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Heat dissipation device for a battery of a new energy vehicle.

(57)

The present invention relates to the technical field of heat dissipation of automobile batteries, discloses a heat dissipation device for a battery of a new energy vehicles, comprising a base, wherein the base is provided with a height-variable placement box, two ends of the placement box are provided with vent grooves, further comprising a heat dissipation mechanism, an air-intake mechanism, a clamping mechanism. The air-intake mechanism comprises a rotating shaft rotationally connected to one end of a placement box, a partition fixedly connected to a side of the rotating shaft, relief holes provided in the middle of the partition, a fan provided inside the relief hole, the width of the partition being the same as the spacing between the rotating shaft, the bottom of the placement box, a side of the partition away from a center of the placement box being provided with a circular-arc. (Fig.1)

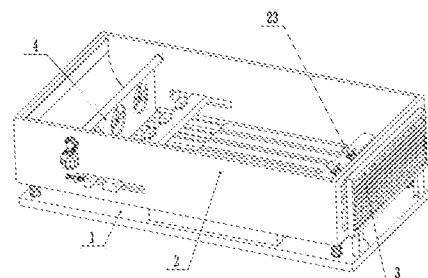


Fig.1

DESCRIPTION**HEAT DISSIPATION DEVICE FOR A BATTERY OF A NEW ENERGY
VEHICLE****TECHNICAL FIELD**

The present invention relates to the technical field of heat dissipation of automobile batteries, and more particularly to a heat dissipation device for a battery of a new energy vehicles.

BACKGROUND TECHNOLOGY

New energy vehicles refer to vehicles that utilize non-conventional automotive fuels as a power source, and are often powered by electricity. The new energy vehicles are equipped with larger-capacity batteries in order to increase the endurance. The battery will heat up during operation, and high temperature will affect the normal discharge function of the battery, thereby affecting the vehicle's endurance, so the battery needs to be cooled.

Conventional heat dissipation devices only dissipate heat through fans inside the vehicle, resulting in an overall airflow channel that is not smooth enough and less effective in dissipating heat. Therefore, it is urgent to improve the heat dissipation function.

SUMMARY OF THE INVENTION

The present invention provides a heat dissipation device for a battery of a new energy vehicle, which solves the problem raised in the above background technology.

In order to realize the above purposes, the present invention provides the following technical solutions:

A heat dissipation device for a battery of a new energy vehicle comprises a base, wherein the base is provided with a height-variable placement box, two ends of the placement box are provided with vent grooves, and the bottom of the placement box is provided with relief grooves, and further comprises a heat dissipation mechanism, an air-intake mechanism, and a clamping mechanism. The air-intake mechanism comprises a rotating shaft rotationally connected to one end of a placement box, a partition is fixedly connected to a side of the rotating shaft, relief holes are provided in the middle of the partition, a fan is provided inside the relief hole, the width of the partition is the same as the spacing between the rotating shaft and the bottom of the placement box, and a side of the partition away from a center of the placement box is provided with a circular-arc deflector that is cooperating with the placement box.

The heat dissipation mechanism comprises at least one heat-conducting strip set in the middle of the base to cooperate with relief grooves, at least one stand column is set at an end of the base away from the air-intake mechanism, a fixed frame is set on the stand column, at least one heat dissipation fin is set in the middle of the fixed frame, and a rotary heat dissipation pipe is set in the heat dissipation fin in conduction with the base.

The clamping mechanism comprises a sliding crossbeam and a fixed crossbeam respectively provided on both sides of the placement box.

As a preferred technical solution of the present invention, the base is provided with a cavity inside in contact with the rotary heat dissipation pipe, the rotary heat dissipation pipe and the cavity inside the base are provided with at least one heat-conducting medium, the heat-conducting strip is in contact with the heat-conducting medium, and an end of the base is provided with a water pump for pressurizing the heat-conducting medium inside the rotary heat dissipation pipe.

As a preferred technical solution of the present invention, the base is provided with guiding columns at four corners, the guiding columns are slidably connected to the bottom of the placement box, and buffer springs is provided between the placement box and the base.

As a preferred technical solution of the present invention, a drive motor is arranged outside the placement box, an output shaft of the drive motor is fixedly connected to a first bevel gear, the first bevel gear is meshed with a second bevel tooth, and the second bevel gear is fixedly connected to an end of a rotary shaft.

As a preferred technical solution of the present invention, a side wall of the placement box is provided with a sliding groove, the sliding groove is slidably connected to the sliding crossbeam, and an end of the sliding groove is provided with a size adjustment assembly that limits the moving distance of the sliding crossbeam.

As a preferred technical solution of the present invention, the size adjustment assembly comprises a fixed block fixedly connected to the placement box, the fixed block threadedly connected to the middle part of a clamping screw, and an end part of the clamping screw rotationally connected to the clamping block slidably connected to the sliding groove.

As a preferred technical solution of the present invention, the fixed crossbeam and sliding crossbeam are provided with stoppers.

As a preferred technical solution of the present invention, the stopper on the fixed crossbeam is provided with a rotary holding assembly.

As a preferred technical solution of the present invention, the rotary holding assembly comprises a right-angle splint rotationally connected with the stopper, a padding block is provided on a side of the right-angle splint close to the fixed crossbeam, and a balance weight lever is provided on a side of the right-angle splint away from the center of the placement box.

The present invention has the following beneficial features:

The present invention is applicable to a heat dissipation device for a battery of a new energy vehicle. By setting up a heat-conducting strip to support the battery, the bottom of the battery also has enough space to facilitate air circulation for heat dissipation treatment, and the angle of the partition can be adjusted according to the state of incoming air in the external environment, so that the vehicle itself can be forced to air flow through the fan to ensure the efficiency of the battery's heat dissipation.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to more clearly illustrate the technical solutions in the embodiments or prior art of the present invention, the accompanying drawings, which are to be used in the description of the embodiments or prior art, will be briefly described below. It will be apparent that the accompanying drawings in the following description are only some embodiments of the present invention, and that other accompanying drawings may be obtained in accordance with these drawings without creative labor for those skilled in the art.

Figure 1 shows a schematic structural diagram of a heat dissipation device for a battery of a new energy vehicle.

Figure 2 shows a schematic diagram of a structure inside a placement box in a heat dissipation device for a battery of a new energy vehicle.

Figure 3 shows a front view of Figure 2.

Figure 4 shows a schematic structural diagram of a heat dissipation mechanism in a heat dissipation device for a battery of a new energy vehicle.

Figure 5 shows a schematic structural diagram of a placement box in a heat dissipation device for a battery of a new energy vehicle.

Figure 6 shows a schematic structural diagram of an air-intake mechanism in a heat dissipation device for a battery of a new energy vehicle.

Figure 7 shows a schematic structural diagram of a clamping mechanism in a heat dissipation device for a battery of a new energy vehicle.

Figure 8 shows a schematic structural diagram of a rotary holding assembly in a heat dissipation device for a battery of a new energy vehicle.

The markups in the drawings are indicated as follows:

1-base; 2-placement box; 3- heat dissipation mechanism; 4-air-intake mechanism; 5- rotating shaft; 6-circular-arc deflector; 7-partition; 8-relief hole; 9-fan; 10-drive motor; 11-first bevel gear; 12-second bevel gear; 13-sliding groove; 14-sliding crossbeam; 15-stopper; 16-fixed crossbeam; 17-rotary holding assembly; 18-clamping screw; 19-fixed block; 20-clamping block; 21-guiding column; 22-buffer spring; 23-clamping mechanism; 24-stand column; 25-fixed frame; 26-heat dissipation fin; 27-rotary heat dissipation pipe; 28-water pump; 29-padding block; 30-right-angle splint; 31-balance weight lever; 32-size adjustment assembly; 33-relief groove; 34-vent groove; 35-heat-conducting strip.

SPECIFIC EMBODIMENTS

The technical solution provided by the present disclosure will be clearly and completely understood from the following detailed description by reference to the drawings. Obviously, the described embodiments are only part of the embodiments of the present disclosure, rather than all of the embodiments. According to the embodiment of the present disclosure, all other embodiments obtained by those skilled in the art without making creative labor fall within the scope of the present disclosure.

In one embodiment, referring to Figures 1-8, a heat dissipation device for a battery of a new energy vehicle comprises a base 1, the base 1 is placed horizontally to be connected with a vehicle frame, and a cavity can be directly set in the middle of the vehicle frame to fix the base 1 to the bottom of the vehicle, increasing the rigidity of the base 1 and enabling the base 1 to be used as a guard plate at the bottom of the vehicle. A placement box 2 that can be moved up and down is provided above the base 1, the placement box 2 is a rectangular structure with an opening at the top, vent grooves 34 are provided at both the left and right ends of the placement box 2, and an air filter can be installed in the vent grooves 34 in order to avoid dust from affecting the electrical components inside the placement box 2. The bottom of the placement box 2 is provided with left-right oriented relief grooves 33. The heat dissipation device for a battery of a new energy vehicle further comprises a heat dissipation mechanism 3, an air-intake mechanism 4, and a clamping mechanism 23.

The air-intake mechanism 4 comprises a rotating shaft 5 rotationally connected to the upper left side of the placement box 2, the rotating shaft 5 being disposed in a front-back orientation, as depicted in the orientation in the accompanying Figure 2. A partition 7 is provided below the rotating shaft 5, a plurality of relief holes 8 are evenly distributed in the middle of the partition 7, a fan 9 is provided in the middle of the relief holes 8, and the fan 9 can generate airflow from left to right. And the width of the partition 7 is the same as the spacing between the rotating shaft 5 and the bottom of the placement box 2. That is to say, after the partition 7 is rotated to the up-and-down orientation as shown in the accompanying Figure 2, the partition 7 separates the left side and the right side of the placement box 2. A circular-arc deflector 6 is provided vertically on the left side of the partition 7, and the radius of the circular-arc deflector 6 is the width of the partition 7.

At this time, the air above the circular-arc deflector 6 can enter the left side of the partition 7 along the circular-arc deflector 6 and flow towards the interior of the placement box 2 through the push of the fan 9, while the gas entering the breathable groove 34 at the left end of the placement box 2 will flow along the lower side of the circular-arc deflector 6 towards the lower right side, and ultimately pass through the relief grooves 33 to reach the base 1. However, when the partition 7 is rotated to the horizontal orientation, the left and right sides of the placement box 2 are conducted, and the gas entering from the vent grooves 34 on the left side of the placement box 2 can flow directly to the right and be discharged through the vent grooves 34 on the right side of the placement box 2, so that the rotating shaft 5 drives the rotation of the partition 7 to realize the change of direction for airflow.

For the heat dissipation mechanism 3, left- and right-oriented heat-conducting strips 35 are provided on the upper surface of the base 1 against the right side, and the dimensions of the heat-conducting strips 35 are matched with the dimensions of the relief grooves 33, so that the heat-conducting strips 35 move upwardly through the relief grooves 33 when the placement box 2 is moved downwardly. The length of the heat-conducting strips 35 is shorter than that of the relief grooves 33, which allows the gases entering the left vent grooves 34, as they flow downwardly with the circular-arc deflector 6, to pass through the relief grooves 33 to reach the upper part of the base 1. Stand columns 24 are vertically provided at the right end of the base 1 on both the front and back sides, and a front-back oriented fixed frame 25 is provided at the upper end of the column 24, which is in the form of a rectangular-ambulatory-plane knot and in which a plurality of front-back oriented heat dissipation fins 26 are provided in the fixed frame 25. In addition, an S-shaped rotary heat dissipation pipe 27 is arranged inside the fixed frame 25.

The rotary heat dissipation pipe 27 passes through the heat dissipation fins 26, so that the heat from the rotary heat dissipation pipe 27 can be transferred to the heat dissipation fins 26 and the heat from the rotary heat dissipation pipe 27 is taken away by the flow of airflow. A cavity is provided in the interior of the base 1, the cavity being in conduction with the rotary heat dissipation pipe 27. A heat dissipation medium, such as a coolant, is placed inside the cavity and the rotary heat dissipation tube 27, and the bottom of the heat-conducting strips 35 is extended into the cavity of the base 1, so that the heat of the heat-conducting strips 35 can be conducted into the coolant. A water pump 28 is provided at the right end of the base 1. The water pump 28 is provided in the middle of the rotary heat dissipation pipe 27. The power provided to the water circuit by the water pump 28 allows the coolant in the water circuit to have sufficient pressure to form a circulation, thereby realizing heat exchange.

The clamping mechanism 23 comprises a sliding crossbeam 14 and a fixed crossbeam 16 disposed on the left and right sides of the placement box 2, respectively, and the sliding crossbeam 14 and the fixed crossbeam 16 are provided with mounting holes, which are connected to the threaded holes on the battery, thereby achieving effective fixation of the battery.

In one case of the present embodiment, guiding columns 21 are vertically provided at all four corners of the upper surface of the base 1, with the upper part of the guiding columns 21 slidably connected to the bottom of the placement box 2. A buffer spring 22 is provided between the placement box 2 and the base 1, and the buffer spring 22 is sleeved on the outside of the guiding columns 21. Thus, when the battery is placed inside the placement box 2, the battery increases the weight of the placement box 2, causing the placement box 2 to move downwardly along the guiding columns 21, allowing the heat-conducting strips 35 to reach inside the placement box 2 to contact the lower surface of the battery, thereby realizing the effect of heat exchange.

Furthermore, since the distance between the placement box 2 and the base 1 may change, the portion of the rotary heat dissipation pipe between the fixed frame 25 and the base 1 may be deformed. In view of this, bellows can be used, which ensure that the coolant inside the base 1 can still be circulated properly in the water circuit when the placement box 2 is moved up and down. In one case of the present embodiment, in order to improve the intelligence of the whole device, a temperature sensor as well as a humidity sensor may be provided inside the placement box 2, and a drive motor 10 may be provided outside the front sidewall of the placement box 2. The output shaft of the drive motor 10 is fixedly connected to the first bevel gear 11, the first bevel gear 11 is meshed with the second bevel gear 12, the second bevel gear 12 is fixedly connected to the front end of the rotary shaft 5, and the fan 9 is also provided with a motor inside. When it is raining or the humidity is high, the drive motor 10 can be activated to rotate the partition 7 downward, so that the battery can be separated from the air in the outside environment. When the air intake is low and causes the temperature of the batteries inside the placement box 2 to be high, the partition 7 can still be rotated downward to achieve heat dissipation of the batteries through the airflow of the fan 9.

In one case of the present embodiment, the left-right oriented sliding grooves 13 are set at the lower left side of the front and rear side walls of the placement box 2, with the middle part of the sliding grooves 13 slidably connected to front-rear oriented sliding beams 14, and the size adjustment assembly 32 is provided on the left side of the sliding grooves 13. The leftmost position of the sliding crossbeam 14 can be adjusted by the size adjustment assembly 32 to realize that the batteries of different sizes can be well fixed. The size adjustment assembly 32 comprises a fixed block 19 provided on the left side of the sliding groove 13 and fixedly connected to the placement box 2.

The middle part of the fixed block 19 is threadedly connected to the left-right oriented clamping screw 18, and the right end of the clamping screw 18 is rotatably connected to the clamping block 20, which is slidably connected to the left side of the sliding grooves 13. Therefore, the left-right position of the clamping block 20 can be adjusted by the clamping screw 18, that is, the left-right sliding position of the sliding crossbeam 14 can be adjusted, so that batteries of different sizes can be well fixed.

In one case of the present embodiment, the fixed crossbeam 16 and sliding crossbeam 14 are provided with stoppers 15. And the stopper 15 is slidable back and forth on the sliding crossbeam 14 or the fixed beam 16 to enable the stopper 15 to avoid the position where the battery needs to be wired, so that the wires of the battery can be placed freely to avoid the wires from being bent and damaged. The rotary holding assembly 17 is disposed on the fixed crossbeam 16. The rotary holding assembly 17 comprises a right-angle splint 30. The right-angle splint 30 is composed of two plates that are perpendicular to each other. The right-angle end of the right-angle splint 30 is rotatably connected to the stopper 15. A pad is provided on the left side of the right-angle splint 30 so that when the right-angle splint 30 is rotated counterclockwise, the pad will fall on the fixed crossbeam 16, thereby allowing the plate on the left side of the right-angle splint 30 to be rotated to a horizontal state for receiving the battery. And a balance weight lever 31 is provided on the right side of the right-angle splint 30, and with the action of the balance weight lever 31, the opening of the right-angle splint 30 can be kept facing up when the battery is not placed, so as to facilitate the placing of the battery. When installing the entire battery, the clamping screw 18 is first rotated to adjust the left and right positions of the clamping block 20 so that the dimensions of the entire clamping mechanism 23 conform to the dimensions of the battery. At this point, the battery is lifted horizontally and the left end of the battery is placed on the sliding crossbeam 14 in a downwardly inclined position, with the left end of the battery resting against the stopper 15 on the sliding beam 14.

At this time, the battery is moved downwardly, and the left end of the battery will push the sliding crossbeam 14 to the left side, with the sliding crossbeam 14 in contact with the clamping block 20 to stop moving. At this time, the right side of the battery is released, the right end of the battery falls downwardly, the right end of the battery will come into contact with the left side of the right-angle splint 30, and the right-angle splint 30 rotates counterclockwise, thereby causing the left padding block 29 of the right-angle splint 30 to come into contact with the fixed crossbeam 16. At this point, the battery is in a horizontal state, and both the left and right ends of the battery are in contact with the sliding crossbeam 14 and the fixed crossbeam 16, so that it is possible to fix the battery with the fixed crossbeam 16 and the sliding crossbeam 14 by means of a bolt connection.

During the implementation of the present embodiment, the entire device must first be installed, and the entire base 1 must be stably installed in the middle of the frame by welding or bolting. Subsequently, the battery is installed, and after the battery is placed in the placement box 2, the weight of the placement box 2 as a whole increases, causing the buffer spring 22 to be compressed, which allows the placement box 2 to move downwardly, the heat-conducting strips 35 move upwardly through the relief grooves 33, and the upper part of the heat-conducting strips 35 supports the bottom part of the battery. At this point, the battery is installed.

During installation, it is necessary to place the left end of the placement box 2 facing the front of the vehicle, the right end of the placement box 2 facing the rear part of the vehicle, and the vent grooves 34 on the left side of the placement box 2 to connect with the air inlet on the front side of the vehicle, or an auxiliary connection can be made through an air pipe so that the airflow can enter the vent grooves 34 through the air pipe after the vehicle hits the wind. A cover is set above the placement box 2, and a gap is left above the left side of the placement box 2, so that the gas inside the car can enter the placement box 2 through the left side of the placement box 2. At this time, the overall installation process is completed.

When the vehicle is in motion and the outside environment is in a dry state, the partition 7 is rotated to a horizontal direction, and the outside airflow will directly enter into the placement box 2 through the vent grooves 34. The airflow will carry away a certain amount of heat when it flows through the battery body, and when the airflow flows through the heat dissipation fins 26, the heat of the heat dissipation fins 26 is carried away, thereby causing the cooling medium to cool down. The cooling medium is moved in the vicinity of the heat-conducting strip 35 under the circulating action of the water pump 28 to allow the heat of the battery to be transferred through the heat-conducting strips 35 to the cooling medium to dissipate the heat.

When the vehicle is in parked standby, no outside air enters at this time. The temperature sensor inside the placement box 2 detects that the battery temperature is high, and the drive motor 10 starts to work to make the partition 7 rotate counterclockwise through the gear transmission, with the partition 7 rotating to a vertical state. And the fan 9 starts to work, generating airflow from left to right, so that the gas inside the car can pass through the circular-arc deflector 6 and enter the interior of the placement box 2. This part of the gas will dissipate heat for the battery as in the above-mentioned working process.

When the vehicle is driving in a rainy environment, the outside gas with high humidity will first enter the placement box 2, and the humidity sensor inside the placement box 2 will detect it. The partition 7 can be controlled to rotate to the vertical direction by the driving motor 10 again. The airflow generated by the fan 9 allows the dry gas inside the car to dissipate heat for the battery. At this time, since the vehicle is working, the battery generates a lot of heat, and the airflow generated by the vehicle hitting the wind will enter between the bottom of the placement box 2 and the base 1 along the lower surface of the circular-arc deflector 6.

These air flows with higher humidity will pass through the heat-conducting strips 35, and the airflow with high humidity will directly cool the heat-conducting strips 35, which improves the heat dissipation efficiency of the heat-conducting strips 35 as well as the heat dissipation efficiency of the battery. In the present application there is a gap between adjacent heat-conducting strips 35, so that air can pass through smoothly.

The present invention is applicable to a heat dissipation device for a battery of a new energy vehicle by providing heat-conducting strips 35 to hold up the battery, allowing the bottom of the battery also to have enough space to facilitate air circulation for heat dissipation. Furthermore, the angle of the partition 7 can be adjusted based on the state of the incoming air of the external environment, so that a forced air flow can occur within the vehicle itself through the fan 9, ensuring the cooling efficiency of the battery.

It is obvious to those skilled in the art that the present invention is not limited to the details of the above exemplary embodiments, and that the present invention can be implemented in other specific forms without departing from the spirit or essential characteristics of the present invention. It is to be considered that the embodiments disclosed are illustrative and not restrictive in all of the aspects. The scope of the present invention is defined by the scope of the appended claims rather than the foregoing description. All variations falling within the significance and scope of the equivalent elements of the claims are intended to be embraced. Any reference sign in the claims should not be regarded as limiting the claims involved.

CLAIMS

1. A heat dissipation device for a battery of a new energy vehicle, comprising a base, wherein the base is provided with a height-variable placement box, two ends of the placement box are provided with vent grooves, and the bottom of the placement box is provided with relief grooves, and further comprising a heat dissipation mechanism, an air-intake mechanism, and a clamping mechanism;
the air-intake mechanism comprising a rotating shaft rotationally connected to one end of a placement box, a partition fixedly connected to a side of the rotating shaft, relief holes provided in the middle of the partition, a fan provided inside the relief hole, the width of the partition being the same as the spacing between the rotating shaft and the bottom of the placement box, and a side of the partition away from a center of the placement box being provided with a circular-arc deflector that is cooperating with the placement box;
the heat dissipation mechanism comprising at least one heat-conducting strip set in the middle of the base to cooperate with relief grooves, at least one stand column set at an end of the base away from the air-intake mechanism, a fixed frame set on the stand column, at least one heat dissipation fin set in the middle of the fixed frame, and a rotary heat dissipation pipe set in the heat dissipation fin in conduction with the base;
the clamping mechanism comprising a sliding crossbeam and a fixed crossbeam respectively provided on both sides of the placement box.

2. The heat dissipation device for a battery of a new energy vehicle according to claim 1, wherein the base is provided with a cavity inside in contact with the rotary heat dissipation pipe, the rotary heat dissipation pipe and the cavity inside the base are provided with at least one heat-conducting medium, the heat-conducting strip is in contact with the heat-conducting medium, and an end of the base is provided with a water pump for pressurizing the heat-conducting medium inside the rotary heat dissipation pipe.
3. The heat dissipation device for a battery of a new energy vehicle according to claim 1, wherein the base is provided with guiding columns at four corners, the guiding columns are slidably connected to the bottom of the placement box, and buffer springs is provided between the placement box and the base.
4. The heat dissipation device for a battery of a new energy vehicle according to claim 1, wherein a drive motor is arranged outside the placement box, an output shaft of the drive motor is fixedly connected to a first bevel gear, the first bevel gear is meshed with a second bevel tooth, and the second bevel gear is fixedly connected to an end of a rotary shaft.
5. The heat dissipation device for a battery of a new energy vehicle according to claim 1, a side wall of the placement box is provided with a sliding groove, the sliding groove is slidably connected to the sliding crossbeam, and an end of the sliding groove is provided with a size adjustment assembly that limits the moving distance of the sliding crossbeam.

6. The heat dissipation device for a battery of a new energy vehicle according to claim 5, wherein the size adjustment assembly comprises a fixed block fixedly connected to the placement box, the fixed block threadedly connected to the middle part of a clamping screw, and an end part of the clamping screw rotationally connected to the clamping block slidably connected to the sliding groove.
7. The heat dissipation device for a battery of a new energy vehicle according to claim 1, wherein the fixed crossbeam and sliding crossbeam are provided with stoppers.
8. The heat dissipation device for a battery of a new energy vehicle according to claim 7, wherein the stopper on the fixed crossbeam is provided with a rotary holding assembly.
9. The heat dissipation device for a battery of a new energy vehicle according to claim 8, wherein the rotary holding assembly comprises a right-angle splint rotationally connected with the stopper, a padding block is provided on a side of the right-angle splint close to the fixed crossbeam, and a balance weight lever is provided on a side of the right-angle splint away from the center of the placement box.

1. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen, die einen Sockel umfasst, dadurch gekennzeichnet, dass auf dem Sockel ein höhenverstellbarer Platzierungskasten vorgesehen ist, wobei ein Belüftungsschlitz an beiden Enden des Platzierungskastens angeordnet ist, und ein Einlassschlitz am Boden des Platzierungskastens vorgesehen ist, und wobei die Wärmeableitungsvorrichtung ferner einen Wärmeableitungsmechanismus, einen Lufteinlassmechanismus und einen Klemmmechanismus umfasst;

wobei der Lufteinlassmechanismus eine Drehwelle umfasst, die drehbar mit einem Ende des Platzierungskastens verbunden ist, wobei eine Abstandsplatte fest mit der Seite der Drehwelle verbunden ist, in der Mitte der Abstandsplatte ein Durchlassloch vorgesehen ist, in dem ein Gebläse vorgesehen ist, wobei die Breite der Abstandsplatte dem Abstand zwischen der Drehwelle und dem Boden des Platzierungskastens entspricht, und auf der von der Mitte des Platzierungskastens abgewandten Seite der Abstandsplatte eine kreisförmige Ablenkplatte vorgesehen ist, die mit dem Platzierungskasten zusammenwirkt;

wobei der Wärmeableitungsmechanismus einen Wärmeleitungstreifen umfasst, der in der Mitte des Sockels vorgesehen ist, um mit dem Durchlassschlitz zusammenzuwirken, wobei eine Säule an einem vom Lufteinlassmechanismus abgewandten Ende des Sockels vorgesehen ist, ein Befestigungsrahmen an der Säule vorgesehen ist, und in der Mitte des Befestigungsrahmens eine Wärmeableitungsrippe vorgesehen ist, an der ein drehbares Wärmeableitungsrohr vorgesehen ist, das mit dem Sockel verbunden ist;

wobei der Klemmmechanismus einen gleitbaren Querträger und einen festen Querträger umfasst, die jeweils auf beiden Seiten des Platzierungskastens vorgesehen sind.

2. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 1, dadurch gekennzeichnet, dass im Inneren des Sockels ein Hohlraum vorgesehen ist, der mit dem umdrehenden Wärmeableitungsrohr verbunden ist, wobei in dem umdrehenden Wärmeableitungsrohr und dem inneren Hohlraum des Sockels ein Wärmeleitmedium vorgesehen ist, und der Wärmeleitungstreifen in Kontakt mit dem Wärmeleitmedium steht, wobei am Ende des Sockels eine Wasserpumpe vorgesehen ist, um das Wärmeleitmedium im Inneren des umdrehenden Wärmeleitungsrohrs unter Druck zu setzen.

3. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 1, dadurch gekennzeichnet, dass an vier Ecken des Sockels eine Führungssäule vorgesehen ist, die gleitend mit dem Boden des Platzierungskastens verbunden ist, wobei eine Pufferfeder zwischen dem Platzierungskasten und dem Sockel vorgesehen ist.
4. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 1, dadurch gekennzeichnet, dass an der Außenseite des Platzierungskastens ein Antriebsmotor vorgesehen ist, dessen Ausgangswelle fest mit einem ersten Kegelzahnrad verbunden ist, wobei das erste Kegelzahnrad kämmend mit einem zweiten Kegelzahnrad verbunden ist, und wobei das zweite Kegelzahnrad fest mit dem Ende einer Drehwelle verbunden ist.
5. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 1, dadurch gekennzeichnet, dass an der Seitenwand des Platzierungskastens eine Gleitnut vorgesehen ist, die gleitend mit dem gleitbaren Querträger verbunden ist, und das Ende der Gleitnut mit einer Größeneinstellungseinheit versehen ist, die den Bewegungsabstand des gleitbaren Querträgers begrenzt.
6. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 5, dadurch gekennzeichnet, dass die Größeneinstellungseinheit einen Befestigungsblock umfasst, der fest mit einem Platzierungskasten verbunden ist, wobei der Befestigungsblock mit der Mitte einer Klemmschraube verschraubt ist, wobei ein Ende der Klemmschraube drehbar mit einem Klemmblock verbunden ist, der gleitend mit einer Gleitnut verbunden ist.
7. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 1, dadurch gekennzeichnet, dass an dem festen Querträger und dem gleitbaren Querträger jeweils ein Anschlag vorgesehen ist.

8. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 7, dadurch gekennzeichnet, dass eine drehbare Halteeinheit an dem Anschlag des festen Querträgers vorgesehen ist.

9. Wärmeableitungsvorrichtung für Batterien von Neuenergiefahrzeugen nach Anspruch 8, dadurch gekennzeichnet, dass die drehbare Halteeinheit eine rechteckige Klemmplatte umfasst, die drehbar mit dem Anschlag verbunden ist, wobei auf der dem festen Querträger zugewandten Seite der rechteckigen Klemmplatte ein Polster vorgesehen ist, und auf der von der Mitte des Platzierungskastens abgewandten Seite der rechteckigen Klemmplatte eine Gegengewichtsstange vorgesehen ist.

FIGURES

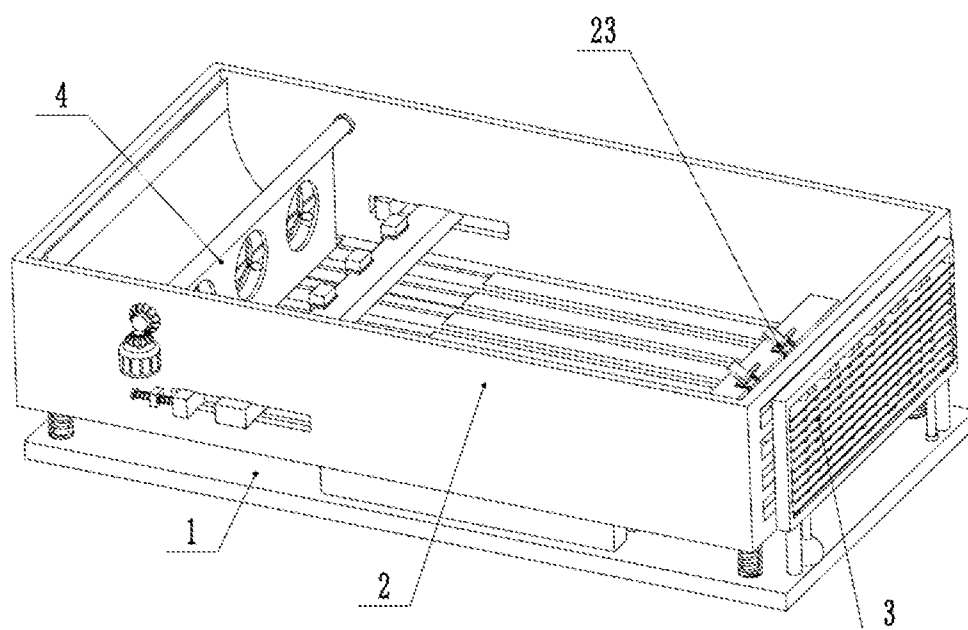


Fig.1

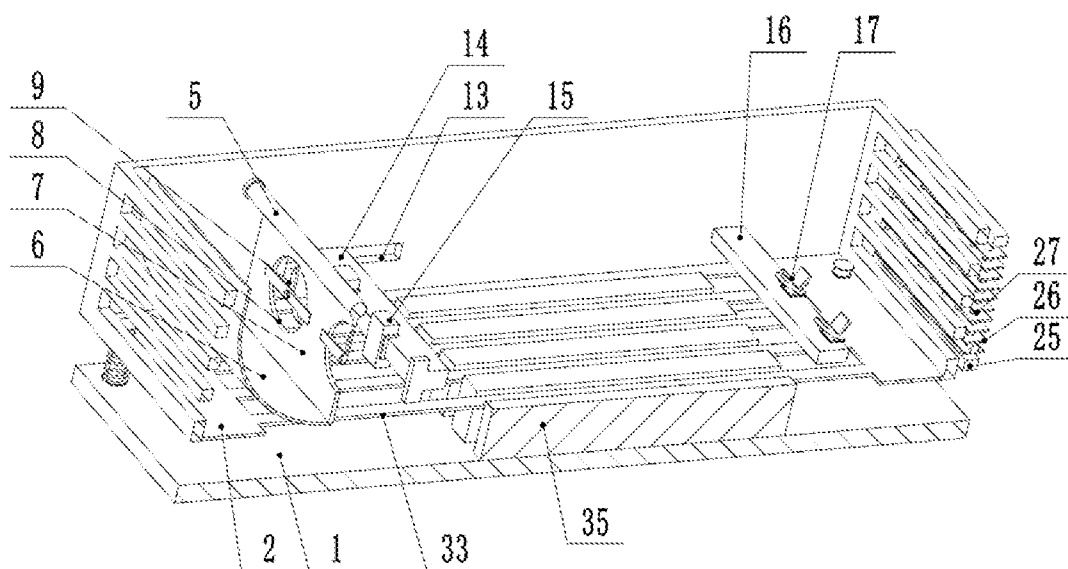


Fig.2

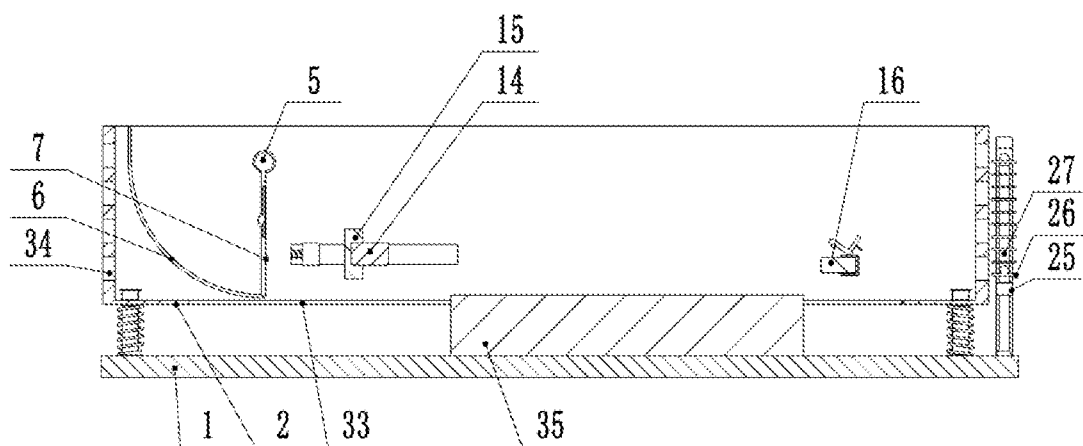


Fig.3

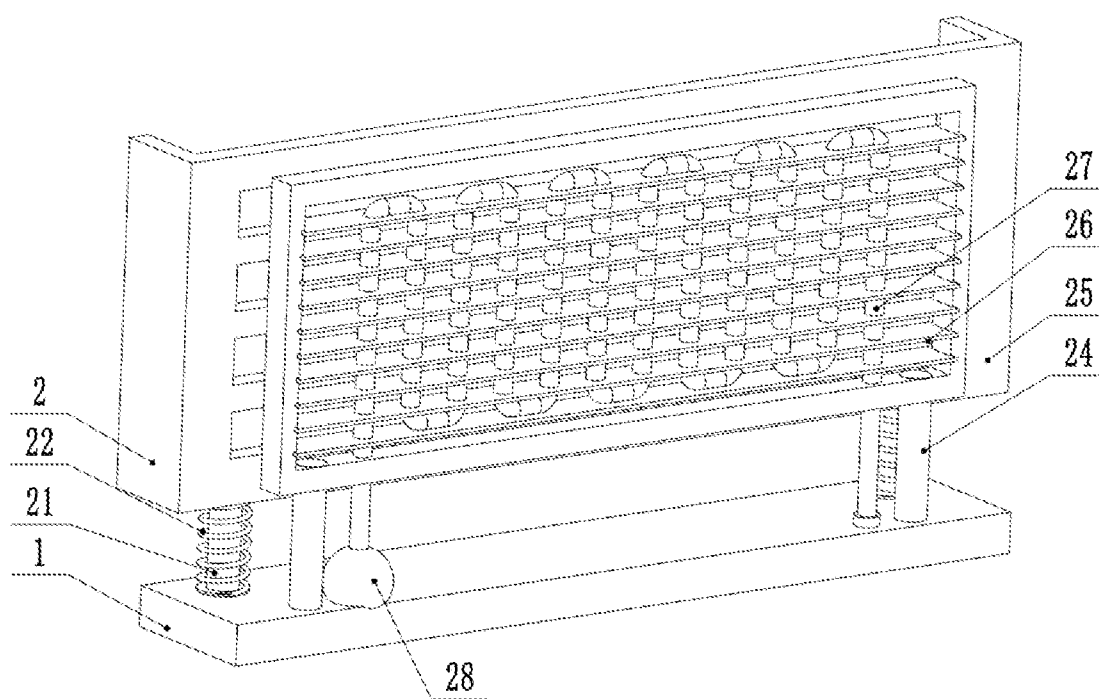


Fig.4

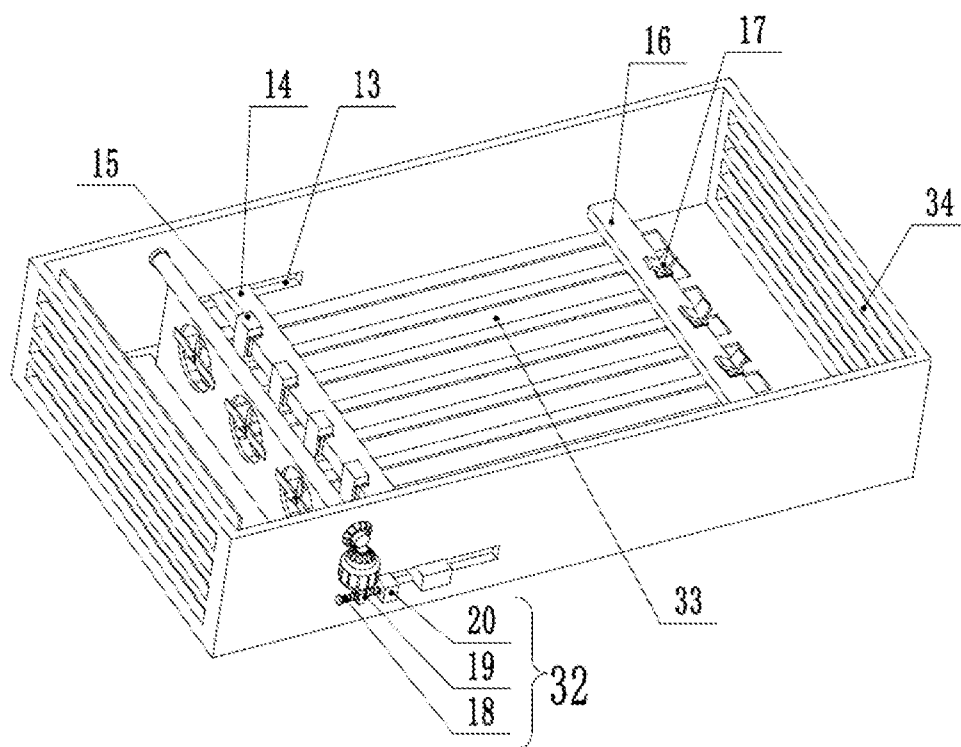


Fig.5

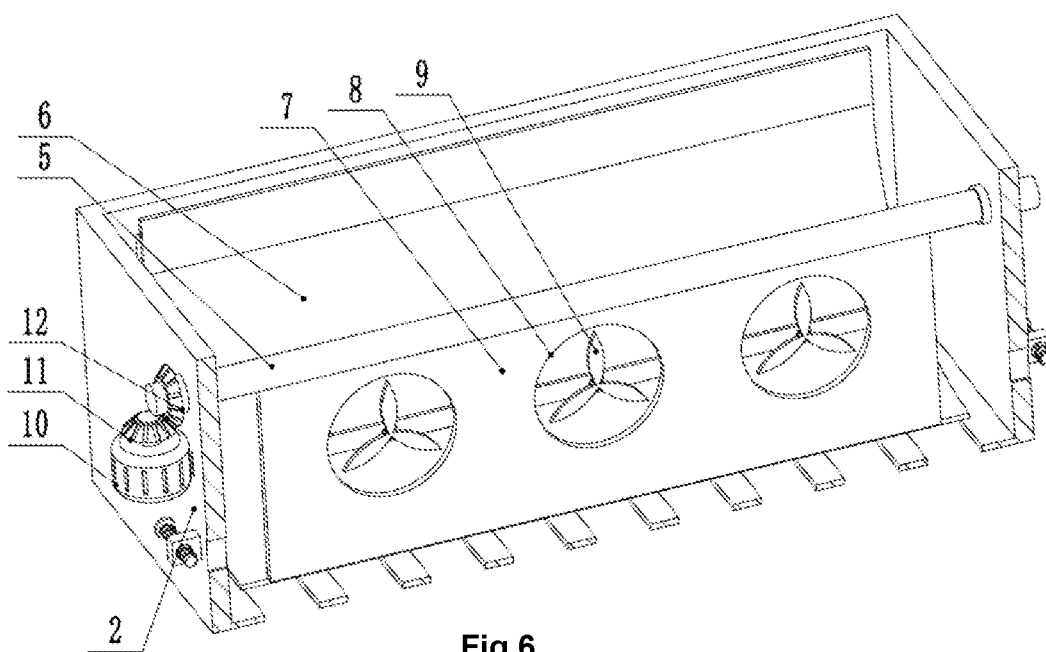
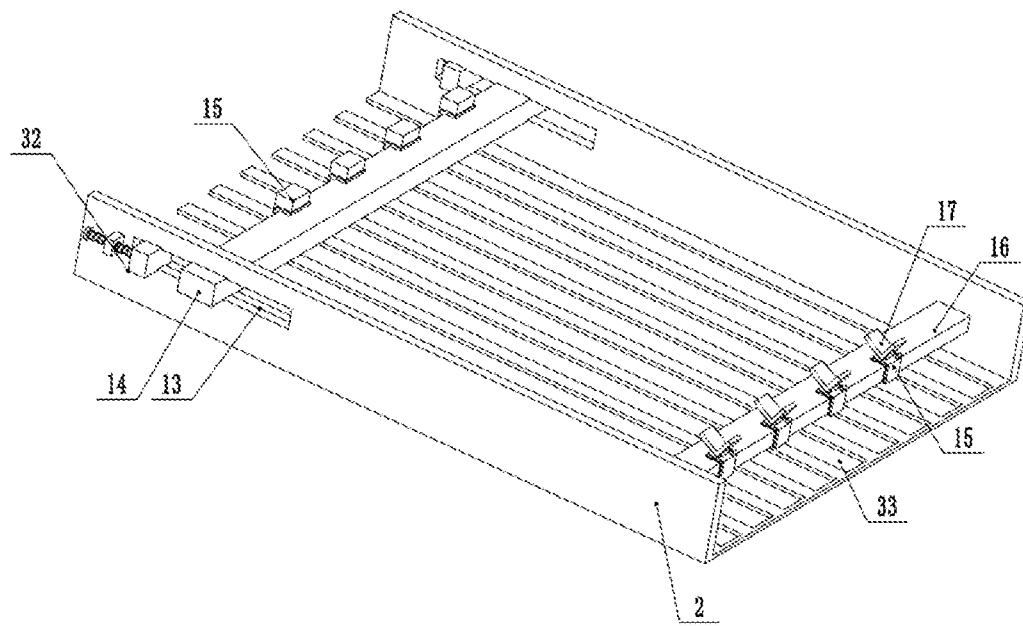


Fig.6

**Fig.7**

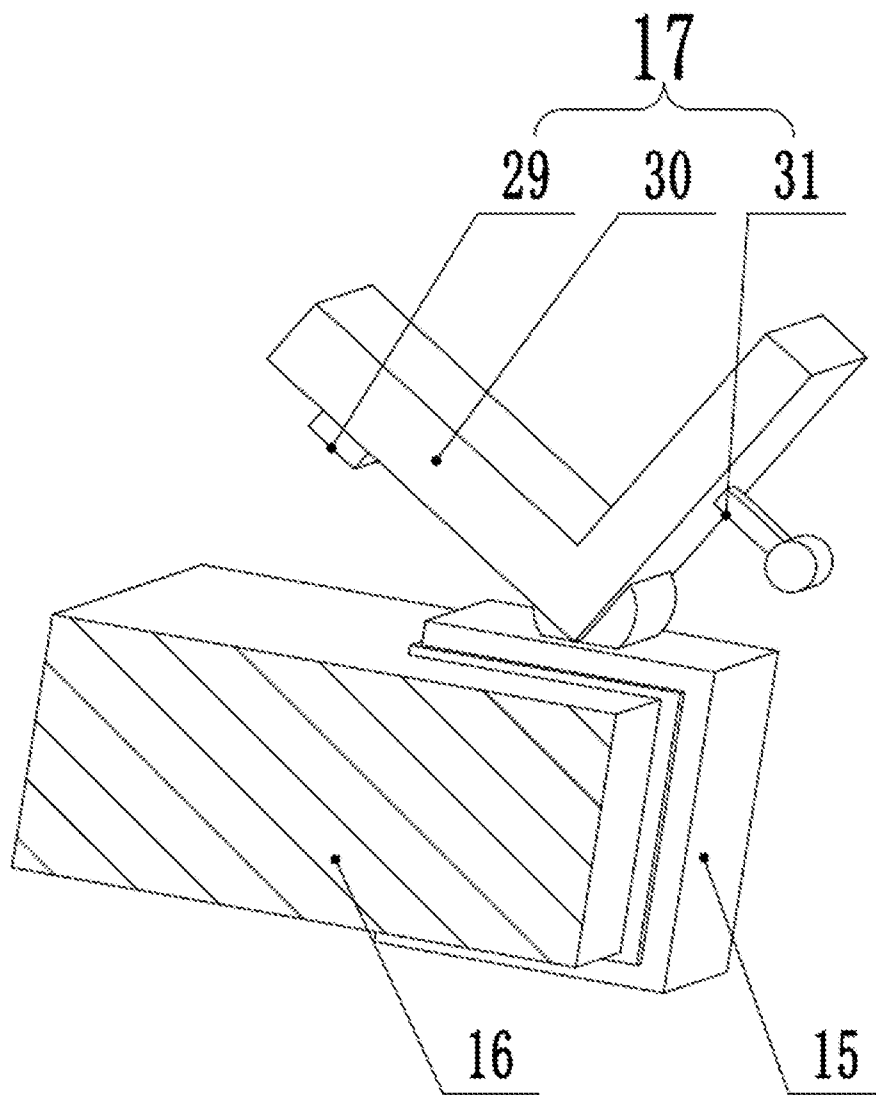


Fig.8