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lateral cavity of the tent body and comprises a hanging rod (22), sprocket guide bars (12) are arranged on the foot tubes (1) of the tent body, and two ends of the hanging rod are snap-fit into the sprocket guide bars.



Description

TECHNICAL FIELD

[0001] The present utility model pertains to the field of outdoor supplies and specifically relates to a louver tent with windproof shutter mechanisms.

BACKGROUND ART

[0002] Outdoor tents are movable buildings. Tents are mainly used in temporary activities such as industrial storage, logistics distribution, wedding banquets, outdoor exhibitions, sports events, tourism and leisure, business gatherings, celebrations, business promotions, military operations and disaster relief. The main function is to block the sun, wind and rain. A tent comprises a movable frame and an awning. The frame generally comprises main components made of alloy and steel, is small in size and can be stored conveniently.

[0003] In order to meet various needs, great changes have taken place to the structures of outdoor tents. A common tent on the current market is often covered with an awning after the frame is installed, and the inside of the tent is relatively hot and stuffy. The tent is ventilated by directly lifting the awning. Therefore, using shutters on the sides of the tent has gradually become a focus to improve the ventilation performance, but the shutters have poor stability and often shake when the wind blows, and in severe cases, will collide with the people resting in the tent, resulting in low safety.

SUMMARY OF THE UTILITY MODEL

[0004] The present utility model has designed a shutter stabilizer, and a windproof louver tent with windproof shutter mechanisms.

[0005] In order to solve the foregoing technical problems, the present utility model adopts the following solution:

A louver tent with windproof shutter mechanisms is provided. The louver tent comprises a tent body, the top of the tent body is provided with louver mechanisms, a shutter mechanism is arranged in a fit manner on a surface of each lateral cavity of the tent body, the shutter mechanism comprises a hanging rod, sprocket guide bars are arranged on the foot tubes of the tent body, and two ends of the hanging rod are used for infinite positioning and fit with the sprocket guide bars.

[0006] Each of the foot tubes comprises an outer tube and an inner tube, a mounting groove used for accommodating a sprocket guide bar is formed between the outer tube and the inner tube, and the sprocket guide bar can be mounted in the mounting groove in a concealed manner.

[0007] The shutter mechanisms are fixedly arranged below the frame, and comprise fabric drums, tube shields for protecting the fabric drums are fixedly arranged out-

side the fabric drums, and the shutters are received in the fabric drums.

[0008] The fabric drums are fixedly arranged below the frame by means of connectors.

[0009] Snap fasteners are arranged on the hanging rods.

[0010] The louver mechanisms comprise window frames, and the window frames are fixedly arranged on the frame by means of fasteners.

[0011] Support rods are arranged on the frame, and the louver mechanisms are arranged above the support rods.

[0012] Controlling turbines are arranged on the support rods, connected to the louver mechanisms after passing through the support rods, and used for controlling the open and closed states of the louver mechanisms.

[0013] A lighting lamp is arranged on a support rod.

[0014] Sprockets are arranged at the ends of the hanging rod, and snap-fit into the sprocket guide bars.

[0015] The louver tent with windproof shutter mechanisms has the following beneficial effects:

In the louver tent provided by the present utility model, sprocket guide bars are arranged on foot tubes of the louver tent, two ends of the hanging rod of each shutter mechanism are limited in the sprocket guide bars, the shutter is used to block sunlight after the shutter is pulled down and will not be lifted by wind and can be stably arranged on the foot tubes. Further, snap fasteners are arranged on the hanging rod to facilitate the pull-down or pull-up of the shutter; and a light lamp is arranged on a support rod of the tent to improve the applicability of the louver tent in various environments.

[0016] Further, the foot tubes are designed to adopt inner tubes, outer tubes and infinite bolt fixing structures and can achieve fast disassembly, combined installation and concealed installation. The sprocket guide bars arranged between the inner tubes and the outer tubes are fit with the sprockets at the ends of the hanging rod. It is a side rail design especially for preventing wind. When the wind force is less than or equal to scale 12, the sunshade fabric will not be distorted, deformed or damaged.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017]

Fig. 1: A structural schematic view of the louver tent with windproof shutter mechanisms;

Fig. 2: A structural schematic view of a support rod in the present utility model;

Fig. 3: A structural schematic view of a controlling turbine in the present utility model;

Fig. 4: A structural schematic view of a snap fastener in the present utility model;

Fig. 5: An exploded schematic view of foot tubes and shutter mechanisms in the present utility model;

Fig. 6: A schematic view of the assembly of foot tubes in the present utility model.

[0018] In the figures, the following reference numerals are used: 1 foot tube; 11 connector; 12 sprocket guide bar; 13 foot; 14 outer tube; 15 inner tube; 2 shutter mechanism; 21 fabric drum; 22 hanging rod; 23 shutter; 24 snap fastener; 25 tube shield; 251 fixed plug; 26 sprocket; 3 frame; 31 support rod; 4 louver mechanism; 41 window frame; 42 controlling turbine; 5 lighting lamp; 51 mounting seat; 6 infinite bolt.

DETAILED DESCRIPTION

[0019] The embodiments of the present utility model will be further illustrated with reference to accompanying drawings, so that the technical solution of the present utility model can be more easily understood.

[0020] Fig. 1 to Fig. 6 show a louver tent with windproof shutter mechanisms. The louver tent comprises a tent body, and the tent body comprises a frame 3 and foot tubes 1. Foot tubes 1 are fixedly arranged below the frame 3 by means of connectors 11. Support rods 31 are arranged on the frame 3. Louver mechanisms 4 are arranged on support rods 31 and provided with window frames 41. The window frames 41 are fixedly arranged on the frame 3 by means of the connectors, and the bottoms are supported with the support rods 31.

[0021] Through holes are arranged on the support rods 31. Controlling turbines 42 used for controlling the open and closed state of the louver mechanisms 4 are connected to the louver mechanisms 4 after passing through the through holes. Connecting holes are arranged on the controlling turbines 42. After rotating rods are inserted into the connecting holes, the rotating rods are rotated to drive the controlling turbines 42 to rotate, thereby controlling the opening and closing.

[0022] A lighting lamp 5 is arranged at the bottom of a support rod 31 and is fixedly arranged on the support rod 31 by means of a mounting seat 51.

[0023] A shutter mechanism 2 is arranged in a fit manner on a surface of each lateral cavity of the tent body, and fixedly arranged below the pipelines of the frame 3. The shutter mechanism 2 comprises a fabric drum 21 and a shutter 23, and the shutter 23 surrounds the fabric drum 21. A hanging rod 22 is arranged at the bottom of the shutter 23, and two ends of the hanging rod 22 are limited into the sprocket guide bars 12, respectively to ensure that the shutter 23 can slide only in a vertical direction and will not shake in winds. The fabric drums 21 are further fixedly provided with tube shields 25 that protect the fabric drums 21. Snap fasteners 24 are arranged on the hanging rod 22 to facilitate the pulling of the shutter 23.

[0024] Feet 13 are arranged on the bottom of the foot

tubes 1 and used for improving connection stability. Each foot tube 1 comprises an outer tube 14 and an inner tube 15, and a sprocket guide bar 12 is arranged between the inner tube and the outer tube. Ends of the hanging rod 22 are provided with sprockets 26. The sprockets 26 are snapped into the sprocket guide bars 12 for position limitation. During assembly, fixed plugs 251 are arranged on the bottoms of the tube shields 25, the tops of the inner tubes 15 work with the fixed plugs 251, then the sprocket guide bars 12 are assembled upwards, so that the sprockets 26 are snapped in the sprocket guide bars 12, and then the outer tubes 14 cover the inner tubes 15 and are fixedly connected by means of infinite bolts 6. Decorative covers are provided at the nuts of the infinite bolts 6 for the purpose of decoration. Through the design of inner tube and outer tube structures, fast disassembly, combined installation and concealed installation can be achieved and meanwhile, the sprocket guide bars 12 adopt a side rail design especially for preventing wind. When the wind force is less than or equal to scale 12, the sunshade fabric will not be distorted, deformed or damaged.

[0025] In the louver tent provided by the present utility model, sprocket guide bars are arranged on foot tubes of the louver tent, two ends of the hanging rod of each shutter mechanism are limited in the sprocket guide bars, the shutter is used to block sunlight after the shutter is pulled down and will not be lifted by wind and can be stably arranged on the foot tubes. Further, snap fasteners are arranged on the hanging rod to facilitate the pull-down or pull-up of the shutter; and a light lamp is arranged on a support rod of the tent to improve the applicability of the louver tent in various environments.

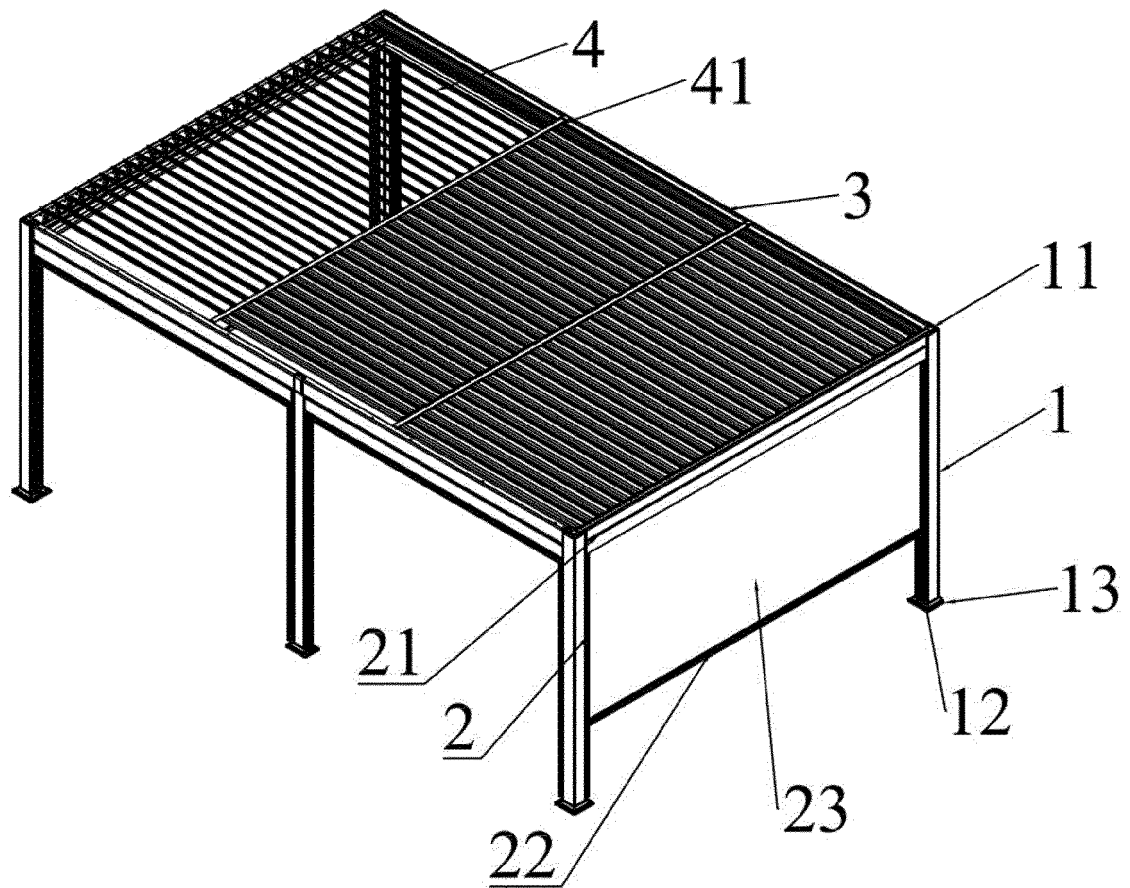
[0026] It should be noted that the relational terms herein such as first and second are only used to distinguish one entity or operation from another entity or operation and do not necessarily require or imply any such actual relation or sequence among these entities or operations. Furthermore, the terms "comprise," "include" and any other equivalent expressions are intended to cover non-exclusive inclusion so that a process, method, object or device comprising a series of factors not only includes these factors but also includes other factors not expressly listed, or also includes factors inherent with the process, method, object or device. Under the condition of no further limitations, the factors delimited by the expression "comprise a..." do not exclude other identical factors in the process, method, object or device including said factors.

[0027] The present utility model has been exemplarily described above in conjunction with accompanying drawings. Obviously, the implementation of the present utility model is not limited by the above ways. All the improvements made according to the method conception and technical solutions of the present utility model, or direct applications of the conceptions and technical solutions of the present utility model to other occasions are all within the scope of protection of the present utility model.

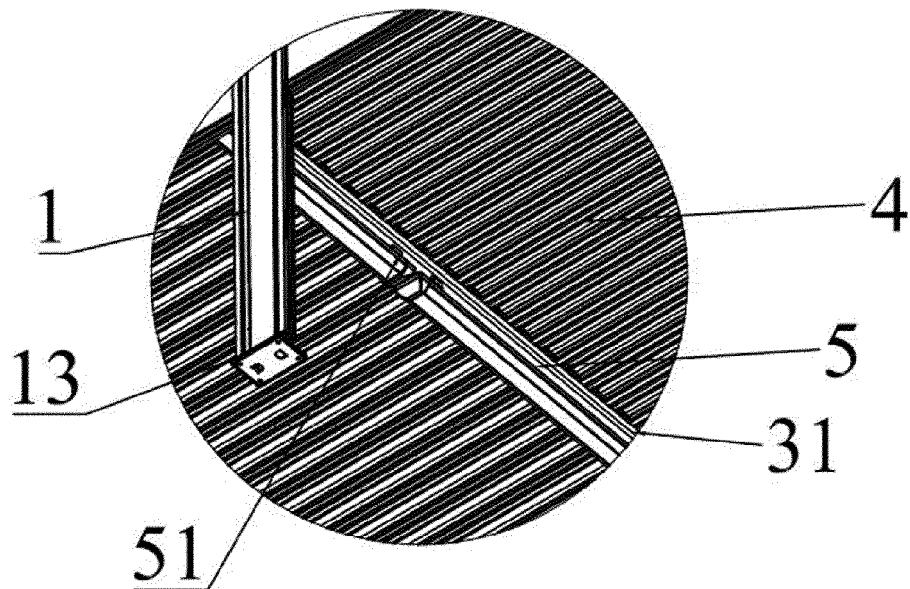
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Claims

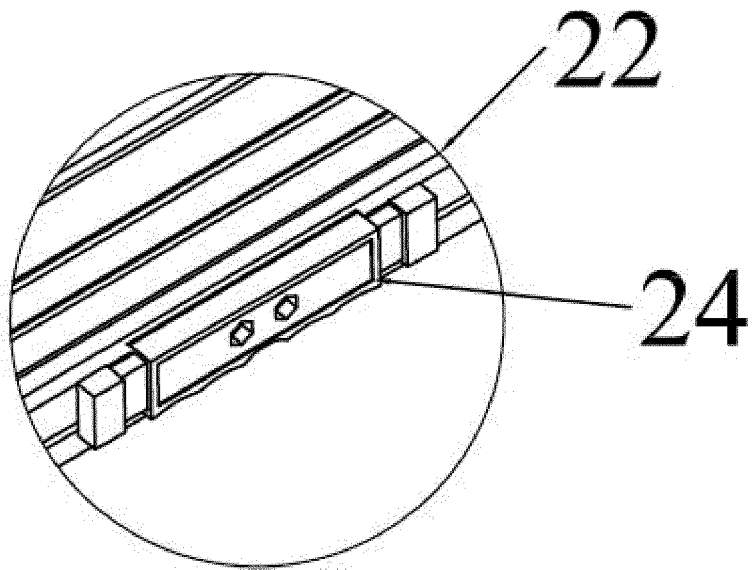
1. A louver tent with windproof shutter mechanisms, wherein the louver tent with windproof shutter mechanisms comprises a tent body, the top of the tent body is provided with louver mechanisms, a shutter mechanism is arranged in a fit manner on a surface of each lateral cavity of the tent body and comprises a hanging rod, sprocket guide bars are arranged on the foot tubes of the tent body, and two ends of the hanging rod are infinitely positioned and fit with the sprocket guide bars. 15
2. The louver tent with windproof shutter mechanisms according to claim 1, wherein each of the foot tubes comprises an outer tube and an inner tube, a mounting groove used for accommodating a sprocket guide bar is formed between the outer tube and the inner tube, and the sprocket guide bar can be mounted in the mounting groove in a concealed manner. 20
3. The louver tent with windproof shutter mechanisms according to claim 1, wherein the shutter mechanisms are fixedly arranged below the frame, and comprise fabric drums, tube shields for protecting the fabric drums are fixedly arranged outside the fabric drums, and the shutters are received in the fabric drums. 25 30
4. The louver tent with windproof shutter mechanisms according to claim 3, wherein the fabric drums are fixedly arranged below the frame by means of connectors. 35
5. The louver tent with windproof shutter mechanisms according to any of claims 1 to 4, wherein snap fasteners are arranged on the hanging rods. 40
6. The louver tent with windproof shutter mechanisms according to claim 2, wherein the louver mechanisms comprise window frames, and the window frames are fixedly arranged on the frame by means of fasteners. 45
7. The louver tent with windproof shutter mechanisms according to claim 2 or 6, wherein support rods are arranged on the frame, and the louver mechanisms are arranged above the support rods. 50
8. The louver tent with windproof shutter mechanisms according to claim 7, wherein controlling turbines are arranged on the support rods, connected to the louver mechanisms after passing through the support rods, and used for controlling the open and closed states of the louver mechanisms. 55
9. The louver tent with windproof shutter mechanisms according to claim 7, wherein a lighting lamp is arranged on a support rod.
10. The louver tent with windproof shutter mechanisms according to claim 1, wherein sprockets are arranged at the ends of the hanging rod, and snap-fit into the sprocket guide bars.



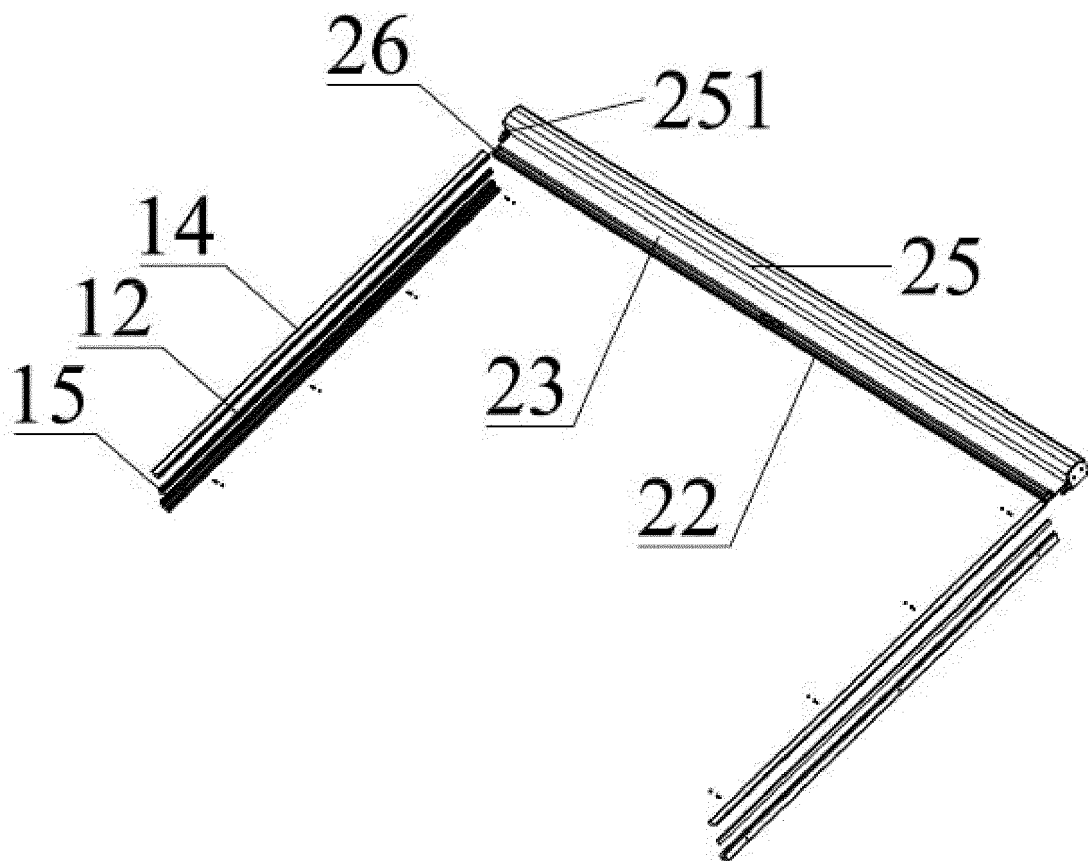
[Figure No.] Fig. 1



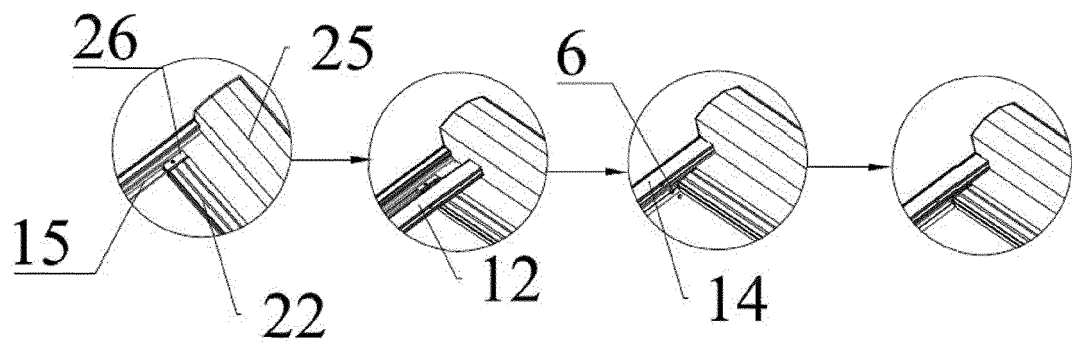
[Figure No.] Fig. 2



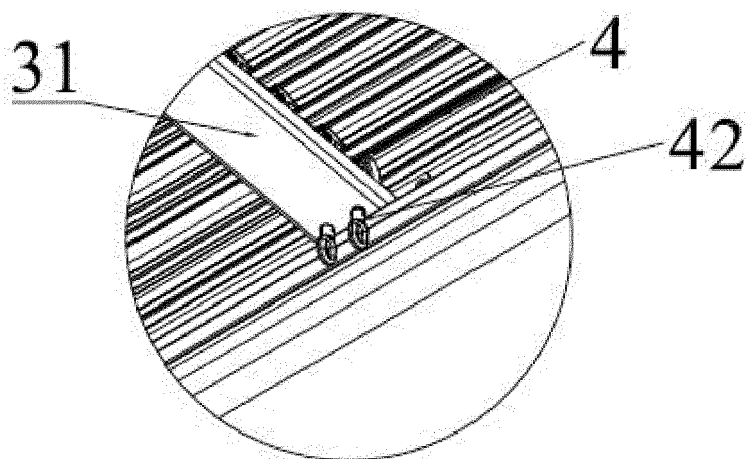
[Figure No.] Fig. 3



[Figure No.] Fig. 4



[Figure No.] Fig. 5



[Figure No.] Fig. 6



EUROPEAN SEARCH REPORT

Application Number

EP 21 19 5984

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DOCUMENTS CONSIDERED TO BE RELEVANT

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The present search report has been drawn up for all claims			

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Place of search
MunichDate of completion of the search
5 February 2022Examiner
Rosborough, John

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CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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