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POP-UP TRUCK CAMPER

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ABSTRACT OF THE DISCLOSURE

The utility model provides a pop-up truck camper, belonging to the field of pop-up truck campers and comprising: a truck camper body and a support component, wherein the support component is supported at the bottom of the truck camper body, the truck camper body comprises a bottom plate, a top cover, a peripheral wall and stoppers. The peripheral wall comprises folding walls and a flexible enclosure which is arranged between the bottom plate and the top cover and is respectively connected with the top cover and the bottom plate, and the flexible enclosure, the bottom plate and the top cover define a cavity. The folding walls are located in the cavity and are connected to the top cover and the bottom plate, respectively. The top cover reciprocates in a vertical direction relative to the bottom plate so that the folding walls and the flexible enclosure can stretch out or fold up; the stoppers are used to stop the folding walls from moving to fold up after the folding walls are unfolded. The pop-up truck camper is easy to operate when used; the top cover can be moved upward manually and the peripheral wall can stretch out to form a usable space; therefore, no electricity is used and the disadvantage that a lifting mechanism occupies too much space is avoided and convenient use is achieved.

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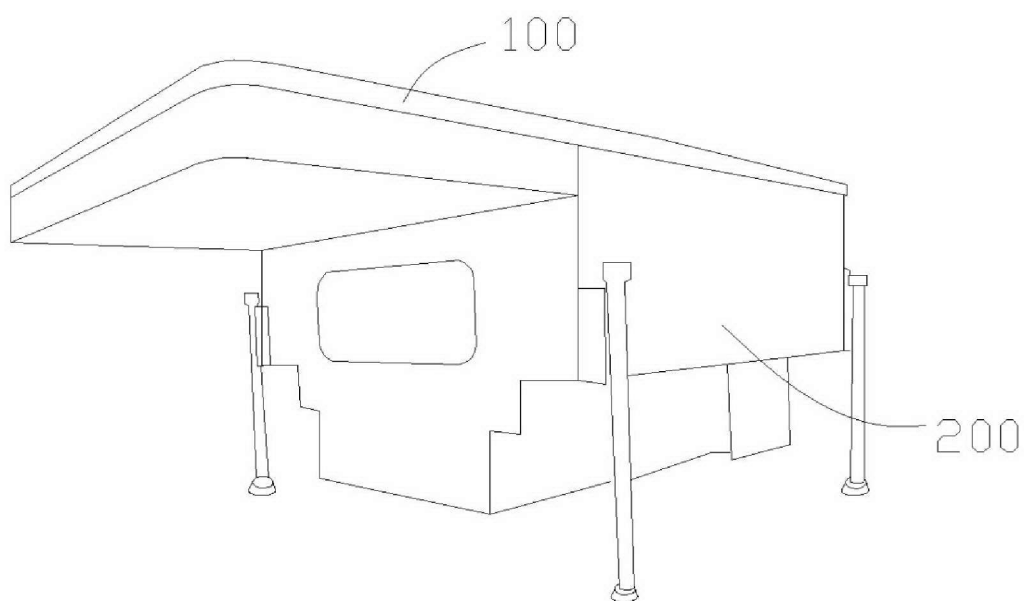


FIG. 1

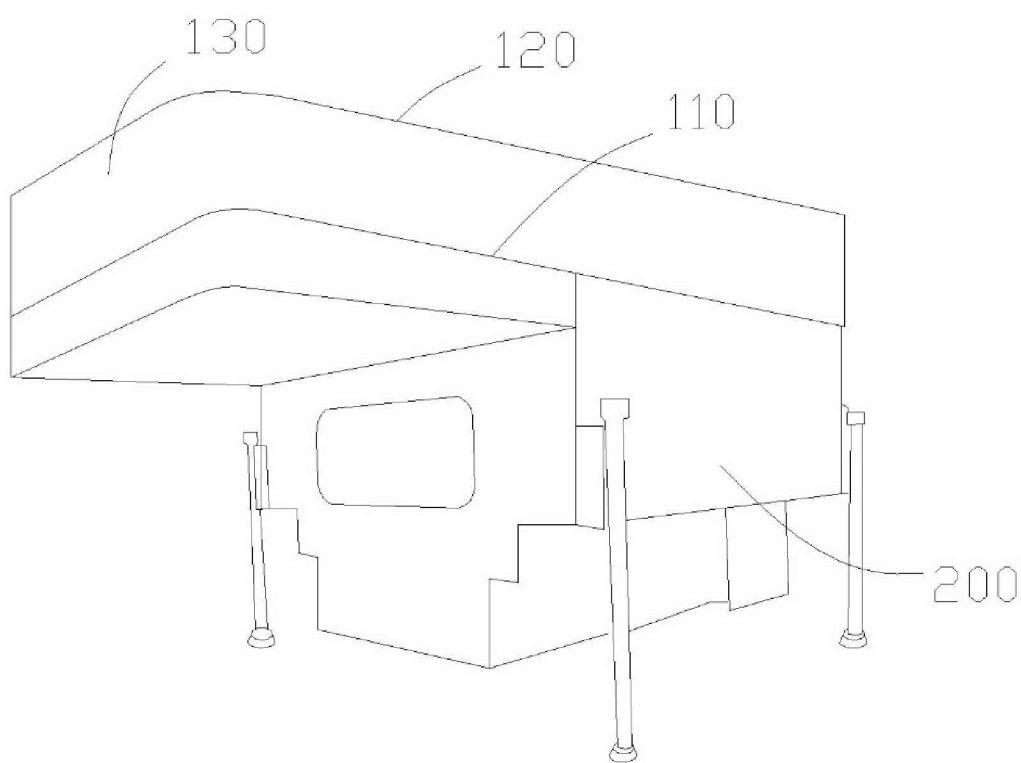


FIG. 2

POP-UP TRUCK CAMPER

BACKGROUND OF THE INVENTION

[0001] Technical Field

[0002] The utility model relates to the field of pop-up truck campers, in particular to a pop-up truck camper.

[0003] Description of Related Art

[0004] With the economic development and social progress, it has become popular to drive out for camping, and accordingly a mobile truck camper which is space-saving, safe, efficient and convenient to use has emerged at this time. A mobile truck camper has become a necessity for people who love self-driving travel. The mobile camper is mounted at the top of a vehicle body and is fixed to the vehicle body by means of a connecting structure or a connecting member. When not in use, the mobile camper is in a plane state, that is, its roof does not need to pop up, the driving resistance of a vehicle is reduced and therefore the mobile camper will not be easily damaged; when the mobile truck camper needs to be used, its roof pops up, and then a space comes out between the ceiling and the floor, that is, a space for people to move around is formed so that people can live their daily life, such as sleeping, eating, etc., in the mobile truck camper, thus providing a great convenience for the self-driving travelers. A traditional pop-up truck camper is driven by electricity to pop up or fall down by using lots of hydraulic pipes or hydraulic pop-up rods.

[0005] Research shows that the traditional pop-up truck camper generally has the following disadvantages when in use:

[0006] 1. the traditional pop-up truck camper pops up by using pop-up hydraulic rods or multiple hydraulic pipes and this process also needs use of electricity, resulting in

inconvenience in popping up; in addition, the pop-up hydraulic rods occupy certain space of the pop-up truck camper, thus reducing the usable space in the pop-up truck camper; and

[0007] 2. the traditional pop-up truck camper can be used only when supplied with power by a motor; therefore, the traditional pop-up truck camper cannot pop up quickly, conveniently and simply and its use limitation is obvious.

BRIEF SUMMARY OF THE UTILITY MODEL

[0008] The utility model is intended to provide a pop-up truck camper, in order to ameliorate such problems of the pop-up truck camper in the prior art as inconvenient popping up and obvious use limitations caused by the fact that a motor is used to drive lifting rods to make the truck camper pop up or fall down.

[0009] The embodiments of the utility model are implemented in the following way:

[0010] For the above purpose, the utility model provides a pop-up truck camper, comprising: a truck camper body and a support component, the support component being supported at the bottom of the truck camper body, wherein

[0011] the truck camper body comprises a bottom plate, a top cover and a peripheral wall;

[0012] the peripheral wall comprises a plurality of folding walls that play a supporting role and a flexible enclosure; the flexible enclosure is arranged between the bottom plate and the top cover and respectively connected with the top cover and the bottom plate; the flexible enclosure, the bottom plate and the top cover define a cavity; the folding walls are located in the cavity and are respectively connected to the top cover and the bottom plate; the top cover reciprocates in a vertical direction relative to the bottom

plate so that the folding walls and the flexible enclosure can stretch out or fold up. A stopper is arranged at the position of the folding line of each one of the folding walls to stop the folding wall from moving to fold up after the folding wall is unfolded.

[0013] In a preferred embodiment of the utility model, the truck camper body is shaped like a rectangular container, the flexible enclosure comprises a front side wall, a rear side wall, a left side wall and a right side wall, the front side wall and the rear side wall are arranged oppositely, the left side wall and the right side wall are arranged oppositely, and two folding walls are arranged and respectively mounted on the front side wall and the rear side wall.

[0014] In a preferred embodiment of the utility model, each folding wall comprises one folding line. The folding line divides the corresponding folding wall into two folding portions, the two folding portions rotate around the folding line and the folding line extends along the horizontal direction.

[0015] In a preferred embodiment, the two folding portions are respectively a first folding portion and a second folding portion, and the first folding portion comprises a first rectangular plate. One side of the first rectangular plate is connected with the top cover in a rotatable way and the rotation axis of the first rectangular plate relative to the top cover is parallel with the folding line.

[0016] In a preferred embodiment, the second folding portion comprises a second rectangular plate and a trapezoidal plate, the lengthwise side of the second rectangular plate is connected with the side in which the bottom of the trapezoidal plate is located, and the trapezoidal plate is overlapped with the first rectangular plate. One side of the second rectangular plate is connected with one side of the first rectangular plate in a rotatable way, and the rotation axis of the first rectangular plate relative to the second rectangular plate is

parallel with the folding line. The first folding portion is arranged between the second folding portion and the flexible enclosure while the second rectangular plate and the bottom plate are connected in a rotatable way. The rotation axis of the second rectangular plate relative to the bottom plate is parallel with the folding line.

[0017] In a preferred embodiment of the utility model, the stoppers are configured as spring hinges. Each folding wall has two sides which are arranged opposite with each other, one side of each folding wall is connected with the top cover through a spring hinge in a rotatable way, and the other side of each folding wall is connected with the bottom plate through a spring hinge in a rotatable way, and the rotation axis of each folding wall relative to the top cover and the rotation axis of the folding wall relative to the bottom plate are both parallel with the corresponding folding line.

[0018] In a preferred embodiment of the utility model, each stopper comprises a stop rod and a limit clamping block, one end of the stop rod is connected to the first folding portion in a rotatable way, and the limit clamping block is mounted on the second folding portion, the other end of the stop rod can be connected in the limit clamping block in a clamped way. A connection line between the end, connected to the first folding portion of the stopper, and the limit clamping block is vertical to the folding line for the first folding portion and the second folding portion.

[0019] In a preferred embodiment of the utility model, the pop-up truck camper further comprises pull rods. One end of each pull rod is connected with the corresponding folding wall and the other end is connected to the top cover in a clamped way.

[0020] In a preferred embodiment of the utility model, the pop-up truck camper further comprises a handle which is mounted on the folding walls.

[0021] In a preferred embodiment of the utility model, the pop-up truck camper

further comprises auxiliary support rods. The auxiliary support rods are placed out of the cavity, one end of each auxiliary support rod is mounted on the bottom plate and the other end is mounted on the top cover. The auxiliary support rods correspondingly stretch out or contract back along with the movement of the top cover.

[0022] The utility model has the following beneficial effects:

[0023] To sum up, the utility model provides a pop-up truck camper. The pop-up truck camper is convenient to manufacture and machine and low in installation and manufacturing costs due to its simple and reasonable structure. In addition, when in use, the pop-up truck camper is easy to operate; the roof can be moved upward manually to form a space between the top cover and the bottom plate. Meanwhile, the peripheral wall stretches out to form a usable space; therefore, no electricity is used and the disadvantage that a lifting mechanism occupies too much space is avoided and the advantages of convenient use and wide application are achieved. The pop-up truck camper is described in detail as follows:

[0024] The pop-up truck camper provided by the utility model comprises a truck camper body and a support component. The truck camper body is of a lifting structure; the support component is supported at the bottom of the truck camper body to support the truck camper body and also facilitates the installation of the whole camper at the top of a vehicle body, and the installation structure is firm and secure. The truck camper body comprises a bottom plate, a top cover and a peripheral wall, wherein a support component is arranged at the bottom of the bottom plate to support the bottom plate. The bottom plate is provided with the peripheral wall, the top cover is arranged above the peripheral wall, the peripheral wall is connected to the top cover, and the top cover, the peripheral wall and the bottom plate define a cavity for use. The peripheral wall comprises a flexible enclosure and folding walls which plays a supporting role. However, the flexible enclosure and the

folding walls both can deform. When the top cover moves away from the bottom plate, the flexible enclosure and the folding walls change to an unfolded state from a folded state, thus achieving the pop-up process of the truck camper body. Moreover, after popping up, stoppers arranged on the folding walls can prevent the folding walls from automatically returning to the folded state from the unfolded state, thus ensuring normal use. When the truck camper body does not need to be used, the top cover is operated to move toward the bottom plate and then the flexible enclosure and the folding walls can return to the folded state. At this moment, the top cover similarly clings to the bottom plate. In the whole operating process, the top cover can be moved up or down manually and the operation is convenient and rapid without using a motor or consuming electricity, thus saving energy. The pop-up and supporting functions are achieved without using hydraulic rods, thus increasing the usable space of the truck camper body.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0025] In order to make the technical solutions in the embodiments of the utility model clearer, drawings to be used in embodiments will be introduced briefly hereinafter. It should be understood that the following drawings merely show some embodiments of the utility model and therefore should not be construed as limiting the scope of the utility model. Those skilled in the art also could conclude other drawings based on these drawings without paying creative labor.

[0026] FIG. 1 is a diagram showing the structure of a pop-up truck camper according to an embodiment of the utility model (a truck camper body is in a folded state);

[0027] FIG. 2 is a diagram showing a structure of the pop-up truck camper according to the embodiment of the utility model (the truck camper body is in an unfolded

state);

[0028] FIG. 3 is a section view of the truck camper body according to the embodiment of the utility model;

[0029] FIG. 4 is a diagram showing a structure of a stopper according to the embodiment of the utility model;

[0030] FIG. 5 is a rear view of the truck camper body according to the embodiment of the utility model;

[0031] FIG. 6 is a diagram showing a connection structure of folding walls with the top cover and the bottom plate according to the embodiment of the utility model;

[0032] where

[0033] truck camper body 100; bottom plate 110; top cover 120; peripheral wall 130; folding wall 131; first folding portion 1311; second folding portion 1312; flexible enclosure 132; front side wall 1321; rear side wall 1322; stopper 140; stop rod 141; limit clamping block 142, spring hinge 150,

[0034] support component 200; and

[0035] auxiliary support rod 300

DETAILED DESCRIPTION OF THE INVENTION

[0036] With the economic development and social progress, it has become a fashion to drive out for camping, and accordingly a mobile truck camper which is space-saving, safe, efficient and convenient has emerged at this time. A mobile truck camper has become a necessity for people who love self-driving travel. The traditional pop-up trunk camper

can pop up by using pop-up hydraulic rods or multiple hydraulic pipes, and this process also needs the use of electricity, resulting in inconvenient popping up and in addition, the pop-up hydraulic rods occupy certain space of the pop-up truck camper, thus reducing the usable space inside the pop-up truck camper. The traditional pop-up truck camper can be used only when supplied with a power by a motor; therefore, the traditional pop-up truck camper cannot pop up quickly, conveniently and simply and its use limitation is obvious.

[0037] In view of this, the designer of the utility model has designed a pop-up truck camper which is simple and reasonable in structure, easy to manufacture and machine, easy to operate, and convenient to use. By arranging a flexible enclosure and folding walls between the top cover and the bottom plate, the conversion between a folded state and an unfolded state is implemented by using the flexible enclosure and the folding walls. Furthermore, the folding walls are provided with stoppers to ensure that the top cover hardly return to the folded state automatically after popping up; therefore, the pop-up truck camper is safe and secure to use and is operated manually to pop up and fall down without using electricity, thus achieving the effects of convenient and rapid operation and energy saving.

[0038] In order to make the purpose, technical solutions and advantages of the embodiments of the utility model clear, the technical solutions in the embodiments of the utility model will be described clearly and completely below in connection with the drawings. Apparently, the embodiments described herein are merely a part, not all of the embodiments of the utility model. The components in embodiments of the utility model, which are typically described and illustrated herein in the drawings, may be arranged and designed in a variety of different configurations.

[0039] Accordingly, the following detailed description of the embodiments of the utility model provided in the drawings is not intended to limit the scope of the utility

model, but merely to illustrate the selected embodiments of the utility model. All other embodiments obtained by those of ordinary skill in the art on the basis of the embodiments in the utility model without doing any creative work shall fall within the scope of the utility model.

[0040] It should be noted that similar reference numerals and letters denote similar items in the accompanying drawings, and therefore, once an item is defined in a drawing, it is not necessary to further define and explain it in the following accompanying drawings.

[0041] In the description of the utility model, it is to be noted that the orientations or positional relationships, indicated by the terms “upper”, “lower”, “left”, “right”, “vertical”, “horizontal”, “inside”, “outer” and the like, are based on the orientations or positional relationships shown in the drawings or refer to conventional arrangement orientations or positional relationships when the product of the utility model is used, and are only for the purpose of facilitating and simplifying the description of the utility model, rather than indicating or implying that the described device or element must have a particular orientation or must be constructed and operated in a particular orientation, and therefore they cannot be construed as limiting the utility model. In addition, the terms “first”, “second”, “third” and the like are used only to distinguish the description and are not to be construed as indicating or implicating relative importance.

[0042] In addition, the terms “horizontal”, “vertical” and the like do not imply that a component must be absolutely horizontal or vertical, but may be slightly tilted. Such as the term “horizontal” simply means that its direction is more horizontal with respect to the vertical direction and does not mean that the structure must be completely horizontal, but means that the structure may be slightly tilted.

[0043] In the description of the utility model, it should also be noted that the terms

“arrange”, “mount”, “connect... .. with”, “connected” should be broadly understood, unless otherwise expressly specified and defined, for example, they may refer to “fixedly connected”, may also refer to “detachably connected” or “integrally connected”; they may refer to “mechanically connected” and may also refer to “electrically connected”; they may refer to “directly connected”, may also refer to indirectly connected through an intermediate and may refer to the internal connectivity of two elements. It will be apparent to those skilled in the art that the specific meanings of the above terms in the utility model can be understood according to the specific conditions.

[0044] It is to be noted that embodiments in the utility model and the features in the embodiments may be combined with each other without conflict.

[0045] Specific Embodiments

[0046] Referring to FIG. 1, an embodiment of the utility model provides a pop-up truck camper, which is mainly to be mounted on a vehicle body for use by the self-driving travelers so that users can live a basic daily life inside the truck camper. The pop-up truck camper comprises a support component and a truck camper body 100, wherein the support component is supported at the bottom of the truck camper body 100.

[0047] As shown in FIG. 2 and 3, the truck camper body 100 comprises a bottom plate 110, a top cover 120, a peripheral wall 130, stoppers 140, a handle, a pull rod, and auxiliary support rods 300.

[0048] The bottom plate 110 is a load-bearing plate, and a bed is arranged on the bottom plate 110. When the truck camper body 100 pops up, the bed can be used by the user to have a sleep. The bottom plate 110 is preferably configured as a rectangular plate, and the bottom plate 110 may be made of wood, plastic or an alloy material to ensure the stability and firmness of the bed body. The bottom plate 110 is a rectangular plate which is

easy to machine and manufacture and is capable of conforming to people's use habits. The bed body is rectangular, which is convenient to use by people and does not take up extra space, thus saving space.

[0049] The top cover 120 is arranged above the bottom plate 110 and is used for blocking wind and rain or sunlight. The top cover 120 is preferably shaped like a rectangular plate, which is the same as the bottom plate 110 in structure. The length of the top cover 120 is the same as that of the bottom plate 110, the width of the top cover 120 is the same as that of the bottom plate 110, and thus the top cover 120 can be in good match with the bottom plate 110 for use. When the top cover 120 goes down and falls on the bottom plate 110, there is no portion protruding from the bottom plate 110, so it is hardly damaged; and the truck camper body 100 is small in size and therefore occupies a small space.

[0050] The peripheral wall 130 is a portion arranged between the top cover 120 and the bottom plate 110. The peripheral wall 130 includes a flexible enclosure 132 and folding walls 131. The flexible enclosure 132 is arranged between the top cover 120 and the bottom plate 110 and is respectively connected with the top cover 120 and the bottom plate 110. The flexible enclosure 132, the top cover 120 and the bottom plate 110 define a cavity. The top cover 120 and the bottom plate 110 are both rectangular plates. After the top cover 120 pops up, the shape of the cavity becomes a square cylindrical cavity. That is, the truck camper body is shaped like a rectangular container and the flexible enclosure 132 serves as the side wall of the rectangular container; the flexible enclosure 132 comprises a front side wall 1321, a rear side wall 1322, a left side wall, and a right side wall. The front side wall 1321 and the rear side wall 1322 are arranged oppositely, and the left side wall and the right side wall are arranged oppositely; further, the front side wall 1321 and the rear side wall 1322 respectively correspond to the head and tail of a vehicle body, and the

left side wall and the right side wall respectively correspond to the left side and right side of the vehicle body.

[0051] The flexible enclosure 132 is flexible and can deform. For example, it may be made of plastic or tarpaulin or the like, has good deformability and is easy to use. The flexible enclosure 132 is preferably shaped like a rectangular strip and goes around the top cover 120, that is, the flexible enclosure 132 defines a rectangle; one lengthwise side of the flexible enclosure 132 is respectively connected to four sides of the top cover 120, the other lengthwise side of the flexible enclosure 132 is connected to the four sides of the bottom plate 110, respectively; and when the top cover 120 pops up, the top cover 120, the bottom plate 110, and the flexible enclosure 132 can form a larger cavity and thus the use becomes more convenient. The flexible enclosure 132 can deform to some extent, that is, the distance between the top cover 120 and the bottom plate 110 is increased when the top cover 120 pops up, and the flexible enclosure 132 is pulled straight to serve as a wall between the top cover 120 and the bottom plate 110. When the use of the truck camper body 100 is completed, the top cover 120 goes down and moves toward the bottom plate 110, the space between the top cover 120 and the bottom plate 110 is compressed and thus the flexible enclosure 132 is in a folded state. Folding leading lines may be arranged on the flexible enclosure 132 so that the folded flexible enclosure can be placed in a rectangular area covered by the top cover 120, i.e., between the top cover 120 and the bottom plate 110, and thus is less likely to be soiled or damaged.

[0052] The flexible enclosure 132 may be connected to the top cover 120 and the bottom plate 110 with screws or in a sewing manner, and the connection forms are many and varied and the machining becomes flexible.

[0053] Referring to FIG. 3, the folding walls 131 are arranged in the cavity and connected with the top cover 120 and the bottom plate 110 play a supporting role;

preferentially, the folding walls 131 are configured as clinging to the inner side of the flexible enclosure 132, without occupying the space defined by the flexible enclosure 132. Preferentially, two folding walls 131 are arranged and respectively located at the front side wall 1321 and the rear side wall 1322 of the flexible enclosure 132. The folding walls 131 are arranged symmetrically to achieve a good supporting effect. In the supporting process, the top cover is under a uniform stress and hardly tilts so that the space defined by the flexible enclosure 132 can be used very well. The folding walls 131 are capable of achieving a folding function. Particularly, each of the folding walls 131 comprises a folding line; the unfolding or folding of the folding walls 131 is similar to open or close of a hinge. After the folding walls 131 are unfolded, it is similar to a flat plate supported between the top cover 120 and the bottom plate 110 and its state is similar to the state of a hinge rotating to 180 degrees, so that the top cover 120 can be lifted up to the maximum and the usable space is enlarged. Further, each folding wall 131 comprises a folding line which divides the folding wall 131 into two folding portions, the two folding portions are folded and unfolded with respect to the folding line, and the folding line is parallel to the intersecting line of the front side wall 1321 and the top cover 120.

[0054] Specifically, the two folding portions include a first folding portion 1311 and a second folding portion 1312. The first folding portion 1311 comprises a first rectangular plate and a trapezoidal plate, the lengthwise side of the first rectangular plate is connected with the side in which the bottom of the trapezoidal plate is located, the first rectangular plate and the top cover are connected in a rotatable way at the joint, the rotation axis of the first rectangular plate and the top cover is the folding line. The first folding portion 1311 and the second folding portion 1312 are made of plastic or other hard materials and thus are convenient to manufacture with low cost.

[0055] The second folding portion 1312 comprises a second rectangular plate and a

trapezoidal plate, the lengthwise side of the second rectangular plate is connected with the side in which the bottom of the trapezoidal plate is located. The trapezoidal plate is overlapped with the first rectangular plate and the second rectangular plate is overlapped with the second folding portion 1312 and is placed at the inner side of the cavity and is fixedly connected to the second rectangular plate. The first folding portion 1311 is provided with a folding line and is connected to the second folding portion 1312. When the first folding portion 1311 is folded up, that is, the first rectangular plate and the folding line rotate relatively, the first rectangular plate and the second folding portion 1312 are connected, that is, the first rectangular plate and the second folding portion 1312 rotate relatively, thus achieving the folding and unfolding operations. Since the first folding portion 1311 is positioned between the second folding portion 1312 and the flexible enclosure 132, during rotation, the folding line moves toward the inside of the cavity, that is, after the folding is completed, no portion of the folding portions is exposed to the outside, the folding portions are hardly subjected to rain or sunlight and the service life of the folding portions will not be affected. Moreover, the overall appearance is not affected too. The shape of the first folding portion 1311 and of the second folding portion 1312 is not limited to the structure described in the embodiment, and it is possible to realize the relative rotation to further complete the folding operations.

[0056] Referring to FIG. 4, the stoppers 140 are used to limit the movement of the folding walls 131, and each folding wall 131 has two states, i.e., folded and unfolded. The truck camper body 100 is in an unfolded state when in use, and the truck camper body 100 is in a folded state when not in use. When the truck camper body 100 is in use, the top cover 120 pops up and the folding walls 131 stretch out to play a supporting role. Since the folding walls 131 are deformable, in order to ensure the good supporting effect of the folding walls for the top cover 120 and ensure that the top cover 120 hardly moves toward

the bottom plate 110, the stoppers 140 are arranged on the folding walls 131 and are preferably arranged at the folding lines to achieve a better limiting effect. When the folding walls 131 are in an unfolded state, the stoppers 140 take effect to stop the folding walls from moving to fold up after the folding walls 131 are unfolded. When the truck camper body 100 does not need to be used, the top cover 120 needs to be moved toward the bottom plate 110. At this time, a force applied by the stoppers 140 to the folding walls 131 can be overcome by applying a certain external force, and thus the use is convenient and reliable. It is preferable that each stopper 140 comprises a stop rod 141 and a stop clamping block 142, and the stop rod 141 is rotatably connected to the corresponding folding wall 131, and moreover, a stop clamping block 142 is mounted on the folding wall 131. The stop clamping block 142 has a stop groove and when the folding wall 131 stretches out, the stop rod 141 is rotated so that the end part of the stop rod 141 is connected to the stop groove of the stop clamping block 142 in a clamped way; the stop rod 141 intersects with the folding line, that is, one end of the stop rod 141 is placed on one folding portion while the other end is placed on the other folding portion. Specifically, one end of the stop rod 141 is rotatably connected to the first folding portion and the stop clamping block 142 is mounted on the second folding portion. When the stop rod 141 is rotated so that, its end, far away from the first folding portion, is connected to the stop groove in a clamped way, the stop rod is vertical to the folding line to achieve a good stopping effect.

[0057] In another alternative to this embodiment, the stoppers are configured as spring hinges 150. Each folding wall 131 has two sides which are arranged opposite to each other. One side of a folding wall 131 and the top cover 120 are rotatably connected by a spring hinge 150 and the other side of the folding wall 131 is rotatably connected to the bottom plate 110 by a spring hinge 150. The rotation axis of the folding wall 131

relative to the top cover and the rotation axis of the folding wall 131 relative to the bottom plate 110 are both parallel with the folding line. When the folding walls 131 are folded or unfolded, the contact positions of the folding walls 131 with the top cover 120 are rotated, and the contact positions of the folding walls 131 with the bottom plate 110 are rotated. When the folding walls 131 are rotated perpendicularly to the top cover 120, the unfolding action of the folding walls 131 is finished, and the spring hinges 150 are in an engaged state at the positions to ensure that the top cover 120 and the folding walls 131 do not rotate relative to each other under the effect of gravity. Similarly, the position of the bottom plate 110 relative to the folding walls 131 remains constant. It is possible to support the folding walls 131 by the function of the spring hinges 150, thus the folding walls 131 can be unfolded conveniently. When the folding walls 131 need to be folded, an external force is applied so that the spring hinges 150 pass over the engaged positions, and the spring hinges 150 rotate in the reverse direction to complete the folding action. The whole operating process is simple and quick because the structure is simple and installation is facilitated. Particularly, referring to FIG. 6, the first folding portions 1311 and the top cover 120 are connected rotatably through spring hinges 150. The first folding portions 1311 and the second folding portions 1312 are connected rotatably through spring hinges 150. The second folding portions 1312 are rotatably connected with the bottom plate 110 through spring hinges 150. Each rotation position is limited by a spring hinge 150, and after the whole folding walls 131 are unfolded, the position is more stable and secure and thus its use is safe and secure.

[0058] The pull rod is arranged on the folding wall 131 located on the front side wall 1321, and the push rod is pulled or pushed by an external force applied by a person to realize the folding or unfolding of the folding wall 131 and the operation is convenient and rapid.

[0059] The handle is arranged on the folding wall 131 located on the rear side wall 1322 and the handle is pulled or pushed by an external force applied by a person to realize the folding or unfolding of the folding wall 131 and the operation is convenient and rapid.

[0060] Referring to FIG. 5, the auxiliary support rods 300 which are telescopic rods are arranged outside the cavity, one end of each auxiliary support rod 300 is connected to the bottom plate 110 and the other end is connected to the top cover 120. When the top cover 120 and the bottom plate 110 are relatively moved, the length of the telescopic rods is changed correspondingly to achieve the supporting effect. It is preferable that two auxiliary support rods 300 are arranged to have an inclined angle, and the two auxiliary support rods 300 are located on the side where the rear side wall 1322 is located.

[0061] The support component 200 is used to support the entire truck camper body 100. The support component may be arranged as a house structure with a certain movable space inside for use by the people and the movable space within the support component 200 is connected with the cavity formed after the truck camper body 100 pops up and thus its use is more convenient.

[0062] The pop-up truck camper provided by the embodiments is simple and reasonable in structure, is easy to manufacture and machine and is low in manufacturing costs. When the pop-up truck camper is used, the operation is convenient; the unfolding and folding of the folding walls 131 are realized by manually operating the pull rod or the handle, and further the top cover 120 can pop up or go down. The entire operating process is convenient and quick and is flexible to use, and it is not necessary to arrange structures such as a motor and a lifting rod, so that the usable space of the truck camper body 100 is increased and thus the use is more convenient and the use scope is wider.

[0063] The above description is merely preferred embodiments of the utility model

and is not intended to limit the utility model. Various changes and modifications of the utility model may be made by those skilled in the art. Any of modifications, equivalent substitutions, improvements and the like made within the spirit and principle of the utility model shall fall within the scope of the utility model.

What is claimed is:

1. A pop-up truck camper, comprising: a truck camper body and a support component, the support component being supported at the bottom of the truck camper body, wherein

the truck camper body comprises a bottom plate, a top cover and a peripheral wall;

the peripheral wall comprises a plurality of folding walls that play a supporting role and a flexible enclosure, the flexible enclosure being arranged between the bottom plate and the top cover and respectively connected with the top cover and the bottom plate, and the flexible enclosure, the bottom plate and the top cover defining a cavity, the folding walls being located in the cavity and respectively connected to the top cover and the bottom plate; the top cover reciprocates in a vertical direction relative to the bottom plate so that the folding walls and the flexible enclosure stretch out or fold up; a stopper is arranged at the position of the folding line of each folding wall to stop the folding wall from moving to fold up after the folding wall is unfolded.

2. The pop-up truck camper according to claim 1, wherein the truck camper body is shaped like a rectangular container, the flexible enclosure comprises a front side wall, a rear side wall, a left side wall and a right side wall, the front side wall and the rear side wall are arranged oppositely, the left side wall and the right side wall are arranged oppositely, and two folding walls are arranged and respectively mounted on the front side wall and the rear side wall.

3. The pop-up truck camper according to claim 1, wherein each of the folding walls comprises a folding line, the folding line divides the corresponding folding wall into two folding portions, the two folding portions rotate around the folding line, and the folding line extends along the horizontal direction.

4. The pop-up truck camper according to claim 3, wherein the two folding portions are

respectively a first folding portion and a second folding portion, the first folding portion comprises a first rectangular plate, one side of the first rectangular plate is connected with the top cover in a rotatable way, and the rotation axis of the first rectangular plate relative to the top cover is parallel with the folding line.

5. The pop-up truck camper according to claim 4, wherein the second folding portion comprises a second rectangular plate and a trapezoidal plate, the lengthwise side of the second rectangular plate is connected with the side in which the bottom of the trapezoidal plate is located, the trapezoidal plate is overlapped with the first rectangular plate, one side of the second rectangular plate is connected with one side of the first rectangular plate in a rotatable way, and the rotation axis of the first rectangular plate relative to the second rectangular plate is parallel with the folding line, the first folding portion is arranged between the second folding portion and the flexible enclosure, the second rectangular plate and the bottom plate are connected in a rotatable way, and the rotation axis of the second rectangular plate relative to the bottom plate is parallel with the folding line.

6. The pop-up truck camper according to any of claims 1-5, wherein the stoppers are configured as spring hinges, each folding wall has two sides which are arranged oppositely, one side of each folding wall is connected with the top cover through a spring hinge in a rotatable way, the other side of each folding wall is connected with the bottom plate through a spring hinge in a rotatable way, the rotation axis of each folding wall relative to the top cover and the rotation axis of the folding wall relative to the bottom plate are both parallel with the folding line.

7. The pop-up truck camper according to any of claims 4-5, wherein each stopper comprises a stop rod and a stop clamping block, one end of the stop rod is connected to the first folding portion, the stop clamping block is mounted on the second folding portion, the other end of the stop rod is connected in the stop clamping block in a clamped way; a

connection line between the end, connected to the first folding portion, of the stopper and the stop clamping block is vertical to the folding line for the first folding portion and the second folding portion.

8. The pop-up truck camper according to claim 1, further comprising pull rods, one end of each pull rod being connected with the corresponding folding wall and the other end of each pull rod being connected to the top cover in a clamped way.

9. The pop-up truck camper according to claim 1, further comprising a handle which is mounted on the folding walls.

10. The pop-up truck camper according to claim 1, further comprising auxiliary support rods, the auxiliary support rods being placed out of the cavity, one end of each auxiliary support rod being mounted on the bottom plate and the other end being mounted on the top cover, the auxiliary support rods correspondingly stretching out or contracting back along with the movement of the top cover.

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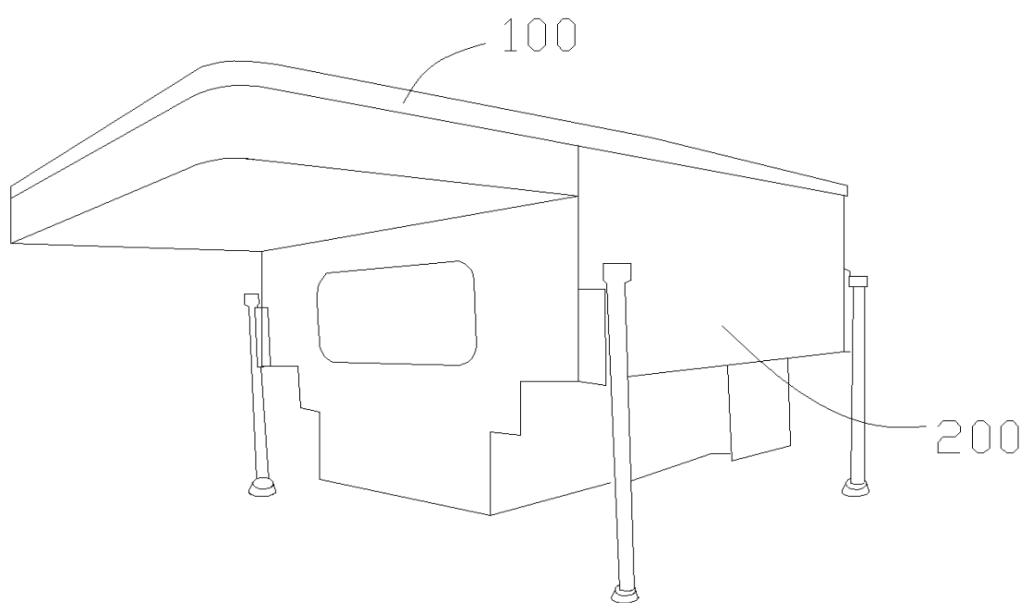


FIG. 1

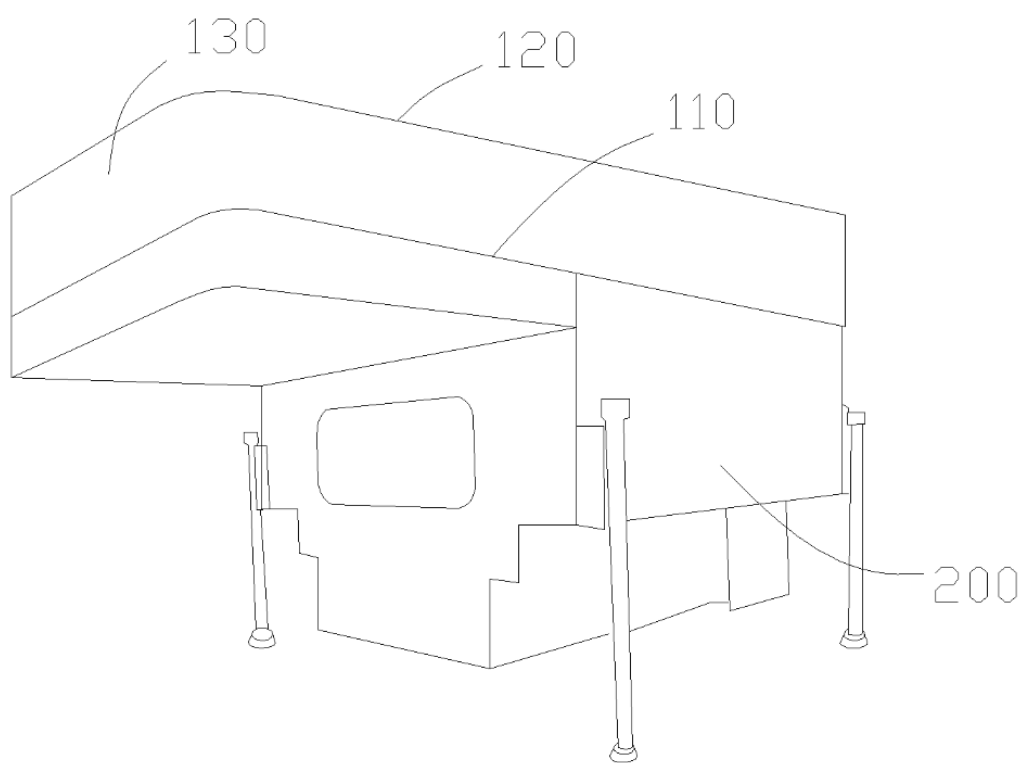


FIG. 2

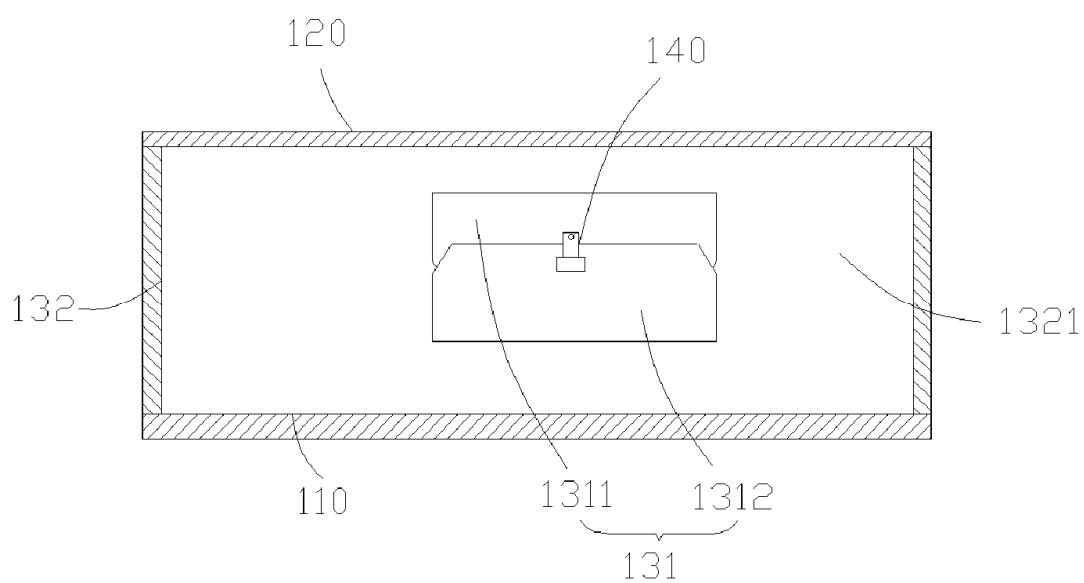


FIG. 3

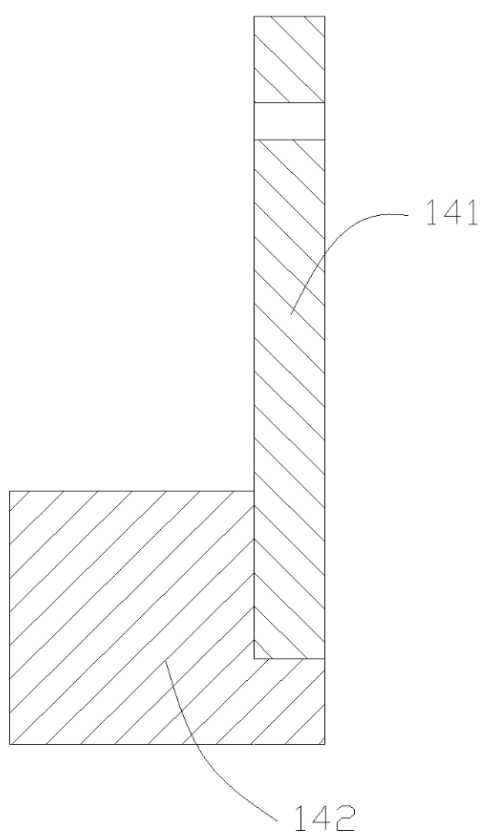


FIG. 4

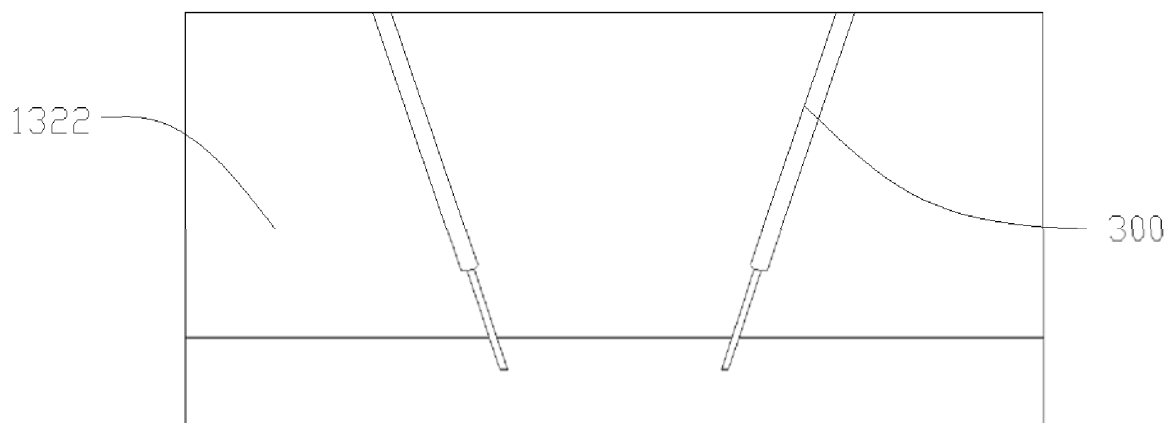


FIG. 5

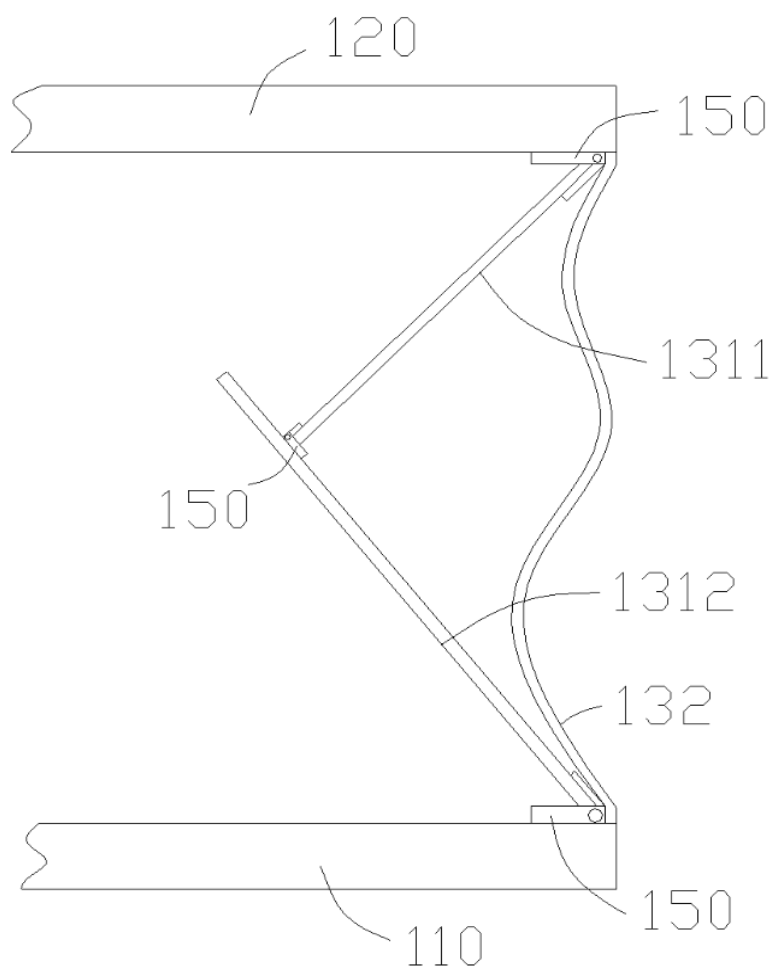


FIG. 6