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CAR USING POWER CYCLE AND AEROGEL BATTERY HEAT PRESERVATION BOX .

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A car using power cycle and aerogel battery heat preservation box includes a car body, a front end of a chassis of the car body is provided with two first wind generators, a roof of the car body is provided with two second wind generators, the roof of the car body is provided with a photovoltaic power generation device, and the car body is provided with an aerogel battery heat preservation box; a first battery pack and a second battery pack are provided in the aerogel battery heat preservation box; the aerogel battery heat preservation box is provided with a constant temperature control system. The invention uses a plurality of wind power generation and solar power generation devices, combined with the interchangeable use between the first battery pack and the second battery pack, not only formed the effective cycle of vehicle power, but also 100% increase the range of the vehicle; there is supplementation from the wind generators and the lithium battery is protected by a thermostat of the aerogel battery heat preservation box, thereby solving two worldwide problems, namely power lithium battery's serious power loss in cold area and car's poor range.

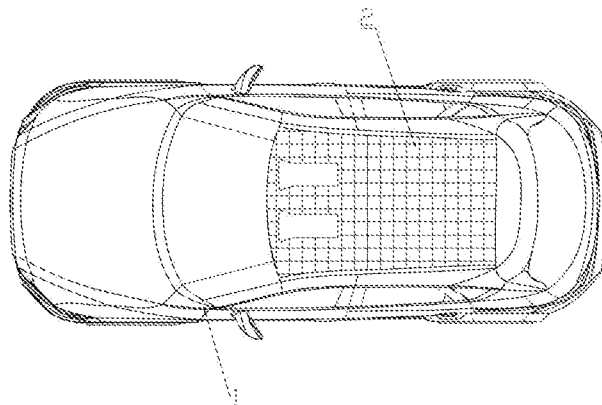


FIG. 1

CAR USING POWER CYCLE AND AEROGEL BATTERY HEAT PRESERVATION BOX

1. Technical Field

The invention belongs to the technical field of new energy vehicle, specifically relates to a car using power cycle and aerogel battery heat preservation box.

2. Background Art

People's pursuit of a low-carbon green life and the widespread popularization of new energy vehicles have prompted technologists to develop and design new energy vehicles that use non-conventional fuels as a source of power or adopt new vehicle-mounted power units to form new energy vehicle with new technologies, materials and structures, technology of which is relatively advanced. At this stage, electric vehicles have a wide development prospect due to their low environmental impact and relatively mature technology. However, electric vehicles are still facing the challenges of serious power loss of power batteries in cold regions and poor vehicle range.

3. Summary of the Invention

The technical problem to be solved by the invention is to overcome the above technical shortcomings and provides a car using power cycle and aerogel battery heat preservation box.

In order to solve said technical problem, the technical solution provided by the invention is a car using power cycle and aerogel battery heat preservation box, comprising a car body, a front end of a chassis of the car body is provided with two first wind generators, a roof of the car body is provided with two second wind generators, the roof of the car body is provided with a photovoltaic power generation device, and the car body is provided with an aerogel battery heat preservation box; a first battery pack and a second battery pack are provided in the aerogel battery heat preservation box; the first wind generators, second wind generators, and photovoltaic power generation device are electrically connected to the first battery pack and second battery pack via a control circuit;

The aerogel battery heat preservation box is provided with a constant temperature control system, so as to maintain the temperature at 30-35°C, guaranteeing that the battery works under effective temperature conditions.

Further, the first wind generators utilize 200 watts of power and the second wind generators utilize 100 watts of power.

Further, the first wind generators and second wind generators both generate electricity by rotating a turbofan through the resistance wind generated by the forward movement of the vehicle.

Further, a front part of the car body is provided with two wind-collection barrels, and two first wind generators are respectively located in the wind-collection barrels; the wind-collection barrel is in the shape of a horn mouth, and curvature of the fan blades of said turbofan is 35-38 degrees.

Further, the photovoltaic power generation device adopts thin-film solar cells with cadmium telluride.

Compared with the prior art, the invention has the following advantages: the invention uses a plurality of wind power generation and solar power generation devices, combined with the interchangeable use between the first battery pack and the second battery pack, not only formed the effective cycle of vehicle power, but also 100% increase the range of the vehicle; there is supplementation from the wind generators and the lithium battery is protected by a thermostat of the aerogel battery heat preservation box, thereby solving two worldwide problems, namely power lithium battery's serious power loss in cold area and car's poor range.

4. Brief Description of Accompany Drawings

FIG. 1 is a structural diagram of a car using power cycle and aerogel battery heat preservation box provided by the invention;

FIG. 2 is a structural diagram of power generation and battery parts of a car using power cycle and aerogel battery heat preservation box provided by the invention.

As shown in the accompanying drawings:

1 car body, 2 first wind generators, 3 second wind generators, 4 photovoltaic power generation device, 5 aerogel battery heat preservation box, 6 first battery pack, 7 second battery pack.

5. Specific Embodiment of the invention

In order to make the objects, technical solutions and advantages of the embodiments of the present invention clearer, the technical solutions in the embodiments of the invention will be clearly and completely described below with reference to the drawings in the embodiments of the invention, and it is obvious that the described embodiments are some, but not all, embodiments of the invention. The components of embodiments of the invention generally described and illustrated in the figures herein may be arranged and designed in a wide variety of different configurations.

Embodiment 1, with reference to FIG. 1 and FIG. 2, a car using power cycle and aerogel battery heat preservation box comprises a car body 1, a front end of a chassis of the car body 1 is provided with two first wind generators 2, a roof of the car body 1 is provided with two second wind generators 3, the roof of the car body 1 is provided with a photovoltaic power generation device 4, and the car body 1 is provided with an aerogel battery heat preservation box 5; a first battery pack 6 and a second battery pack 7 are provided in the aerogel battery heat preservation box 5; the first wind generators 2, second wind generators 3, and photovoltaic power generation device 4 are electrically connected to the first battery pack 6 and second battery pack 7 via a control circuit; the aerogel battery heat preservation box 5 is provided with a constant temperature control system, so as to maintain the temperature at 30-35°C, guaranteeing that the battery works under effective temperature conditions.

The first wind generators 2 utilize 200 watts of power and the second wind generators 3 utilize 100 watts of power.

The first wind generators 2 and second wind generators 3 both generate electricity by rotating a turbofan through the resistance wind generated by the forward movement of the vehicle.

A front part of the car body 1 is provided with two wind-collection barrels, and two first wind generators 2 are respectively located in the wind-collection barrels; the wind-collection barrel is in the shape of a horn mouth, and curvature of the fan blades of said turbofan is 35-38 degrees.

The invention uses the horn mouths of the wind-collection barrels at the front of the car body and top of the driver's compartment to channel the resistance wind generated inevitably in the vehicle driving process, and the channeling process not only effectively reduce the wind resistance, but also convert the resistance wind into wind power, blowing two groups of wind generators with 200 watts (400 watts in total) at the front of the car body and two groups of wind generators with 100 watts (200 watts in total) at the top of the driver's compartment to generate electricity. Experiments have shown that the wind generators can generate electricity at full capacity when the vehicle is traveling at a speed of 40 kilometers per hour. The electricity generated by a total of 600W wind generators located on the vehicle meets the needs of the vehicle power cycle.

The invention uses two power battery packs, when the first battery pack is working, the electricity from the first wind generators, second wind generators, and photovoltaic power generation device is integrated to charge the second battery pack. When the second battery pack is in operation, the electricity from the first wind generators, second wind generators, and photovoltaic power generation device is integrated to charge the first battery pack. Such interchangeable use of the first battery pack and second battery pack made the working process of first wind generators, second wind generators, and photovoltaic power generation device not only form an effective cycle of vehicle power, but also increase the range of the vehicle by 100% with power supplement from the wind generators.

In the embodiment, the aerogel battery heat preservation box is battery heat preservation box made of hard aerogel plus carbon fiber, and in the heat preservation box is equipped with "electric heating network" and "constant temperature thermostat"; the temperature is controlled between 30 and 35 degrees, and the temperature of the electric heating network is controlled by the thermostat. The aerogel battery heat preservation box adopts carbon fiber plate shell, with 6Cm thick hard aerogel attached therein, and the hard aerogel inner wall is

attached with carbon fiber mesh as a support for the electric heating network. The design ensures the effective working temperature of the power battery to prevent it from being lack of power in cold weather, The aerogel is in a nano-scale porous solid state, with porosity of 99.9%, ultralow heat conduction function and extremely strong flame retardant property, and the insulating property of the aerogel with the dielectric constant less than 1.003 not only provides absolute safety guarantee for the vehicle-mounted power battery to keep the normalized work, but also can effectively prevent and control the combustion and the explosion of the vehicle-mounted battery.

The photovoltaic power generation device adopts thin-film solar cells with cadmium telluride and is only arranged in partial blocks of the vehicle windows and the vehicle roof, and the generated electricity only provides partial electric energy for the electric heating net of the heat preservation box of battery when the vehicle is parked at night (the electricity required by the electric heating net of the heat preservation box of battery is mainly supplied by vehicle-mounted battery).

In the description of the embodiments of the invention, it should be noted that, if the terms “center”, “on”, “below”, “left”, “right”, “vertical”, “horizontal”, “inner”, “outer”, etc. indicate orientations or positional relationships based on the orientations or positional relationships shown in the drawings or the orientations or positional relationships that the products of the invention are usually placed in when used, the orientations or positional relationships are only used for convenience of describing the invention and simplifying the description, but the terms do not indicate or imply that the devices or elements indicated must have specific orientations, be constructed in specific orientations, and operate, and therefore, should not be construed as limiting the invention. Furthermore, the terms “first”, “second”, “third” and the like are used solely to distinguish one from another and are not to be construed as indicating or implying relative importance.

Furthermore, the terms “horizontal”, “vertical”, “overhang” and the like do not require that the components be absolutely horizontal or overhang, but may be slightly inclined. For example, “horizontal” merely means that the direction is more horizontal than “vertical” and does not mean that the structure must be perfectly horizontal, but may be slightly inclined.

In the description of the embodiments of the invention, “a plurality” represents at least 2.

In the description of the embodiments of the invention, it should be further noted that unless otherwise explicitly stated or limited, the terms “arranged”, “mounted”, and “connected” should be interpreted broadly, and may be, for example, fixedly connected, detachably connected, or integrally connected; can be mechanically or electrically connected; they may be connected directly or indirectly through intervening media, or they may be interconnected between two elements. The specific meanings of the above terms in the invention can be understood by those skilled in the art according to specific situations.

The invention and its embodiments have been described above, but the description is not limited thereto; only one embodiment of the invention is shown in the drawings, and the actual structure is not limited thereto. In general, it is to be understood by those skilled in the art that non-creative design of structural forms and embodiments that are similar to the technical solutions without departing from the spirit of the invention shall all fall within the protective scope of the invention.

CLAIMS

1. A car using power cycle and aerogel battery heat preservation box,

comprising a car body, a front end of a chassis of the car body is provided with two first wind generators, a roof of the car body is provided with two second wind generators, the roof of the car body is provided with a photovoltaic power generation device, and the car body is provided with an aerogel battery heat preservation box; a first battery pack and a second battery pack are provided in the aerogel battery heat preservation box; the first wind generators, second wind generators, and photovoltaic power generation device are electrically connected to the first battery pack and second battery pack via a control circuit;

the aerogel battery heat preservation box is provided with a constant temperature control system, so as to maintain the temperature at 30-35°C, guaranteeing that the battery works under effective temperature conditions.

2. The car using power cycle and aerogel battery heat preservation box of claim 1, wherein the first wind generators utilize 200 watts of power and the second wind generators utilize 100 watts of power.

3. The car using power cycle and aerogel battery heat preservation box of claim 1, wherein the first wind generators and second wind generators both generate electricity by rotating a turbofan through the resistance wind generated by the forward movement of the vehicle.

4. The car using power cycle and aerogel battery heat preservation box of claim 3, wherein a front part of the car body is provided with two wind-collection barrels, and two first wind generators are respectively located in the wind-collection barrels; the wind-collection barrel is in the shape of a horn mouth, and curvature of the fan blades of said turbofan is 35-38 degrees.

5. The car using power cycle and aerogel battery heat preservation box of claim 1, wherein the photovoltaic power generation device adopts thin-film solar cells with cadmium telluride.

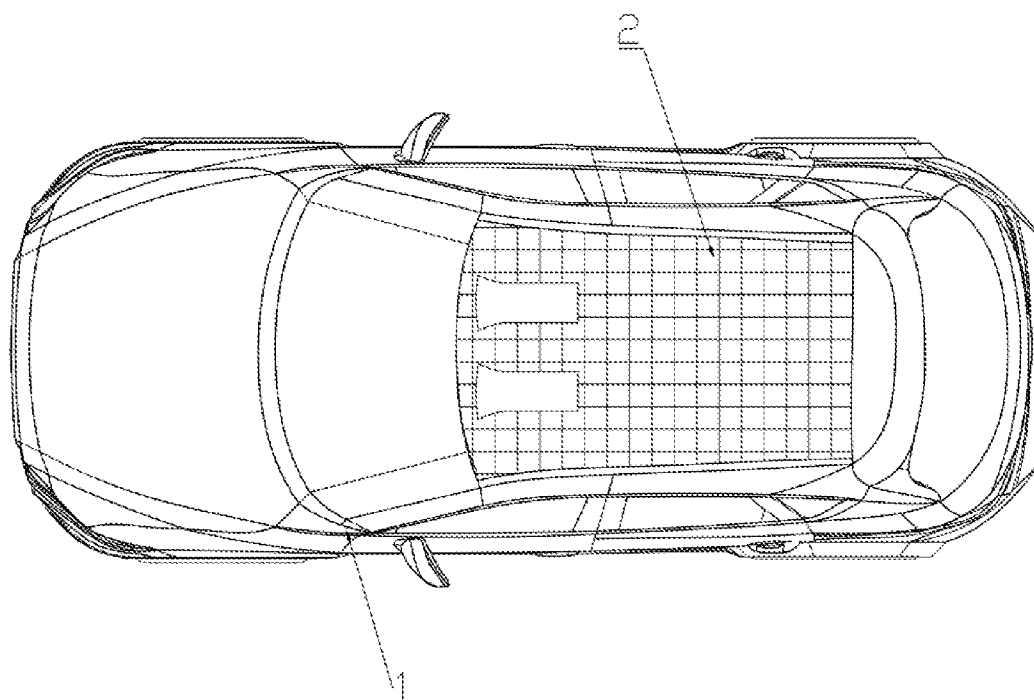


FIG. 1

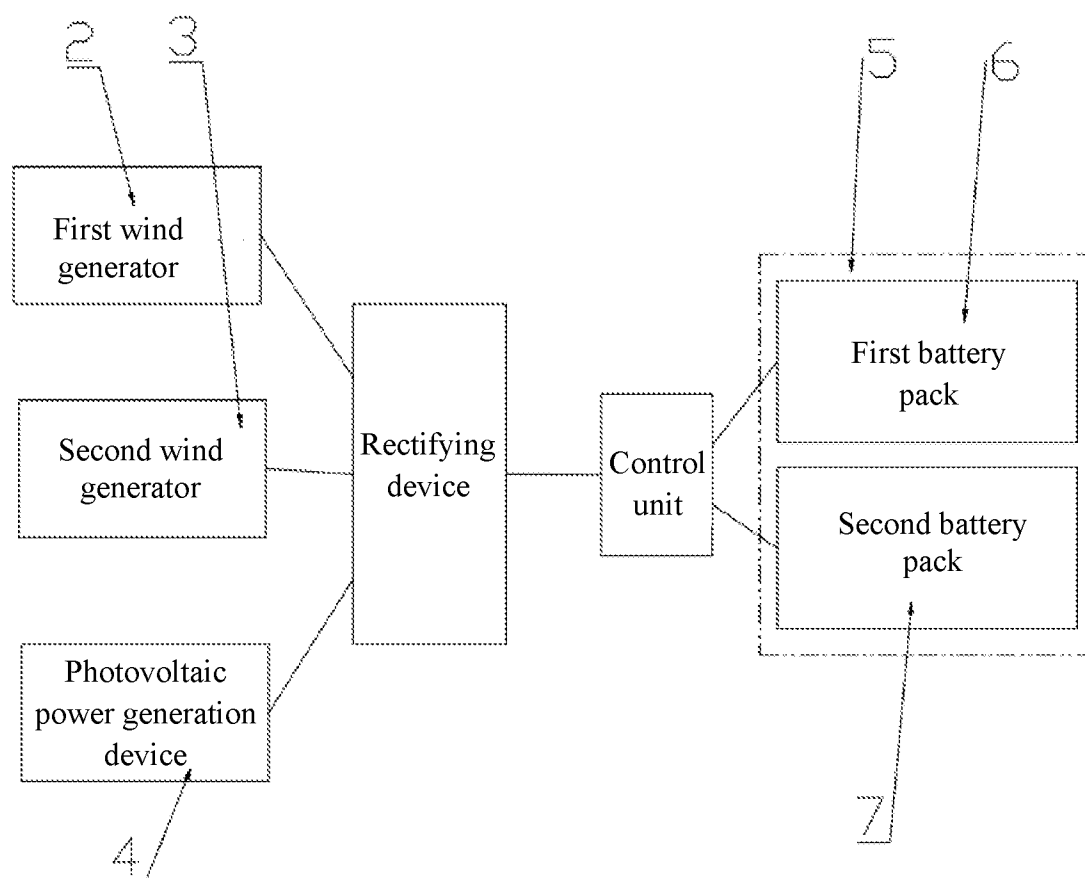


FIG. 2