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(72) Inventors:
• **ZHAO, Zisheng**
Foshan, Guangdong 528311 (CN)
• **XUE, Weifei**
Foshan, Guangdong 528311 (CN)
• **ZHAO, Shuai**
Foshan, Guangdong 528311 (CN)
• **GAO, Wendong**
Foshan, Guangdong 528311 (CN)
• **RAO, Tao**
Foshan, Guangdong 528311 (CN)

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(71) Applicants:
• **GD Midea Air-Conditioning Equipment Co., Ltd.**
Foshan, Guangdong 528311 (CN)
• **Midea Group Co., Ltd.**
Foshan, Guangdong 528311 (CN)

(74) Representative: **Lam, Alvin**
Maucher Jenkins
26 Caxton Street
London SW1H 0RJ (GB)

(54) **AIR CONDITIONING OUTDOOR UNIT AND AIR CONDITIONER**

(57) Disclosed is an air conditioning outdoor unit, comprising: a housing, having a compressor chamber filled with a noise reduction filler, the housing comprising an underpan (10) and a side plate fixed onto the underpan (10) and arranged near a compressor of the air conditioning outdoor unit, the side plate being provided with a water-through hole (221) in communication with the compressor chamber, the underpan being provided with a water discharge outlet (10a) and a water discharge channel (10b), and the water discharge channel (10b) being at least partially located in the compressor chamber, with one end of the water discharge channel (10b) being in communication with the water discharge outlet (10a), and the other end thereof being arranged near the water-through hole (221); a high/low-pressure valve group (40) mounted on the side plate; a water disposal pan (50), mounted on the side plate and arranged to cover the high/low-pressure valve group (40), with the water disposal pan (50) being used for introducing water from the water disposal pan (50) into the water-through hole (221); and a cover plate (60), covering a portion, located in the compressor chamber, of the water discharge channel (10b), with the cover plate (60) being provided with

a communication water hole (60a) that communicates the water-through hole (221) with the water discharge channel (10b). An air conditioner is further disclosed.

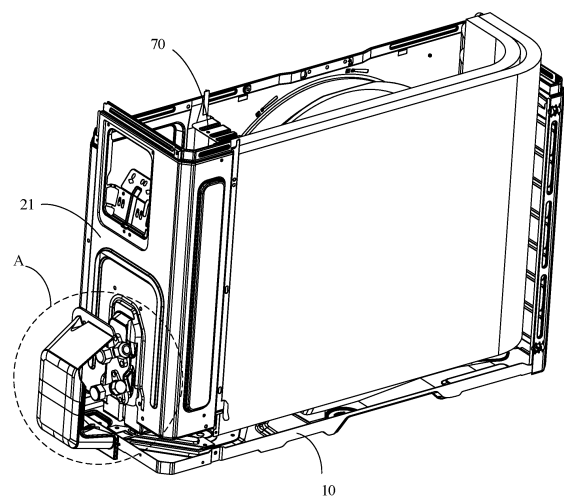


Fig. 1

Description

TECHNICAL FIELD

5 **[0001]** This application relates to the field of air conditioners, in particular to an outdoor unit of an air conditioner and an air conditioner.

BACKGROUND

10 **[0002]** Since the compressor of the outdoor unit of the air conditioner generates greater vibration during operation, resulting in greater noise, noise reduction fillers, such as damping particles, are generally filled in the compressor cavity to reduce noise. Generally, a high-pressure valve and a low-pressure valve are arranged on an enclosure of the outdoor unit, and the indoor unit is connected to the high-pressure valve and the low-pressure valve through connection pipes to be communicated with the outdoor unit. When the air conditioner is in a cooling mode, condensed water will be
 15 generated on the high-pressure valve, the low-pressure valve, and the connecting pipes. Generally the condensed water is guided into a chassis of the outdoor unit and discharged through the chassis. However, after the condensed water is guided into the chassis, it will come into contact with the noise reduction fillers in the compressor cavity. The noise reduction fillers hinder the flow of condensed water, and the condensed water also results in poor noise reduction effect of the noise reduction fillers.

SUMMARY

[0003] The main object of this application is to provide an outdoor unit of an air conditioner, which aims to prevent the noise reduction fillers in the compressor cavity from contacting the condensed water to affect the noise reduction effect.

25 **[0004]** In order to achieve the above object, the outdoor unit of the air conditioner provided in this application includes:

a housing, defining a compressor cavity filled with noise reduction fillers, and including a chassis and a side plate fixed on the chassis and arranged close to a compressor of the outdoor unit of the air conditioner, the side plate defining a water passage hole in communication with the compressor cavity, the chassis defining a water outlet and
 30 a drain groove, the drain groove being at least partially located in the compressor cavity, one end of the drain groove being in communication with the water outlet, the other end of the drain groove being arranged close to the water passage hole;

a high and low pressure valve set, installed on the side plate;

a water receiving box, installed on the side plate, covering the high and low pressure valve set, and configured to
 35 guide water in the water receiving box into the water passage hole; and

a cover plate, covering a part of the drain groove located in the compressor cavity, and defining a water-communi-
 cating hole communicating the water passage hole and the drain groove.

[0005] Optionally, the side plate includes a side plate body and a valve plate, the side plate body is connected to the chassis and defines an installation opening, the valve plate is installed on the side plate body and configured to cover
 40 the installation opening, the high and low pressure valve set is installed on the valve plate, and the valve plate defines the water passage hole.

[0006] Optionally, a bottom surface of the valve plate includes an installation flange, and the installation flange is folded inward and abutted against the cover plate.

45 **[0007]** Optionally, the water passage hole is a groove defined on an outer surface of the valve plate, the water passage hole extends to the installation flange, and the water-communicating hole is defined on the cover plate at a position directly opposite to the water passage hole on the installation flange.

[0008] Optionally, a drain slot is defined on a lower surface of the cover plate at a position corresponding to the drain groove, and the drain slot extends along an extension direction of the drain groove.

50 **[0009]** Optionally, the chassis includes two installation bosses in the compressor cavity, the two installation bosses are separately provided on two opposite sides of the drain groove and extend along a length direction of the drain groove, and the cover plate is arranged on the installation bosses.

[0010] Optionally, the cover plate is detachably connected to the chassis.

55 **[0011]** Optionally, a bottom wall of the water receiving box is gradually inclined downward in a direction towards the side plate.

[0012] Optionally, a water guide groove is defined on an inner surface of a bottom wall of the water receiving box, the water guide groove extends close to the side plate, and the water guide groove is defined corresponding to the water passage hole.

[0013] Optionally, the water receiving box includes a water guide protrusion on the bottom wall and close to a side surface of the side plate, the water guide protrusion is arranged along a groove wall of the water guide groove and inserted into the water passage hole.

[0014] This application further provides an air conditioner. The air conditioner includes an outdoor unit and an indoor unit, and the outdoor unit includes:

a housing, defining a compressor cavity filled with noise reduction fillers, and including a chassis and a side plate fixed on the chassis and facing the compressor cavity, the side plate defining a water passage hole in communication with the compressor cavity, the chassis defining a water outlet and a drain groove, the drain groove being at least partially located in the compressor cavity, one end of the drain groove being in communication with the water outlet, the other end of the drain groove being arranged close to the water passage hole;

a high and low pressure valve set, installed on the side plate;

a water receiving box, installed on the side plate, covering the high and low pressure valve set, and configured to guide water in the water receiving box into the water passage hole; and

a cover plate, covering a part of the drain groove located in the compressor cavity, and defining a water-communicating hole communicating the water passage hole and the drain groove.

[0015] In this application, by defining a water passage hole on a side plate and covering a water receiving box on a high and low pressure valve set, condensed water generated by the high and low pressure valve set may be guided into the water passage hole by the water receiving box and guided into the chassis through the water passage hole, so as to avoid direct dripping of condensed water. In addition, by providing a drain groove on the chassis, the condensed water generated by the high and low pressure valve set flows to the drain groove through the water passage hole to be guided into the water outlet on the chassis and discharged from the water outlet in a concentrated manner. By covering the drain groove with a cover plate, the noise reduction fillers filled in the compressor cavity may be isolated from the condensed water by the cover plate, which may prevent the noise reduction fillers from filling the drain groove and hinder the smooth flow of the condensed water, and may also prevent the noise reduction fillers from getting wet after contact with the condensed water and affecting the noise reduction effect.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] In order to more clearly describe the technical solutions in the embodiments of this application or the prior art, the following will briefly introduce the drawings that need to be used in the description of the embodiments or the related art. It is appreciated that the drawings in the following description are only some embodiments of this application. For those of ordinary skill in the art, without creative work, other drawings can be obtained according to the structures shown in these drawings.

Fig. 1 is a schematic structural diagram of an outdoor unit of an air conditioner according to an embodiment of this application.

Fig. 2 is a schematic diagram of an internal structure of the outdoor unit of the air conditioner in Fig. 1.

Fig. 3 is a partial enlarged view at A in Fig. 1.

Fig. 4 is a schematic structural diagram of a water receiving box in Fig. 1.

Fig. 5 is a schematic structural diagram of a valve plate in Fig. 1.

Fig. 6 is a schematic cross-sectional view of the valve plate in Fig. 5 along B-B.

Fig. 7 is a schematic structural diagram of a chassis in Fig. 1.

Fig. 8 is a schematic diagram of an assembly of the chassis and the valve plate in Fig. 1.

Fig. 9 is a schematic diagram of an assembly of the chassis and a cover plate in Fig. 1.

Description of reference numerals:

[0017]

[Table 1]

No.	Name	No.	Name
10	Chassis	40	High and low pressure valve set
10a	Water outlet	41	High-pressure valve
10b	Drain groove	42	Low-pressure valve
11	Installation boss	50	Water receiving box
21	Side plate body	50a	Water guide groove
22	Valve plate	51	Water guide protrusion
221	Water passage hole	60	Cover plate
221a	Vertical extension section	60a	Water-communi cating hole
221b	Horizontal extension section	61	Bulge
222	Installation flange	70	Middle partition
30	Outdoor heat exchanger		

[0018] The realization of the object of this application, functional characteristics, and advantages will be further described in conjunction with the embodiments and with reference to the accompanying drawings.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0019] The technical solutions in the embodiments of this application will be described clearly and completely in conjunction with the drawings in the embodiments of this application. It is appreciated that the described embodiments are only a part of the embodiments of this application, but not all the embodiments. Based on the embodiments in this application, all other embodiments obtained by those of ordinary skill in the art without creative work shall fall within the protection scope of this application.

[0020] It should be noted that if there is a directional indication (such as up, down, left, right, front, back...) in the embodiment of this application, the directional indication is only used to explain the relative positional relationship, movement conditions, etc. among the components in a specific posture (as shown in the drawings), if the specific posture changes, the directional indicator also changes accordingly.

[0021] In addition, if there are descriptions related to "first", "second", etc. in the embodiments of this application, the descriptions of "first", "second", etc. are for descriptive purposes only, and cannot be understood as indicating or implying their relative importance or implicitly indicating the number of indicated technical features. Thus, the features defined as "first" and "second" may include at least one of the features either explicitly or implicitly. In addition, the technical solutions between the various embodiments can be combined with each other, but they must be based on the ability of those skilled in the art to realize. When the combination of technical solutions conflicts with each other or cannot be realized, it should be considered that the combination of such technical solutions does not exist, nor within the scope of protection required by this application.

[0022] This application provides an air conditioner, which includes an indoor unit and an outdoor unit.

[0023] In some embodiments of this application, as shown in Figs. 1 to 9, the outdoor unit of the air conditioner includes a housing, an outdoor heat exchanger 30, a compressor, a high and low pressure valve set 40, a water receiving box 50, and a cover plate 60.

[0024] As shown in Figs. 1 and 2, the housing includes a chassis 10, a front panel and side plates. The front panel and the side plates are all provided on the chassis 10. There are two side plates, namely a left side plate and a right side plate, which are respectively connected to left and right sides of the front panel. Generally, a middle partition 70 is provided on the chassis 10 to separate an internal space of the outdoor unit of the air conditioner as a compressor cavity and an air duct space distributed along a left-right direction. The compressor is provided in the compressor cavity, and the outdoor heat exchanger 30 is provided in the air duct space. In order to reduce the noise generated by the compressor, noise reduction fillers may be filled in the compressor cavity. The noise reduction fillers may be damping particles. The vibration generated by the compressor will be transmitted to the damping particles. The damping particles may collide and rub against each other to buffer the vibration generated by the compressor, and the kinetic energy of the vibration of the compressor is converted into frictional heat energy and discharged through the case, thereby reducing the working noise of the compressor. The side plate described in the following embodiments specifically refers to a side plate arranged

close to the compressor, and the side plate is one of cavity walls of the compressor cavity.

[0025] Please refer to Fig. 3, the high and low pressure valve set 40 is installed on the side plate facing the compressor cavity. The high and low pressure valve set 40 generally includes a high-pressure valve 41 and a low-pressure valve 42. The outdoor unit of the air conditioner is connected to the high-pressure valve 41 and the low-pressure valve 42 respectively, and the indoor unit of the air conditioner is also connected to the high-pressure valve 41 and the low-pressure valve 42 respectively. Generally, the high and low pressure valve set 40 is installed on the valve plate 22. That is, the side plate includes a side plate body 21 and a valve plate 22. The side plate body 21 is connected to the chassis 10. The side plate body 21 defines an installation opening close to a bottom of the side plate body 21. For example, the installation opening may be a notch defined at the bottom of the side plate body 21. It is appreciated that the installation opening may also be a closed annular installation hole. The valve plate 22 is installed on the side plate body 21 and is configured to cover the installation opening. The high and low pressure valve set 40 is installed on the valve plate 22. Generally, the high-pressure valve 41 and the low-pressure valve 42 are detachably connected to the valve plate 22, for example, may be fixed by screws. It is appreciated that in other embodiments, the high-pressure valve 41 and the low-pressure valve 42 may also be directly installed on the side plate body 21. Specifically, the valve plate 22 defines two circular holes, one of which is for the high-pressure valve 41 to fit through, and the other of which is for the low-pressure valve 42 to fit through. Since valve bodies of the high-pressure valve 41 and the low-pressure valve 42 are cylindrical, the high-pressure valve 41 and the low-pressure valve 42 are inserted through the circular holes, so that the high-pressure valve 41 and the circular hole may be better adapted to each other to ensure that a gap between the two is small; similarly, the low-pressure valve 42 and the circular hole may also be better adapted to each other to ensure that a gap between the two is small. Preferably, the gap between the high-pressure valve 41 and a hole wall of the circular hole is less than 2mm, for example, the gap between the high-pressure valve 41 and the hole wall of the circular hole is 1mm or 1.5mm, etc., which may not only ensure that the high-pressure valve 41 may be penetrated through the circular hole without interference, but also may prevent leakage of larger damping particles. Similarly, the gap between the low-pressure valve 42 and a hole wall of the circular hole is less than 2 mm, for example, the gap between the low-pressure valve 42 and the hole wall of the circular hole is 1 mm or 1.5 mm.

[0026] In this embodiment, when the air conditioner is operated in a cooling mode, condensed water will be generated on the high-pressure valve 41 and the low-pressure valve 42, as well as the connecting pipe on the high-pressure valve 41 and the connecting pipe on the low-pressure valve 42, so, in order to prevent the condensed water from dripping directly to the ground, a water receiving box 50 is configured to cover the high and low pressure valve set 40, and the water receiving box 50 is installed on the side plate. Specifically, the water receiving box 50 and the side plate body 21 are fixed by screws, or the water receiving box 50 is clamped to the side plate body 21. The water receiving box 50 defines at least one opening facing the side plate, and in order to facilitate the user to operate on the high and low pressure valve set 40, the water receiving box 50 further defines a rearward opening. In order to prevent the condensed water in the water receiving box 50 from flowing out from the rearward opening of the water receiving box 50, a retaining edge is provided on a bottom wall of the water receiving box 50 close to the rearward opening. Please refer to Fig. 5, in order to avoid the overflow of the condensed water in the water receiving box 50, a water passage hole 221 is defined on the side plate. The water receiving box 50 is arranged corresponding to the water passage hole 221, that is, the water receiving box 50 at least covers part of the water passage hole 221 inside, or the water receiving box 50 covers the entire water passage hole 221 inside, so as to guide the water in the water receiving box 50 into the water passage hole 221.

[0027] Please refer to FIG. 4, in order to facilitate the water in the water receiving box 50 to flow into the water passage hole 221, the bottom wall of the water receiving box 50 is gradually inclined downward in the direction towards the side plate, so that the condensed water dripping from the high and low pressure valve set 40 may flow downward along the bottom wall of the water receiving box 50 and toward the water passage hole 221, and the bottom wall of the water receiving box 50 functions as an inclined guide. Furthermore, a water guide groove 50a is defined on an inner surface of a bottom wall of the water receiving box 50. The water guide groove 50a extends close to the side plate, and the water guide groove 50a is defined corresponding to the water passage hole 221. In this embodiment, the water guide groove 50a is defined corresponding to the water passage hole 221, which means that an end of the water guide groove 50a close to the side plate is directed to the water passage hole 221, so that the condensed water may be guided into the water passage hole 221.

[0028] In order to better guide the condensed water in the water receiving box 50 into the water passage hole 221, further, the water receiving box 50 includes a water guide protrusion 51 on the bottom wall and close to a side surface of the side plate. The water guide protrusion 51 is arranged along a groove wall of the water guide groove 50a, that is, the water guide protrusion 51 is arranged around a groove wall at one end of the water guide groove 50a to extend a length of the water guide groove 50a. And, the water guide protrusion 51 is inserted into the water passage hole 221, so that the condensed water is directly guided into the water passage hole 221.

[0029] Please refer to Figs. 7 to 9, the chassis 10 defines a water outlet 10a and a drain groove 10b in communication with the water outlet 10a. The drain groove 10b is elongated and extended toward the side plate to be arranged close to the water passage hole 221. Generally, the water outlet 10a is located in the air duct space, and the drain groove 10b

is at least partially located in the compressor cavity. One end of the drain groove 10b is in communication with the water outlet, specifically through a groove, and the other end of the drain groove 10b is arranged close to the water passage hole. The cover plate 60 is configured to cover the drain groove 10b. Preferably, the cover plate 60 is configured to cover a part of the drain groove 10b located in the compressor cavity. In this way, the area of the cover plate 60 may be reduced and materials may be saved. The cover plate 60 defines a water-communicating hole 60a communicating the water passage hole 221 and the drain groove 10b, so that the water flowing down from the water passage hole 221 may flow from the water-communicating hole 60a to the drain groove 10b and be discharged from the water outlet 10a.

[0030] In this embodiment, the water passage hole 221 is defined on the valve plate 22. In addition, the water passage hole 221 may also be directly defined on the side plate body 21. In this embodiment, a bottom surface of the valve plate 22 includes an installation flange 222, and the installation flange 222 is folded inward and abutted against the cover plate 60. By abutting the installation flange 222 against the cover plate 60, the movement of the cover plate 60 may be restricted to a certain extent. In this embodiment, the water passage hole 221 is a groove defined on an outer surface of the valve plate 22, and is preferably defined by the valve plate 22 being recessed inward. The water passage hole 221 extends to the installation flange 222, that is, the water passage hole 221 is substantially L-shaped and includes a vertical extension section 221a and a horizontal extension section 221b. If a groove depth of the vertical extension section 221a is too large, it means that the valve plate 22 needs to be recessed too much inward, resulting in a position of the valve plate 22 forming the vertical extension section 221a being too thin and easy to break; if the groove depth of the vertical extension section 221a is too small, the water flow is too small, resulting in the condensed water being discharged not in time. Therefore, in this embodiment, the groove depth of the vertical extension section 221a is 5 to 10 mm, for example, the groove depth of the vertical extension section 221a may be 5mm, 6mm, 8mm or 10mm, etc. Similarly, if a groove depth of the horizontal extension section 221b is too large, it means that the installation flange 222 needs to be recessed too much upward, resulting in a position of the installation flange 222 forming the horizontal extension section 221b being too thin and easy to break; if the groove depth of the horizontal extension section 221b is too small, the water flow is too small, resulting in the condensed water being discharged not in time. Therefore, in this embodiment, the groove depth of the horizontal extension section 221b is 3 to 10 mm, for example, the groove depth of the horizontal extension section 221b may be 3mm, 5mm, 8mm or 10mm, etc.

[0031] The water-communicating hole 60a is defined on the cover plate 60 at a position directly opposite to the water passage hole 221 on the installation flange 222. Specifically, the condensed water flows downward from the vertical extension section 221a of the water passage hole 221, then flows to the horizontal extension section 221b, and drips from the water-communicating hole 60a on the cover plate 60 into the drain groove 10b. Since the water passage hole 221 is in the shape of a groove, and the installation flange 222 is abutted against the cover plate 60, that is, an edge of a downward opening of the water passage hole 221 is abutted against the cover plate 60. At the same time, an edge of an outward opening of the water passage hole 221 is abutted against the flange on the chassis 10 or is directly exposed, so the water passage hole 221 will not in communication with the compressor cavity, which may avoid the noise reduction fillers in the compressor cavity from running out from the water passage hole 221 to the outside, and may avoid the condensed water from leaking from an edge of the water passage hole 221.

[0032] In this embodiment, the cover plate 60 is detachably connected to the chassis 10, for example, both ends of the cover plate 60 are fixed to the chassis 10 by screws; or, the chassis 10 defines a clamp slot, and the cover plate 60 is provided with a buckle to be clamped with the clamp slot. In addition, the cover plate 60 and the installation flange 222 may also be detachably connected.

[0033] In addition, the chassis 10 includes two installation bosses 11 in the compressor cavity. The two installation bosses 11 are separately provided on two opposite sides of the drain groove 10b and extend along the drain groove 10b. The cover plate 60 is arranged on and fixed with the two installation bosses 11. By setting the installation bosses 11 to erect the cover plate 60, a depth of the drain groove 10b may be increased, a drain flow rate of the drain groove 10b may be increased, and the condensed water may be discharged smoothly.

[0034] Generally, the depth of the drain groove 10b is relatively small, and the cover plate 60 is configured to cover the drain groove 10b. In order to ensure that the condensed water may flow out smoothly when the flow rate is large, a drain slot is defined on a lower surface of the cover plate 60 at a position corresponding to the drain groove 10b, and the drain slot extends along an extension direction of the drain groove 10b. In this embodiment, the drain slot is defined by the lower surface of the cover plate 60 being recessed upward, and a bulge 61 is correspondingly formed on an upper surface of the cover plate 60. The arrangement of the drain slot is equivalent to increasing the depth of the drain groove 10b, so that a cross section area of the drain groove 10b may be larger, which facilitates flow of a larger water flow. In order to facilitate the flow of the condensed water in the drain groove 10b, an end of the drain groove 10b close to the water passage hole 221 is higher than an end of the drain groove 10b close to the water outlet 10a, that is, a bottom groove wall of the drain groove 10b is gradually inclined downward in the direction from the end close to the water passage hole 221 towards the water outlet 10a, so that the condensed water flows from a high place to a low place.

[0035] The drain groove 10b has a larger groove width at the end close to the water passage hole 221, which means that the drain groove 10b has a larger cross-sectional area at an inflow end of the condensate water. An orthographic

projection of the water-communicating hole 60a on the chassis 10 falls into the drain groove 10b, so that the drain groove 10b may completely receive the condensed water flowing down from the water-communicating hole 60a, and prevent the condensed water from flowing out. The drain groove 10b has a smaller groove width at the end close to the water outlet 10a, which means that the drain groove 10b is gradually narrowed along the flow direction of the condensed water, so that the condensed water may be gradually collected into a narrower and more rapid water flow to be better guided into the water outlet 10a.

[0036] In this application, by defining a water passage hole 221 on a side plate and covering a water receiving box 50 on a high and low pressure valve set 40, condensed water generated by the high and low pressure valve set 40 may be guided into the water passage hole 221 by the water receiving box 50 and guided into the chassis 10 through the water passage hole 221, so as to avoid direct dripping of condensed water. In addition, by providing a drain groove 10b on the chassis 10, the condensed water generated by the high and low pressure valve set 40 flows to the drain groove 10b through the water passage hole 221 to be guided into the water outlet 10a on the chassis 10 and discharged from the water outlet 10a in a concentrated manner. By covering the drain groove 40b with a cover plate 60, the noise reduction fillers filled in the compressor cavity may be isolated from the condensed water by the cover plate 60, which may prevent the noise reduction fillers from filling the drain groove 10b and hinder the smooth flow of the condensed water, and may also prevent the noise reduction fillers from getting wet after contact with the condensed water and affecting the noise reduction effect.

[0037] The above are only the preferred embodiments of this application, and therefore do not limit the patent scope of this application. Under the conception of this application, any equivalent structural transformation made by using the content of the description and drawings of this application, or direct/indirect application in other related technical fields are all included in the patent protection scope of this application.

Claims

1. An outdoor unit of an air conditioner, comprising:

a housing, defining a compressor cavity filled with noise reduction fillers, and comprising a chassis and a side plate fixed on the chassis and arranged close to a compressor of the outdoor unit of the air conditioner, the side plate defining a water passage hole in communication with the compressor cavity, the chassis defining a water outlet and a drain groove, the drain groove being at least partially located in the compressor cavity, one end of the drain groove being in communication with the water outlet, the other end of the drain groove being arranged close to the water passage hole;

a high and low pressure valve set, installed on the side plate;

a water receiving box, installed on the side plate, covering the high and low pressure valve set, and configured to guide water in the water receiving box into the water passage hole; and

a cover plate, covering a part of the drain groove located in the compressor cavity, and defining a water-communicating hole communicating the water passage hole and the drain groove.

2. The outdoor unit of the air conditioner of claim 1, wherein the side plate comprises a side plate body and a valve plate, the side plate body is connected to the chassis and defines an installation opening, the valve plate is installed on the side plate body and configured to cover the installation opening, the high and low pressure valve set is installed on the valve plate, and the valve plate defines the water passage hole.

3. The outdoor unit of the air conditioner of claim 2, wherein a bottom surface of the valve plate comprises an installation flange, and the installation flange is folded inward and abutted against the cover plate.

4. The outdoor unit of the air conditioner of claim 3, wherein the water passage hole is a groove defined on an outer surface of the valve plate, the water passage hole extends to the installation flange, and the water-communicating hole is defined on the cover plate at a position directly opposite to the water passage hole on the installation flange.

5. The outdoor unit of the air conditioner of claim 1, wherein a drain slot is defined on a lower surface of the cover plate at a position corresponding to the drain groove, and the drain slot extends along an extension direction of the drain groove.

6. The outdoor unit of the air conditioner of claim 1, wherein the chassis comprises two installation bosses in the compressor cavity, the two installation bosses are separately provided on two opposite sides of the drain groove and extend along a length direction of the drain groove, and the cover plate is arranged on the installation bosses.

7. The outdoor unit of the air conditioner of claim 1, wherein the cover plate is detachably connected to the chassis.
8. The outdoor unit of the air conditioner of claim 1, wherein a bottom wall of the water receiving box is gradually inclined downward in a direction towards the side plate.
9. The outdoor unit of the air conditioner of claim 1, wherein the water receiving box defines a water guide groove is defined on an inner surface of a bottom wall of the water receiving box, the water guide groove extends close to the side plate, and the water guide groove is defined corresponding to the water passage hole.
10. The outdoor unit of the air conditioner of claim 9, wherein the water receiving box comprises a water guide protrusion on the bottom wall and close to a side surface of the side plate, the water guide protrusion is arranged along a groove wall of the water guide groove and inserted into the water passage hole.
11. An air conditioner, comprising an indoor unit and an outdoor unit, wherein the outdoor unit comprises:
 - a housing, defining a compressor cavity filled with noise reduction fillers, and comprising a chassis and a side plate fixed on the chassis and arranged close to a compressor of the outdoor unit of the air conditioner, the side plate defining a water passage hole in communication with the compressor cavity, the chassis defining a water outlet and a drain groove, the drain groove being at least partially located in the compressor cavity, one end of the drain groove being in communication with the water outlet, the other end of the drain groove being arranged close to the water passage hole;
 - a high and low pressure valve set, installed on the side plate;
 - a water receiving box, installed on the side plate, covering the high and low pressure valve set, and configured to guide water in the water receiving box into the water passage hole; and
 - a cover plate, covering a part of the drain groove located in the compressor cavity, and defining a water-communicating hole communicating the water passage hole and the drain groove.
12. The air conditioner of claim 11, wherein the side plate comprises a side plate body and a valve plate, the side plate body is connected to the chassis and defines an installation opening, the valve plate is installed on the side plate body and configured to cover the installation opening, the high and low pressure valve set is installed on the valve plate, and the valve plate defines the water passage hole.
13. The air conditioner of claim 12, wherein the valve plate comprises an installation flange at a bottom surface, and the installation flange is folded inward and abutted against the cover plate.
14. The air conditioner of claim 13, wherein the water passage hole is a groove defined on an outer surface of the valve plate, the water passage hole extends to the installation flange, and the water-communicating hole is defined on the cover plate at a position directly opposite to the water passage hole on the installation flange.
15. The air conditioner of claim 11, wherein a drain slot is defined on a lower surface of the cover plate at a position corresponding to the drain groove, and the drain slot extends along an extension direction of the drain groove.
16. The air conditioner of claim 11, wherein the chassis comprises two installation bosses in the compressor cavity, the two installation bosses are separately provided on two opposite sides of the drain groove and extend along a length direction of the drain groove, and the cover plate is arranged on the installation bosses.
17. The air conditioner of claim 11, wherein the cover plate is detachably connected to the chassis.
18. The air conditioner of claim 11, wherein a bottom wall of the water receiving box is gradually inclined downward in a direction towards the side plate.
19. The air conditioner of claim 11, wherein a water guide groove is defined on an inner surface of a bottom wall of the water receiving box, the water guide groove extends close to the side plate, and the water guide groove is defined corresponding to the water passage hole.
20. The air conditioner of claim 19, wherein the water receiving box comprises a water guide protrusion on the bottom wall and close to a side surface of the side plate, the water guide protrusion is arranged along a groove wall of the water guide groove and inserted into the water passage hole.

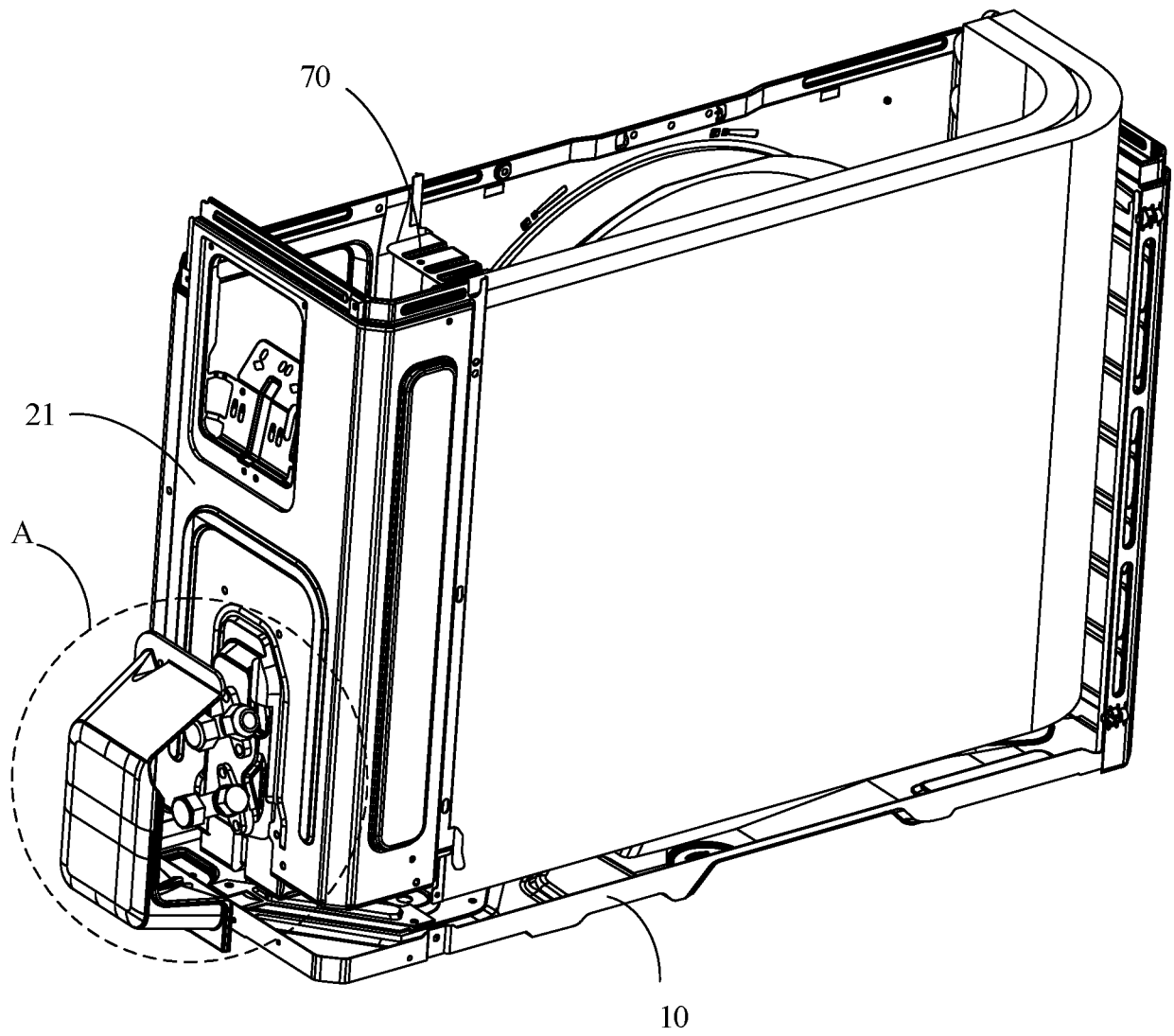


Fig. 1

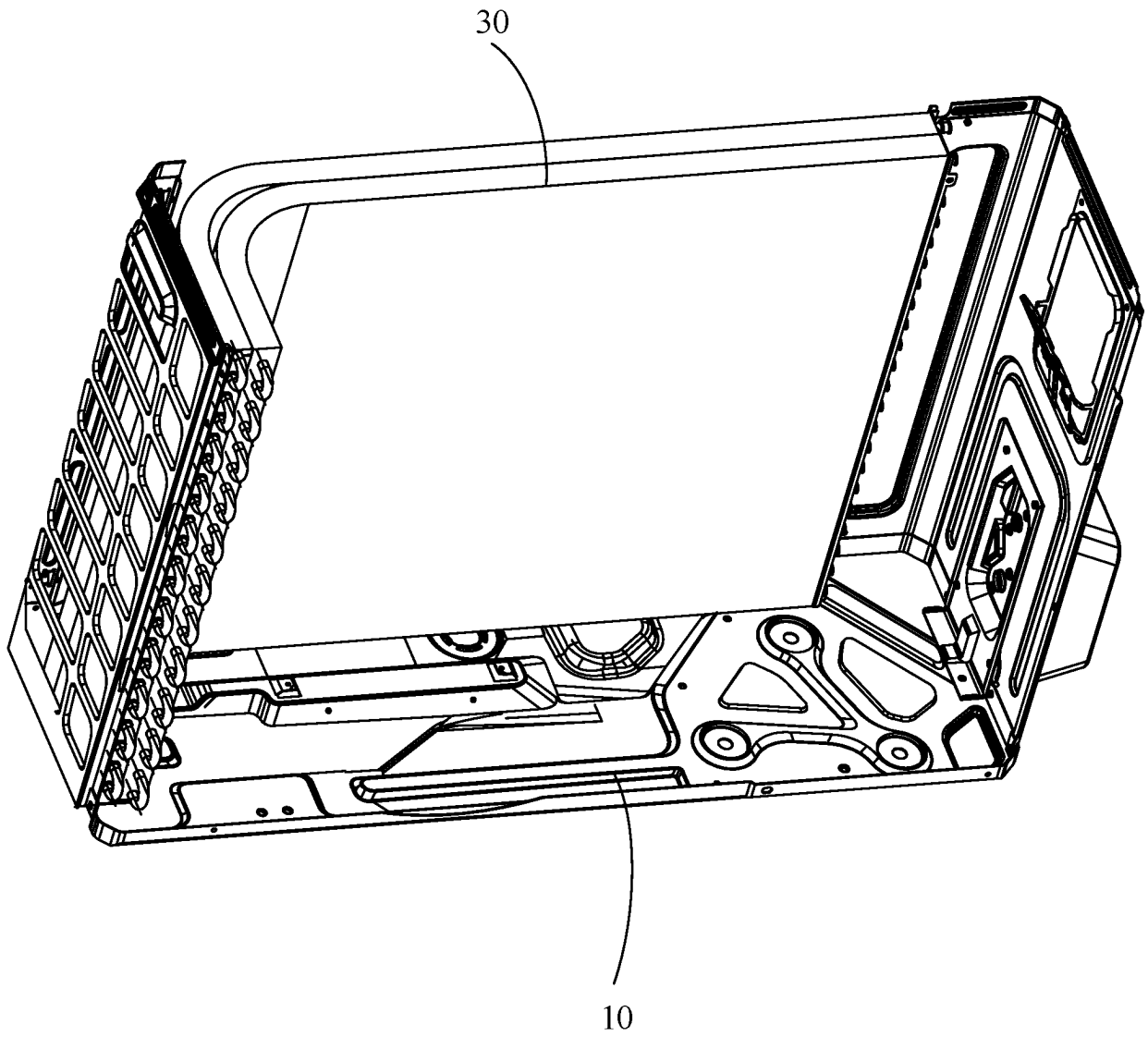


Fig. 2

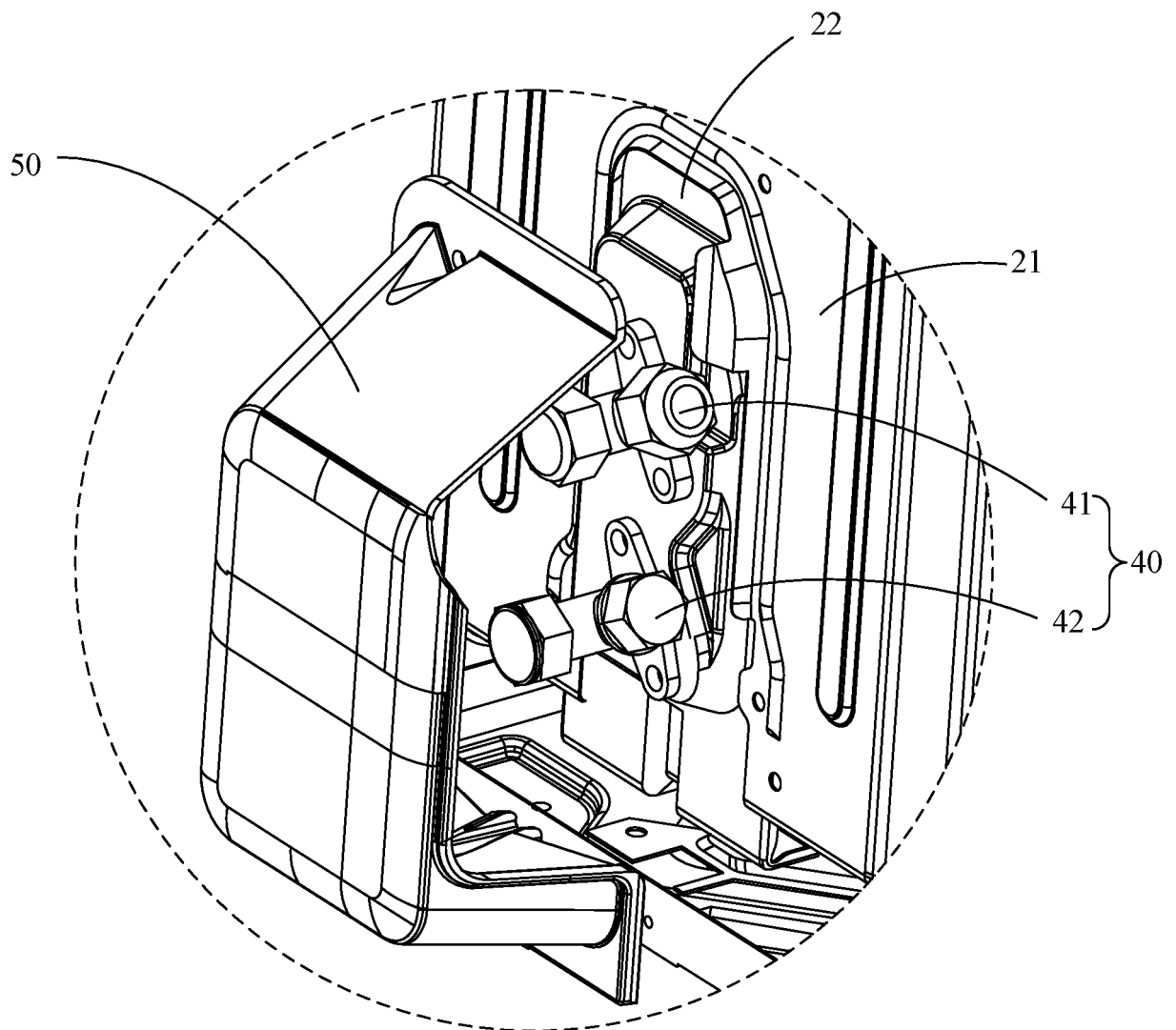


Fig. 3

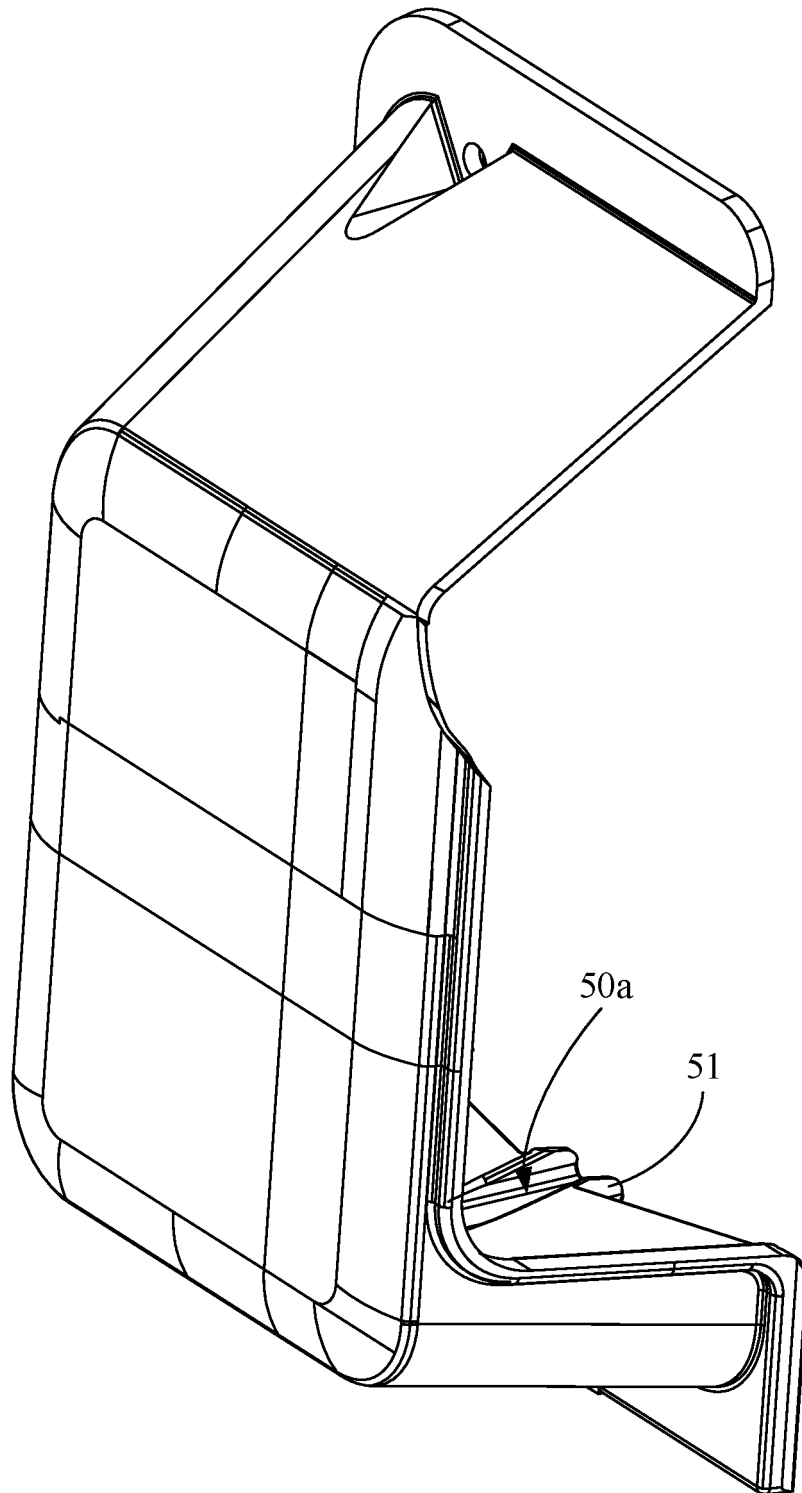


Fig. 4

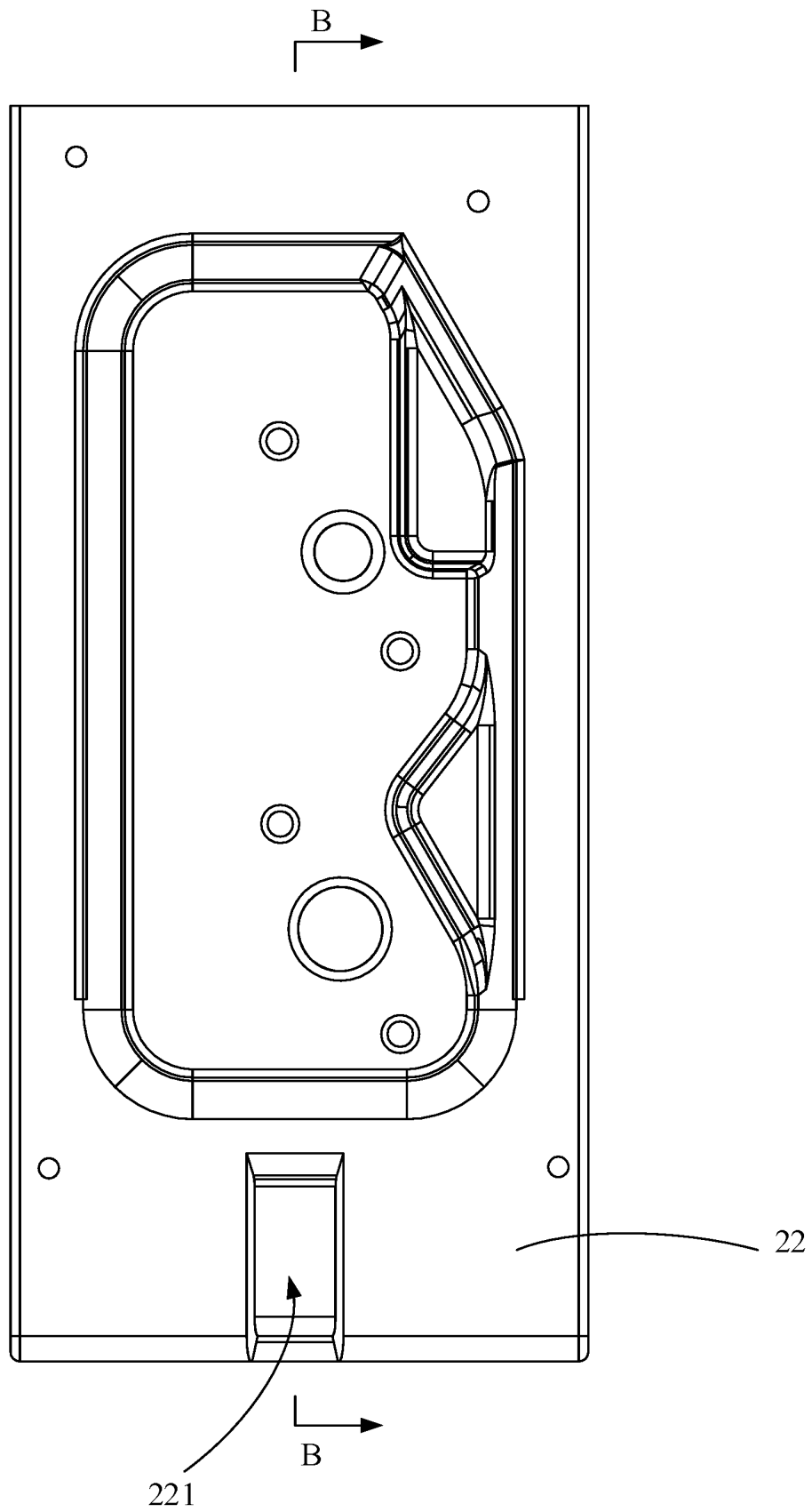


Fig. 5

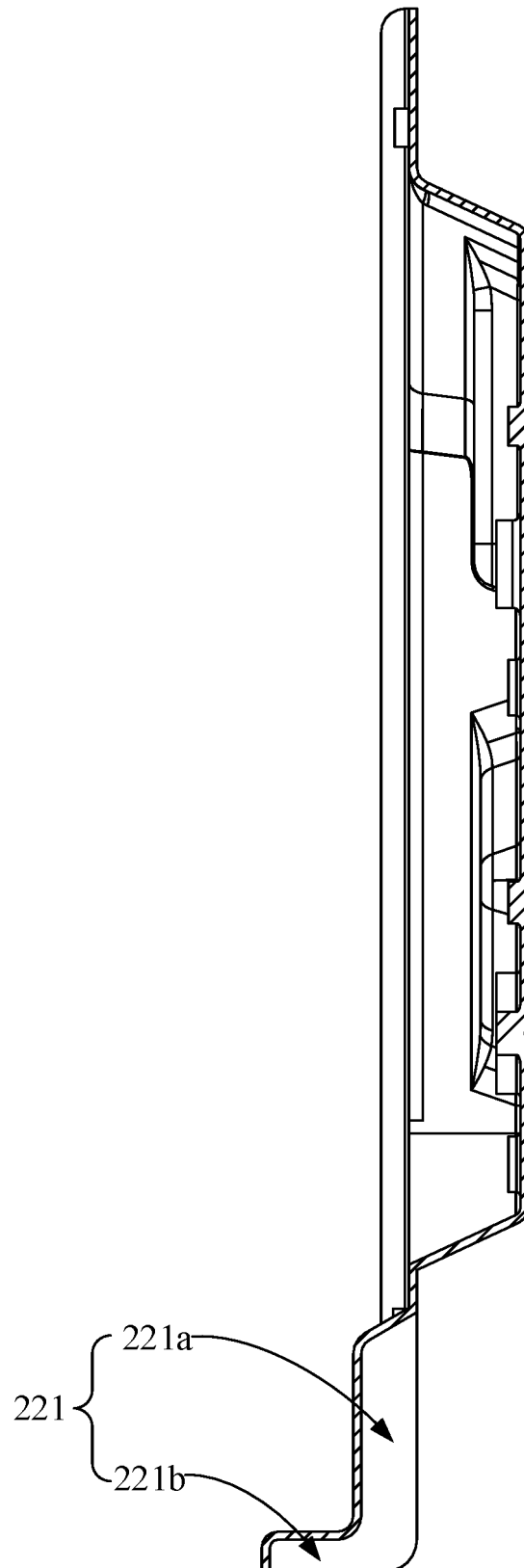


Fig. 6

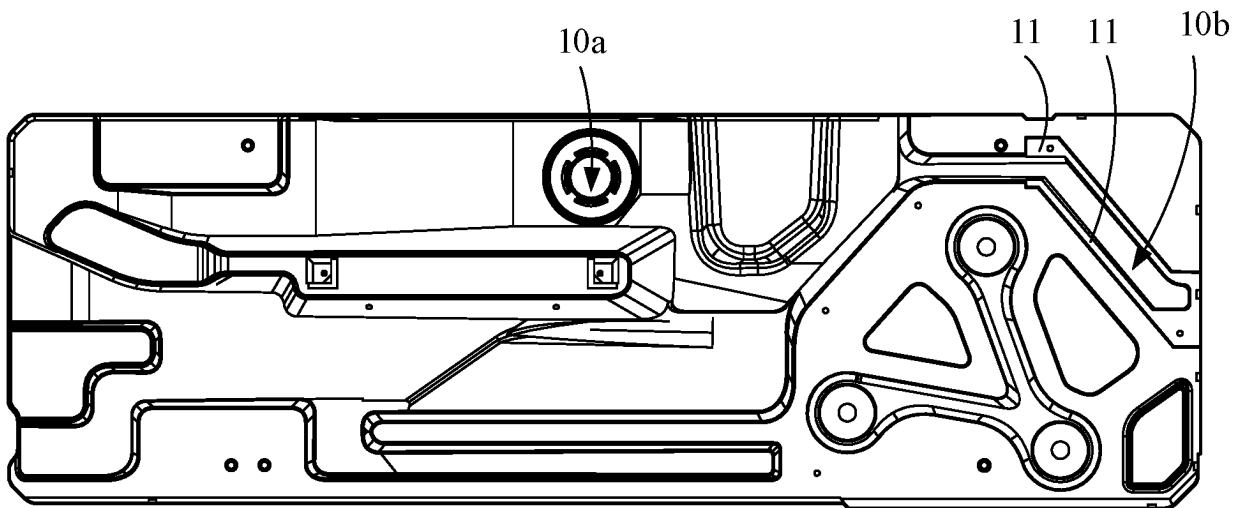


Fig. 7

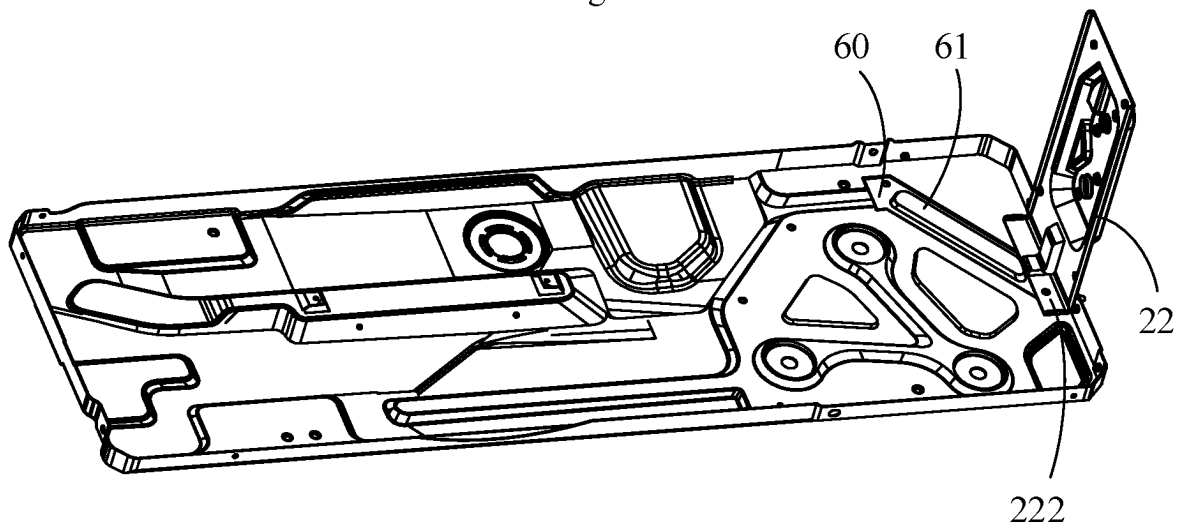


Fig. 8

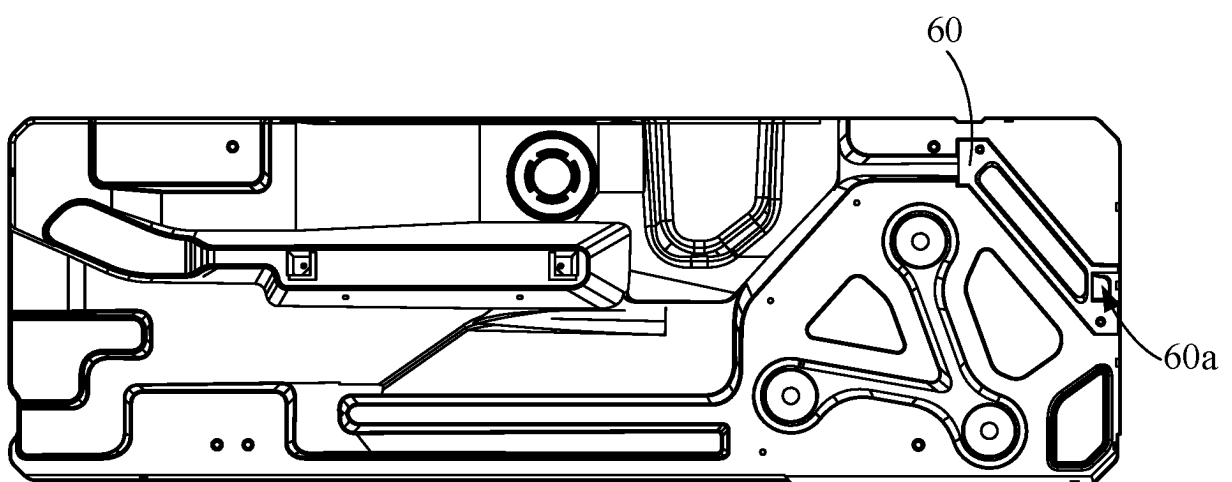


Fig. 9

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER F24F 1/12(2011.01)i; F24F 1/36(2011.01)i; F24F 13/22(2006.01)i According to International Patent Classification (IPC) or to both national classification and IPC																								
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) F24F Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched																								
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CNABS, CNTXT, VEN: 空调, 室外, 底盘, 底板, 水槽, 水沟, 排水, 盖板, 遮盖, 覆盖, air conditioner, outdoor, chassis, base, groove, recess, tunnel, drain, cover, shield, lid																								
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>EP 2716983 A2 (MITSUBISHI HEAVY IND LTD.) 09 April 2014 (2014-04-09) description, paragraphs [0018]-[0040], and figures 1-6</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>JP H08313009 A (MITSUBISHI HEAVY IND LTD.) 29 November 1996 (1996-11-29) description, paragraphs [0005]-[0014], and figure 1</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>CN 101813338 A (LG ELECTRONICS TIANJIN APPLIANCES CO., LTD.) 25 August 2010 (2010-08-25) description, paragraphs [0015] and [0016], and figures 1-4</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>CN 206875613 U (ZHUHAI SAMYOU ENVIRONMENTAL TECH CO., LTD.) 12 January 2018 (2018-01-12) description, paragraphs [0023]-[0029], and figures 1-5</td> <td>1-20</td> </tr> <tr> <td>A</td> <td>TW 456151 B (MATSUSHITA ELECTRIC TW CO., LTD.) 11 October 2014 (2014-10-11) entire document</td> <td>1-20</td> </tr> <tr> <td>A</td> <td>JP 2010210199 A (PANASONIC CORP.) 24 September 2010 (2010-09-24) entire document</td> <td>1-20</td> </tr> <tr> <td>A</td> <td>CN 106288038 A (GUANGDONG MIDEA AIR-CONDITIONING EQUIPMENT CO., LTD. ET AL.) 04 January 2017 (2017-01-04) entire document</td> <td>1-20</td> </tr> </tbody> </table>	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	EP 2716983 A2 (MITSUBISHI HEAVY IND LTD.) 09 April 2014 (2014-04-09) description, paragraphs [0018]-[0040], and figures 1-6	1-20	Y	JP H08313009 A (MITSUBISHI HEAVY IND LTD.) 29 November 1996 (1996-11-29) description, paragraphs [0005]-[0014], and figure 1	1-20	Y	CN 101813338 A (LG ELECTRONICS TIANJIN APPLIANCES CO., LTD.) 25 August 2010 (2010-08-25) description, paragraphs [0015] and [0016], and figures 1-4	1-20	Y	CN 206875613 U (ZHUHAI SAMYOU ENVIRONMENTAL TECH CO., LTD.) 12 January 2018 (2018-01-12) description, paragraphs [0023]-[0029], and figures 1-5	1-20	A	TW 456151 B (MATSUSHITA ELECTRIC TW CO., LTD.) 11 October 2014 (2014-10-11) entire document	1-20	A	JP 2010210199 A (PANASONIC CORP.) 24 September 2010 (2010-09-24) entire document	1-20	A	CN 106288038 A (GUANGDONG MIDEA AIR-CONDITIONING EQUIPMENT CO., LTD. ET AL.) 04 January 2017 (2017-01-04) entire document	1-20
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Date of the actual completion of the international search 20 February 2019	Date of mailing of the international search report 13 March 2019																							
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2018/097376

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 201032249 Y (HAIER GROUP CO., LTD. ET AL.) 05 March 2008 (2008-03-05) entire document	1-20

Form PCT/ISA/210 (second sheet) (January 2015)

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Information on patent family members

International application No.

PCT/CN2018/097376

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CN 206875613 U	12 January 2018	None	
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		TW I456151 B	11 October 2014
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Form PCT/ISA/210 (patent family annex) (January 2015)