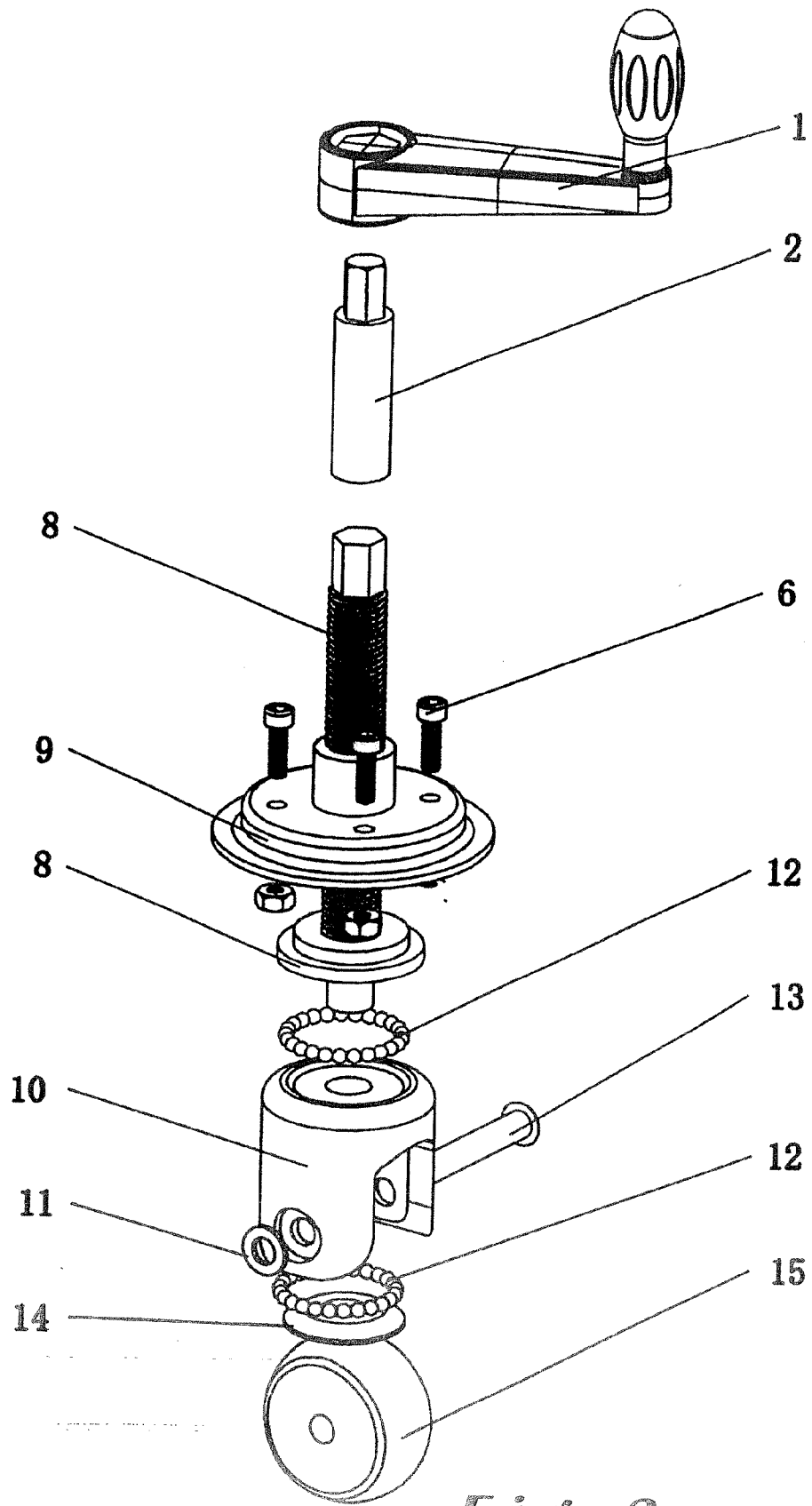


Fig. 2