



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
13.05.2020 Bulletin 2020/20

(51) Int Cl.:
F24F 1/24 ^(2011.01) **F24F 1/22** ^(2011.01)

(21) Application number: **19812898.5**

(86) International application number:
PCT/CN2019/089862

(22) Date of filing: **03.06.2019**

(87) International publication number:
WO 2020/052280 (19.03.2020 Gazette 2020/12)

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

• **GD Midea Heating & Ventilating Equipment Co.,
Ltd.**
Foshan, Guangdong 528311 (CN)

(30) Priority: **10.09.2018 CN 201811051438**
10.09.2018 CN 201821480814 U

(72) Inventor: **The designation of the inventor has not
yet been filed**

(71) Applicants:
• **HEFEI MIDEA HEATING & VENTILATING
EQUIPMENT
CO., LTD.**
**Boyan Science Park,
High-Tech Zone, Hefei
Anhui 230088 (CN)**

(74) Representative: **Grünecker Patent- und
Rechtsanwälte
PartG mbB
Leopoldstraße 4
80802 München (DE)**

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

(57) An outdoor unit for an air conditioner (100) and an air conditioner having the same are provided. The outdoor unit for an air conditioner (100) includes: a body (1), a rotor (2), a welded member for electronic control (3), a waterproof member (5), and at least one baffle. The welded member for electronic control (3) is arranged at a top portion in the body (1), the welded member for electronic control (3) defines at least one opening in a bottom portion thereof, and the electronic control component (4) is arranged in the welded member for electronic control (3). The waterproof member (5) is connected to the bottom portion of the welded member for electronic control (3) and opposite to the opening, the waterproof member (5) and the welded member for electronic control (3) cooperatively define an airflow passage (51) in communication with the opening, the waterproof member (5) and the welded member for electronic control (3) define two airflow outlets (52) in communication with the airflow passage (51), and the baffle is arranged in the airflow passage (51).

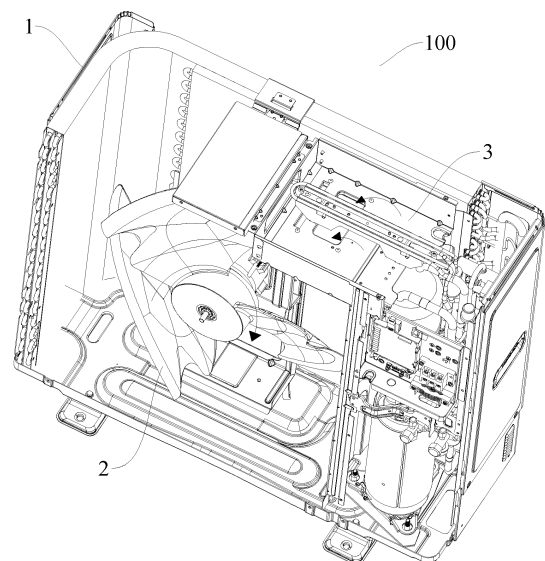


FIG. 1

Description

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is based upon and claims priority to Chinese Patent Application Serial No. 201811051438.7, filed on September 10, 2018, and Chinese Patent Application Serial No. 201821480814.X filed on September 10, 2018, the entire contents of which are incorporated herein by reference.

FIELD

[0002] The present disclosure relates to a field of manufacturing technologies for air conditioners, and more particularly, to an outdoor unit for an air conditioner and an air conditioner having the same.

BACKGROUND

[0003] In the related art, an electronic control element on an electronic component of an outdoor unit for an air conditioner, such as a small multi-coupled-side-air-output outdoor unit, generates heat during operation. The normal operation and service life of the electronic control element will be affected, if the heat cannot be discharged. In addition, if water and the like from rotors are splashed on the electronic control element, failures of the electronic control element may be caused, and moreover the outdoor unit for an air conditioner cannot operate normally.

SUMMARY

[0004] The present disclosure seeks to solve at least one of the technical problems existing in the related art. To this end, an objective of the present disclosure provides an outdoor unit for an air conditioner. Quick heat dissipation can be provided to the electronic control component of the outdoor unit for an air conditioner, and water and the like hardly fall on the electronic control component.

[0005] Another objective of the present disclosure provides an air conditioner with the outdoor unit.

[0006] The outdoor unit for an air conditioner according to embodiments of a first aspect of the present disclosure includes: a body; a rotor arranged in the body; a welded member for electronic control arranged in a top portion within the body, defining at least one opening in a bottom portion of the welded member for electronic control, and provided with an electronic control component in the welded member for electronic control; a waterproof member connected to the bottom portion of the welded member for electronic control, and being opposite to the opening, defining an airflow passage in communication with the opening cooperatively with the welded member for electronic control, having two ends separately spaced apart from the welded member for electronic control to define two airflow outlets in communication with the air-

flow passage; and at least one baffle arranged in the airflow passage to prevent liquid from entering the welded member for electronic control through the airflow passage.

[0007] In the outdoor unit for an air conditioner according to embodiments of the present disclosure, the waterproof member is arranged at the bottom portion of the welded member for electronic control and opposite the opening, the waterproof member and the welded member for electronic control cooperatively define the airflow passage in communication with the opening and the two airflow outlets in communication with the airflow passage, and the baffle is arranged in the airflow passage, quick heat dissipation for the electronic control component can be realized, and water and the like hardly enter the welded member for electronic control through the opening, such that the electronic control component in the welded member for electronic control can normally operate.

[0008] According to some embodiments of the present disclosure, the waterproof member is open at a top portion, two sides of the waterproof member in a width direction are provided with connecting parts extending outwards respectively, the waterproof member is connected to the bottom portion of the welded member for electronic control by means of the connecting parts, and two ends of the waterproof member in the length direction are spaced apart from the welded member for electronic control to define the two airflow outlets respectively.

[0009] According to some embodiments of the present disclosure, at least one end of the two ends of the waterproof member in the length direction is provided with an incline part, the incline part obliquely extends upwards in a direction away from a center of the waterproof member and has a free end, the free end of the incline part is provided with a flange horizontally extending outwards, an upper surface of the flange is spaced apart from the bottom portion of the welded member for electronic control to define the airflow outlet.

[0010] According to some embodiments of the present disclosure, at least one end of the two ends of the waterproof member in the length direction is provided with an extending part vertically extending upwards, and a top surface of the extending part is spaced apart from the bottom portion of the welded member for electronic control to define the airflow outlet.

[0011] According to some embodiments of the present disclosure, a width of the airflow outlet in an up-down direction is represented by a , and the a fulfills $0 < a \leq 10\text{mm}$.

[0012] According to some embodiments of the present disclosure, the baffle includes a first sub-baffle, and the first sub-baffle surrounds the opening and extends downwards into the waterproof member.

[0013] According to some embodiments of the present disclosure, the baffle further includes a second sub-baffle, the second sub-baffle has a first end connected to the bottom portion of the welded member for electronic control and a second end extending downwards and spaced apart from a bottom wall of the waterproof mem-

ber, and the second sub-baffle is arranged between the opening and the airflow outlet.

[0014] According to some embodiments of the present disclosure, the opening includes a first orifice and a second orifice spaced apart from each other, the first sub-baffle is connected at the first orifice, the second orifice is located at a side of the first orifice away from the second sub-baffle, the third sub-baffle is arranged at the second orifice, and the third sub-baffle is connected to a side wall of the second orifice away from the first sub-baffle.

[0015] According to some embodiments of the present disclosure, a width of the airflow outlet in an up-down direction is represented by a, a height of the first sub-baffle is represented by b, a height of the second sub-baffle is represented by c, a distance between a bottom surface of the welded member for electronic control and a bottom wall of the waterproof member is represented by d, and a, b, c, and d fulfill $d \geq a$, $a < b < d$, and $a < c < d$.

[0016] According to some embodiments of the present disclosure, the electronic control component is inverted in the welded member for electronic control.

[0017] The air conditioner according to embodiments of the second aspect of the present disclosure includes the outdoor unit according to the embodiments of the first aspect of the present disclosure.

[0018] Additional aspects and advantages of embodiments of present disclosure will be given in part in the following descriptions, become apparent in part from the following descriptions, or be learned from the practice of the embodiments of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] These and/or other aspects and advantages of embodiments of the present disclosure will become apparent and more readily appreciated from the following descriptions made with reference to the drawings.

FIG. 1 is a perspective view of an air conditioner according to embodiments of the present disclosure.

FIG. 2 is an exploded view of a welded member for electronic control, a waterproof member, and a baffle according to embodiments of the present disclosure.

FIG. 3 is a top view of a welded member for electronic control, a waterproof member, and a baffle according to embodiments of the present disclosure.

FIG. 4 is sectional view taken along line A-A in FIG. 3, showing a direction along which air flows.

FIG. 5 is a front view of an outer unit for an air conditioner according to embodiments of the present disclosure.

FIG. 6 is a sectional view of a welded member for electronic control, a waterproof member, and a baffle in FIG. 5, showing a direction along which water drops are splashed.

[0020] Reference numerals:

100: outdoor unit for air conditioner;

1: body; 2: rotor;

3: welded member for electronic control; 31: first opening; 32: second opening;

4: electronic control component; 41: electronic control element;

5: waterproof member; 51: airflow passage; 52: airflow outlet;

53: connecting part; 54: incline part; 55: flange; 56: extending part;

61: first sub-baffle; 62: second sub-baffle; 63: third sub-baffle.

DETAILED DESCRIPTION

[0021] Embodiments of the present disclosure are described in detail, and examples of the embodiments are depicted in the drawings. The same or similar elements and the elements having same or similar functions are denoted by like reference numerals throughout the descriptions. The embodiments described herein with reference to drawings are explanatory and only used to illustrate the present disclosure. The embodiments shall not be construed to limit the present disclosure.

[0022] In the description of the present disclosure, it should be understood that, terms such as "central," "longitudinal," "lateral," "length," "width," "thickness," "upper," "lower," "front," "rear," "left," "right," "vertical," "horizontal," "top," "bottom," "inner," "outer," "clockwise," and "counterclockwise," "axial," "radial," "circumferential", etc. should be construed to refer to the orientation and position relationship as then described or as shown in the drawings under discussion for simplifying the description of the present disclosure, but do not alone indicate or imply that the device or element referred to must have a particular orientation. Moreover, it is not required that the present disclosure is constructed or operated in a particular orientation, and shall not be construed to limit the present disclosure. In addition, the feature defined with "first" and "second" may indicate or imply that one or more of these features are provided. In the description of the present disclosure, the term "a plurality of" means two or more than two, unless specified otherwise.

[0023] In the description of the present disclosure, it should be understood that, unless specified or limited otherwise, the terms "mounted," "connected," and "coupled" are used broadly and may be such as fixed connections, detachable connections, or integral connections; may also be mechanical or electrical connections; may also be direct connections or indirect connections via intervening structures; may also be inner communications of two elements, which can be understood by those skilled in the art according to specific situations.

[0024] An outdoor unit for an air conditioner 100 according to embodiments of the present disclosure is described referring to FIG. 1 to FIG. 6. The outdoor unit for an air conditioner 100 can be a small multi-coupled-side-air-output outdoor unit. In the following description of the

present disclosure, the small multi-coupled-side-air-output outdoor unit will be described as an example of the outdoor unit for an air conditioner 100. Certainly, one of ordinary skill in the art can understand that the outdoor unit for an air conditioner 100 can be other types of an outdoor unit for an air conditioner 100, and not limited to the small multi-coupled-side-air-output outdoor unit.

[0025] As illustrated in FIG. 1-FIG 6, the outdoor unit for an air conditioner 100 according to embodiments in a first aspect of the present application, such as the small multi-coupled-side-air-output outdoor unit, includes a body 1, a rotor 2, a welded member for electronic control 3, a waterproof member 5, and at least one baffle.

[0026] The rotor 2, the welded member for electronic control 3, the waterproof member 5, and the at least one baffle are all arranged in the body 1. Specifically, referring to FIG. 1 and FIG. 5, the welded member for electronic control 3 is arranged at a top portion within the body 1, and the welded member for electronic control 3 is located above the rotor 2. The welded member for electronic control 3 defines at least one opening in a bottom portion, and the electronic control component 4 is arranged in the welded member for electronic control 3. For example, in examples shown in FIG. 2 and FIG. 3, the welded member for electronic control 3 is in a shape of a substantial rectangle, and the welded member for electronic control 3 is open at a top portion and a right wall, such that the electronic control component 4 is mounted in the welded member for electronic control 3 from the upper to the lower. The opening runs through the bottom portion of the welded member for electronic control 3 in an up-down direction. The electronic control component 4 is provided with an electronic control element 41.

[0027] The waterproof member 5 is connected to the bottom portion of the welded member for electronic control 3, and the waterproof member 5 is opposite to the opening. The waterproof member 5 and the welded member for electronic control 3 cooperatively define an airflow passage 51 in communication with the opening, two ends (a left end and a right end in FIG. 4, e.g.) of the waterproof member 5 are separately spaced apart from the welded member for electronic control 3 to define two airflow outlets 52 in communication with the airflow passage 51. As illustrated in FIG. 1 and FIG. 4, when the rotor 2 rotates (clockwise rotates, e.g.), air in the welded member for electronic control 3 can flow through the opening in the bottom portion of the welded member for electronic control 3, passes through the airflow passage 51 defined by the welded member for electronic control 3 and the waterproof member 5, and reaches at a side with the rotor 2 through the two airflow outlets 52 at two ends of the waterproof member 5, thereby carrying heat generated by the electronic control component 4 in the welded member for electronic control 3 during operation off. Therefore, with the two airflow outlets 52, heat generated by the electronic control component 4 during operation can quickly flow to the rotor 2 in quantity through the two airflow outlets 52, achieving quick ventilation and heat

dissipation for the electronic control component 4.

[0028] Furthermore, with the arrangement that the waterproof member 5 is opposite the opening in the bottom portion of the welded member for electronic control 3, the waterproof member 5 shields the opening. For example, in case that the rotor 2 throws water, since the waterproof member 5 shields the opening in the bottom portion of the welded member for electronic control 3, water drops hardly come into the welded member for electronic control 3 through the opening, guaranteeing normal operation of the electronic control component 4.

[0029] The baffle is arranged in the airflow passage 51 to prevent liquid from entering the welded member for electronic control 3 through the airflow passage 51. When the rotor 2 throws water, as illustrated in FIG. 5 and FIG. 6, with the baffle in the airflow passage 51, even water drops can enter the airflow passage 51 through the airflow outlets 52, the water drops hardly enter the welded member for electronic control 3 because of prevention by the baffle, thereby further guaranteeing the normal operation of the electronic control component 4.

[0030] In the outdoor unit for an air conditioner 100 according to embodiments of the present disclosure, such as the small multi-coupled-side-air-output outdoor unit, the waterproof member 5 is arranged at the bottom portion of the electrically controlled welded member 3 and opposite the opening, the waterproof member 5 and the welded member for electronic control 3 cooperatively define the airflow passage 51 in communication with the opening and the two airflow outlets 52 in communication with the airflow passage 51, and the baffle is arranged in the airflow passage 51, quick heat dissipation for the electronic control component 4 can be realized, and water and the like hardly enter the welded member for electronic control 3 through the opening, such that the electronic control component 4 in the welded member for electronic control 3 can normally operate.

[0031] According to some specific embodiments of the present disclosure, referring to FIG. 2, the waterproof member 5 is open at a top portion, two sides of the waterproof member 5 in a width direction are provided with connecting parts 53 respectively, and the connecting parts 53 extend outwards. The waterproof member 5 is connected to the bottom portion of the welded member for electronic control 3 by means of the connecting parts 53. Two ends (a left end and a right end in FIG. 2, e.g.) of the waterproof member 5 in a length direction are spaced apart from the welded member for electronic control 3 to define the two airflow outlets 52 respectively. For example, in the example in FIG. 2, each of the connecting parts 53 can extend outwards from a top edge of the waterproof member 5 in the width direction, the connecting parts 53 can be connected to the bottom portion of the welded member for electronic control 3 by means of screws, etc., such that the waterproof member 5 can be conveniently and firmly connected to the bottom portion of the welded member for electronic control 3 by means of the connecting parts 53. It should be noted herein, a

direction "out" can be understood as a direction way from a center of the waterproof member 5, and an opposite direction is defined as "in", i.e. a direction towards the center of the waterproof member 5. Top surfaces of two ends of the waterproof member 5 in the length direction can be both lower than top surfaces of the two ends of the waterproof member 5 in the width direction, such that the two ends of the waterproof member 5 in the length direction can be spaced apart from the welded member for electronic control 3 to define the two airflow outlets 52 respectively. Therefore, the waterproof member 5 is simple in whole structure, easy to realize, and low in cost. Connection between the waterproof member and the welded member for electronic control 3 is convenient.

[0032] Optionally, as shown in FIG. 2-FIG 4, at least one of the two ends of the waterproof member 5 in the length direction is provided with an incline part 54, and the incline part 54 obliquely extends upwards in the direction away from the center of the waterproof member 5. The incline part 54 has a free end (a left end in FIG. 4, e.g.), and the free end is provided with a flange 55 horizontally extending outwards, an upper surface of the flange 55 is spaced apart from the bottom portion of the welded member for electronic control 3 to define the airflow outlet 52. For example, referring to FIG. 2 and FIG. 3 as well as FIG. 4, the incline part 54 obliquely extends upwards from a left end of the waterproof member 5, the flange 55 horizontally extends leftwards from a left end of the incline part 54. Therefore, with the incline part 54 and the flange 55, compared with a bottom wall of the waterproof member 5, the incline part 54 and the flange 55 are kept at smaller distances from the bottom portion of the welded member for electronic control 3. On the premise that air can smoothly pass through the airflow passage 51 and flow out through the airflow outlet 52, water and the like on the rotor 2 more hardly enter the waterproof member 5 through the airflow outlet 52, achieving a comparatively waterproof effect of the waterproof member 5.

[0033] Or optionally, as shown in FIG. 2-FIG. 4, at least one of the two ends of the waterproof member 5 in the length direction is provided with an extending part 56 vertically extending upwards. A top surface of the extending part 56 is spaced apart from the bottom portion of the welded member for electronic control 3 to define the airflow outlet 52. A distance between the top surface of the extending part 56 and the bottom portion of the welded member for electronic control 3 is less than a distance between the bottom wall of the waterproof member 5 and the bottom portion of the welded member for electronic control 3. Therefore, on the premise that air can smoothly pass through the airflow passage 51 and flow out through the airflow outlet 52, water and the like on the rotor 2 also more hardly enter the waterproof member 5 through the airflow outlet 52, also achieving a comparatively waterproof effect of the waterproof member 5. For example, referring to FIG. 2 and FIG. 3 as well as FIG. 4, the extending part 56 vertically extend upwards from a left end

of the waterproof member 5, and the two ends of the extending part 56 in the length direction can extend to be in contact with two side walls of the waterproof member 5 in the width direction respectively, for a better waterproof effect.

[0034] It should be noted that, in examples in FIG. 2 to FIG. 4 and FIG. 6, one end of the waterproof member 5 in the length direction is provided with the incline part 54 and the flange 55, and the other end is provided with the extending part 56, in order to guarantee good ventilation and heat dissipation, as well as achieve the better waterproof effect. Certainly, the present disclosure is not limited thereto, each the two ends of the waterproof member 5 in the length direction can provided with the incline part 54 and the flange 55, or the extending part 56 (not shown in the drawings). It should be noted that, specific structures of the two ends of the waterproof member 5 in the length direction can be configured according to actually needs for better satisfying actual applications.

[0035] Optionally, referring to FIG. 6, a width of the airflow outlet 52 in an up-down direction is represented by a , a is greater than 0 mm and less than or equal to 10 mm. Therefore, when the width a of the airflow outlet 52 is greater than 10 mm, though heat of the electronic control component 4 can be carried out quickly, a risk that the water the like on the rotor 2 enter the waterproof member 5 through the airflow outlet 52 is large due to a large distance between ends of the waterproof member 5 in the length direction and the welded member for electronic control 3. In other words, by setting the width a of the airflow outlet 52 to fulfill $0 < a \leq 10 \text{ mm}$, on the premise of good ventilation and heat dissipation for the electronic control component 4, water and the like on the rotor 2 hardly enter the waterproof member 5 through the airflow outlet 52, thereby guaranteeing reliable operation of the electronic control component 4.

[0036] According to further embodiments of the present disclosure, as shown in FIG. 3, FIG. 4, and FIG. 6, the baffle includes a first sub-baffle 61, the first sub-baffle 61 surrounds the opening and extends downwards into the waterproof member 5. For example, referring to FIG. 3, FIG. 4, and FIG. 6, the opening is a substantial rectangular opening, the first sub-baffle 61 can be an annular baffle plate. The first sub-baffle 61 has an upper end connected to a side wall defining the opening, and a lower end vertically extending downwards and spaced apart from the bottom wall of the waterproof member 5. Therefore, with the above first sub-baffle 61, on the premise that the heat can be smoothly discharged, water drops entering the airflow passage 51 can be further stopped.

[0037] Furthermore, referring to FIG. 2, FIG. 4 and FIG. 6, the baffle further includes a second sub-baffle 62, the second sub-baffle 62 has a first end connected to the bottom portion of the electrically controlled welded member 3 and a second end extending downwards and spaced apart from the bottom wall of the waterproof member 5. The second sub-baffle 62 is arranged between the

opening and the airflow outlet 52. For example, in examples of FIG. 2, FIG. 4, and FIG. 6, the second sub-baffle 62 is arranged between the first sub-baffle 61 and the airflow outlet 52 at a right side of the waterproof member 5. The second sub-baffle 62 is substantially L-shaped. Specifically, the second sub-baffle 62 includes a connecting plate horizontally extending and connected to the bottom portion of the welded member for electronic control 3, and a baffle part having a first end connected to the connecting plate and a second end vertically extending downwards. A lower end surface of the baffle part is spaced apart from a bottom wall of the waterproof member 5. Therefore, with the second sub-baffle 62, after water drops enter the airflow passage 51 through the airflow outlet 52 at the right side, firstly the second sub-baffle 62 stops the water drops. If some water droops can pass through the second sub-baffle 62, all the water drops can be substantially stopped at the first sub-baffle 61.

[0038] Furthermore, as shown in FIG. 3, FIG. 4, and FIG. 6, the opening includes a first orifice 31 and a second orifice 32 spaced apart from each other. The first sub-baffle 61 is connected at the first orifice 31. The second orifice 32 is located at a side of the first orifice 31 away from the second sub-baffle 62. A third sub-baffle 63 is arranged at the second orifice 32, and the third sub-baffle 63 is connected to a side wall of the second orifice 32 away from the first sub-baffle 61. For example, in examples in FIG. 3, FIG. 4, and FIG. 6, the third sub-baffle 63 is arranged between the airflow outlet 52 of the waterproof member 5 at the left side and the first sub-baffle 61, and the third sub-baffle 63 vertically extends downwards from a left side wall of the second orifice 32. Therefore, after water drops enter the airflow passage 51 through the airflow outlet 52 at the left side, firstly, the third sub-baffle 63 stops the water drops. If some water drops can pass through the third sub-baffle 63, all the water drops can also be substantially stopped at the first sub-baffle 61.

[0039] Therefore, with the above first sub-baffle 61, second sub-baffle, and third sub-baffle 63, a barrier of two layers can be achieved, water thrown from the rotor 2 hardly enters the welded member for electronic control 3 through the opening, thereby guaranteeing reliable operation of the electronic control component 4 in a long term.

[0040] Optionally, as shown in FIG. 6, the width of the airflow outlet 52 in the up-down direction is represented by a, a height of the first sub-baffle 61 is represented by b, a height of the second sub-baffle 62 is represented by c, and a distance between a bottom surface of the welded member for electronic control 3 and the bottom wall of the waterproof member 5 is represented by d, a, b, c, and d fulfill $d \geq a$, $a < b < d$, and $a < c < d$. Therefore, by setting the width a of the airflow outlet 52 less than or equal to the distance d, water from outside hardly enters the waterproof member 5 through the airflow outlet 52. By setting the height b of the first sub-baffle 61 and the height

c of the second sub-baffle 62 between the width a of the airflow outlet 52 and the distance d, on the premise that the stopping effect is guaranteed, heat generated during operation of the electronic control component 4 can be smoothly discharged. It should be noted that, Specific values of the above dimensions can be determined according to actual structure of the outdoor unit for an air conditioner 100.

[0041] According to some embodiments of the present disclosure, the electronic control component 4 is inverted in the welded member for electronic control 3. For example, in an example in FIG. 5, the electronic control element 41 is arranged at a lower surface of the electronic control component 4. During assembling, the electronic control component 4 is inverted and mounted to an upper portion of the body 1. Specifically, the electronic control component 4 can be mounted in the welded member for electronic control 3 from the upper to the lower.

[0042] The air conditioner according to embodiments of a second aspect of the present disclosure includes the outdoor unit for an air conditioner 100 according to embodiments of the first aspect of the present disclosure.

[0043] The whole performance of the air conditioner according to embodiments of the present disclosure can be improved with the outdoor unit for an air conditioner 100.

[0044] Other configurations and operations of the air conditioner according to embodiments of the present disclosure are known to those skilled in the art, which will not be described in detail herein.

[0045] Throughout the description of the present disclosure, reference to "an embodiment," "some embodiments," "explanatory embodiment", "an example," "a specific example," or "some examples," means that a particular feature, structure, material, or characteristic described in connection with the embodiment or example is included in at least one embodiment or example of the present disclosure. Thus, the appearances of the phrases in various places throughout this specification are not necessarily referring to the same embodiment or example of the present disclosure. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

[0046] Although explanatory embodiments have been shown and described, it would be appreciated by those skilled in the art that the above embodiments cannot be construed to limit the present disclosure, and changes, alternatives, and modifications can be made in the embodiments without departing from spirit, principles and scope of the present disclosure.

Claims

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

a body;

- a rotor arranged in the body;
a welded member for electronic control arranged in a top portion within the body, defining at least one opening in a bottom portion of the welded member for electronic control, and provided with an electronic control component in the welded member for electronic control;
a waterproof member connected to the bottom portion of the welded member for electronic control and being opposite to the opening, the waterproof member defining an airflow passage in communication with the opening cooperatively with the welded member for electronic control, the waterproof member having two ends separately spaced apart from the welded member for electronic control to define two airflow outlets in communication with the airflow passage; and
at least one baffle arranged in the airflow passage to prevent liquid from entering the welded member for electronic control through the airflow passage.
2. The outdoor unit according to claim 1, wherein the waterproof member is open at a top portion, two sides of the waterproof member in a width direction are provided with connecting parts extending outwards respectively, the waterproof member is connected to the bottom portion of the welded member for electronic control by means of the connecting parts, and two ends of the waterproof member in the length direction are spaced apart from the welded member for electronic control to define the two airflow outlets respectively.
 3. The outdoor unit according to claim 2, wherein at least one end of the two ends of the waterproof member in the length direction is provided with an incline part, the incline part obliquely extends upwards in a direction away from a center of the waterproof member and has a free end, the free end of the incline part is provided with a flange horizontally extending outwards, an upper surface of the flange is spaced apart from the bottom portion of the welded member for electronic control to define the airflow outlet.
 4. The outdoor unit according to claim 2, wherein at least one end of the two ends of the waterproof member in the length direction is provided with an extending part vertically extending upwards, and a top surface of the extending part is spaced apart from the bottom portion of the welded member for electronic control to define the airflow outlet.
 5. The outdoor unit according to claim 2, wherein a width of the airflow outlet in an up-down direction is represented by a , and the a fulfills $0 < a \leq 10\text{mm}$.
 6. The outdoor unit according to any one of claims 1 to 5, wherein the baffle comprises a first sub-baffle, and the first sub-baffle surrounds the opening and extends downwards into the waterproof member.
 7. The outdoor unit according to claim 6, wherein the baffle further comprises a second sub-baffle, the second sub-baffle plate has a first end connected to the bottom portion of the welded member for electronic control and a second end extending downwards and spaced apart from a bottom wall of the waterproof member, and the second sub-baffle plate is arranged between the opening and the airflow outlet.
 8. The outdoor unit according to claim 7, wherein the opening comprises a first orifice and a second orifice spaced apart from each other, the first sub-baffle is connected at the first orifice, the second orifice is located at a side of the first orifice away from the second sub-baffle plate, the third sub-baffle is arranged at the second orifice, and the third sub-baffle is connected to a side wall of the second orifice away from the first sub-baffle.
 9. The outdoor unit according to claim 7, wherein a width of the airflow outlet in an up-down direction is represented by a , a height of the first sub-baffle is represented by b , a height of the second sub-baffle is represented by c , a distance between a bottom surface of the welded member for electronic control and a bottom wall of the waterproof member is represented by d , and a, b, c , and d fulfill $d \geq a$, $a < b < d$, and $a < c < d$.
 10. The outdoor unit according to any one of claims 1 to 9, wherein the electronic control component is inverted in the welded member for electronic control.
 11. An air conditioner, comprising the outdoor unit according to any one of claims 1 to 10.

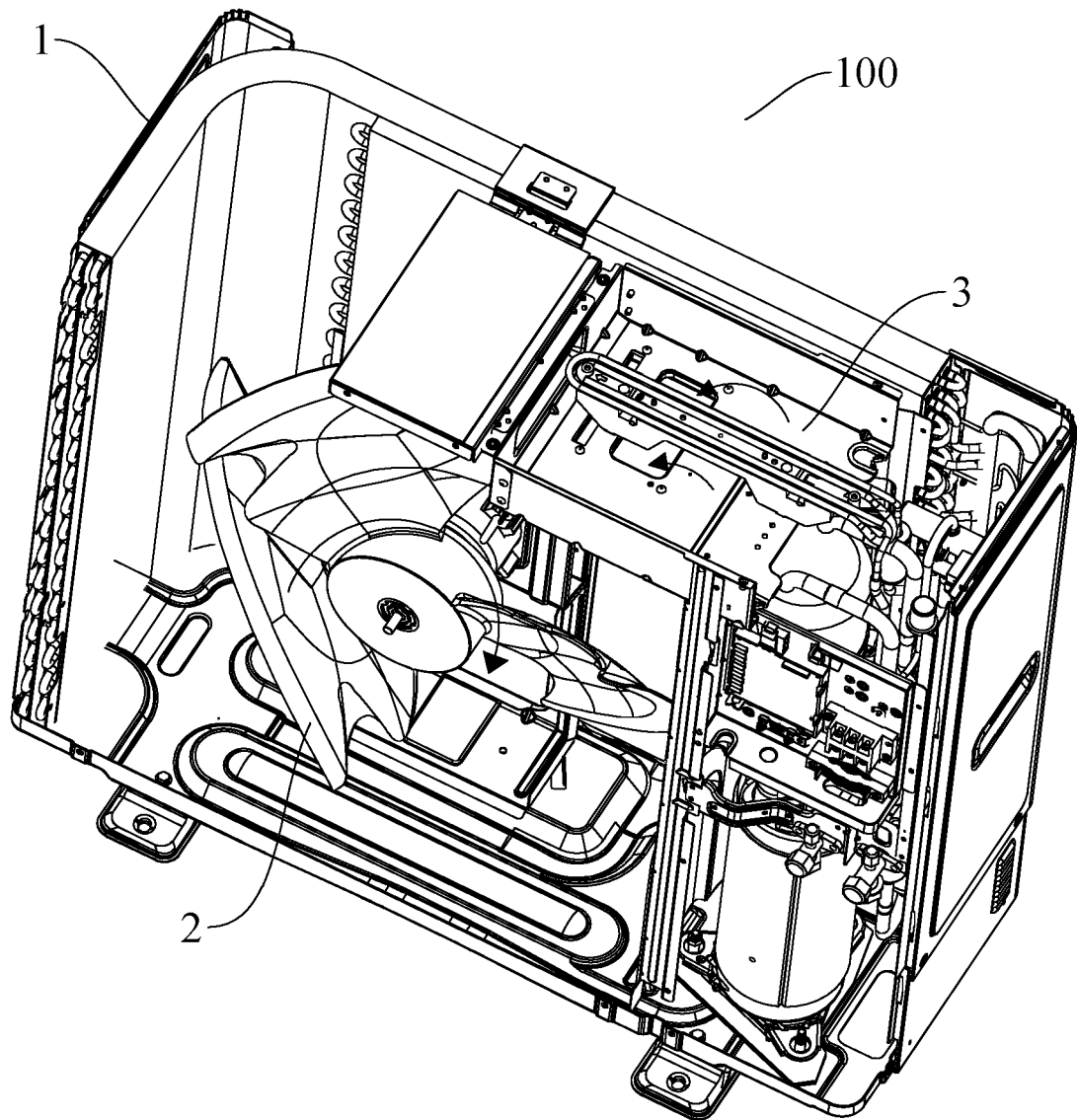


FIG. 1

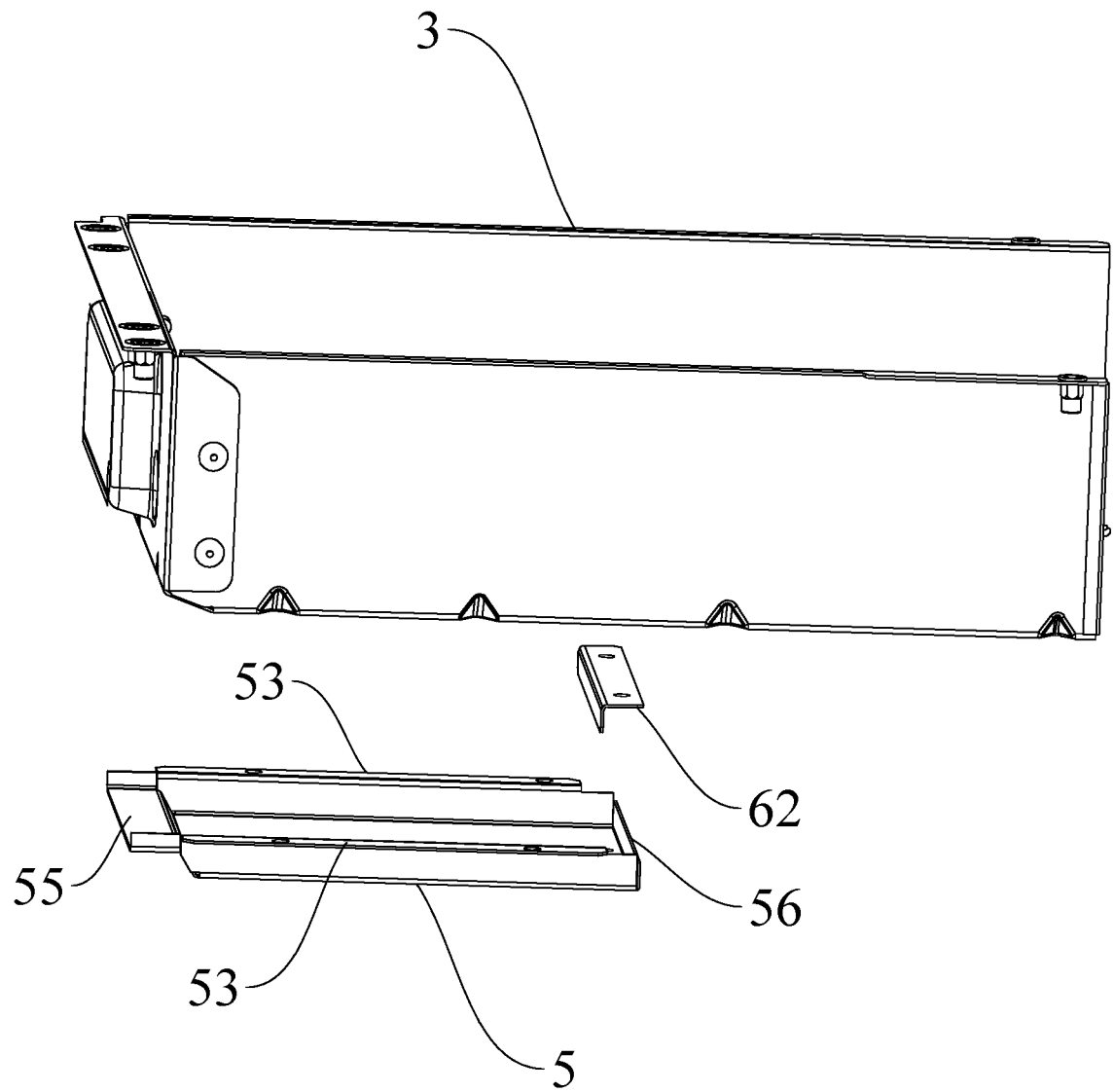


FIG. 2

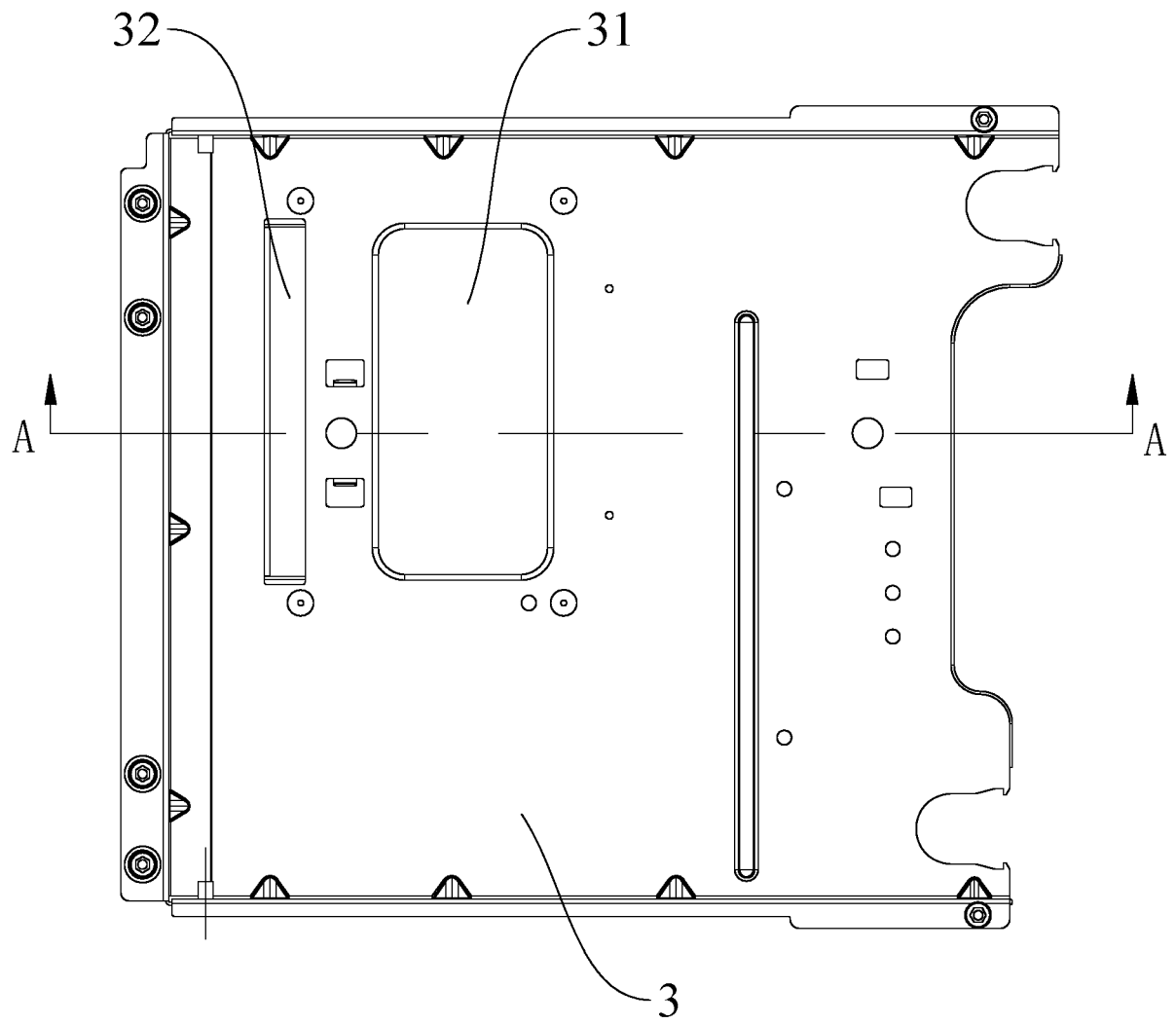


FIG. 3

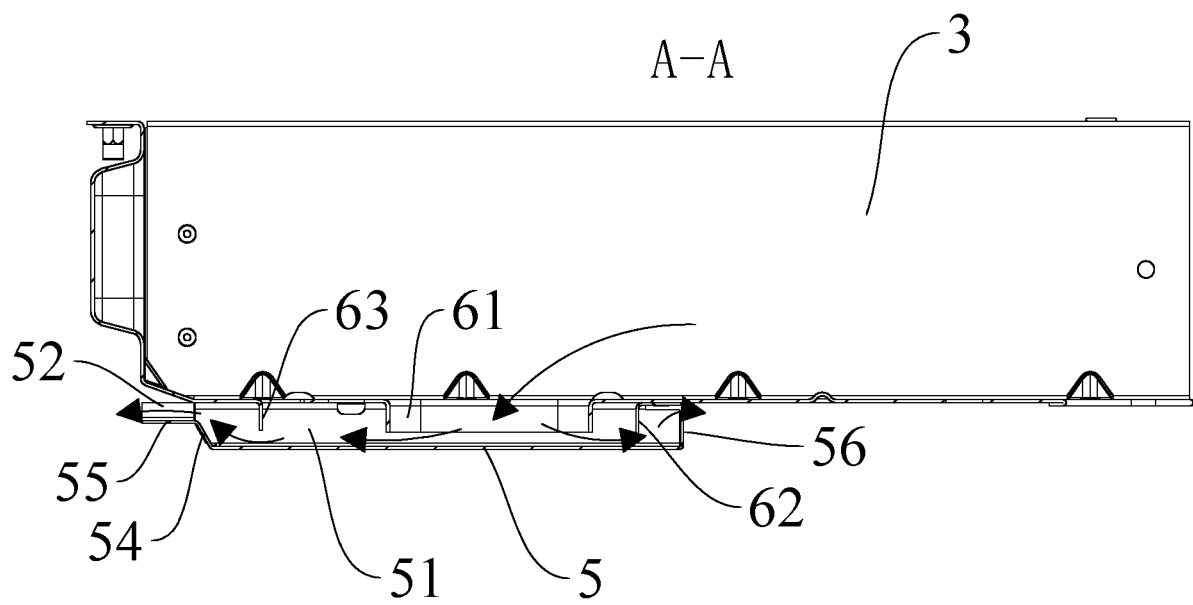


FIG. 4

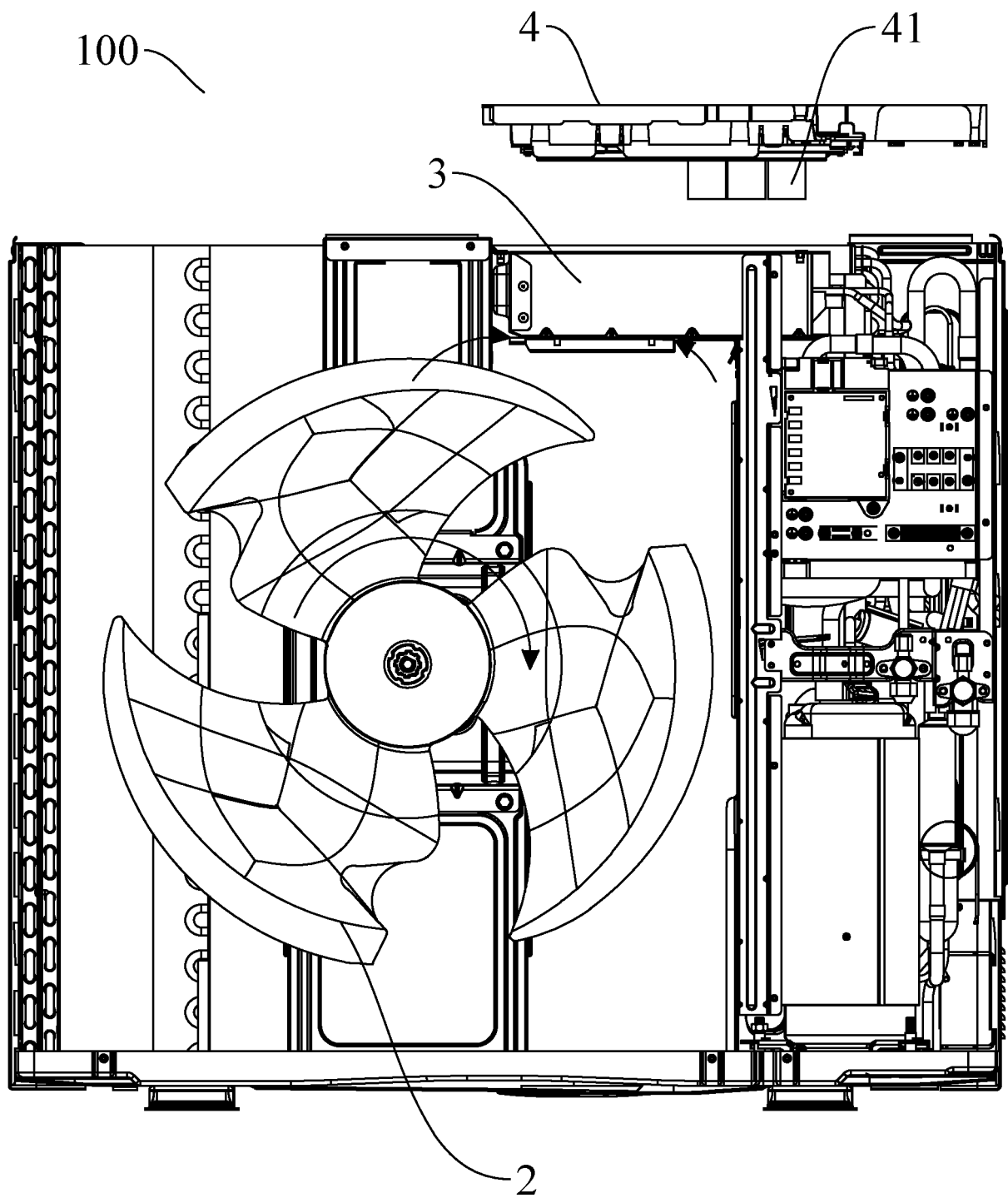


FIG. 5

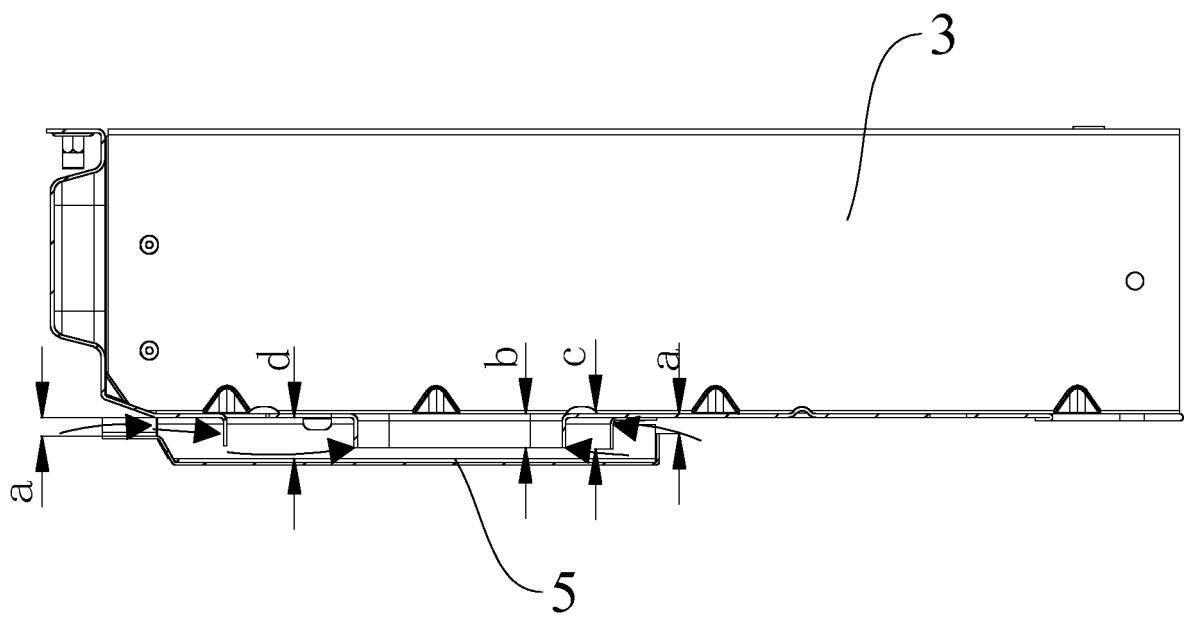


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/089862

A. CLASSIFICATION OF SUBJECT MATTER

F24F 1/24(2011.01)i; F24F 1/22(2011.01)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, DWPI, VEN, CNKI, CNTXT, USTXT, EPTXT, WOTXT: 空调, 室外机, 电控, 防水, 挡板, 电器控制, 电气控制, 控制部件, 水, 液, 电控盒, 电气控制盒, 电器控制盒, 风道, 通道, 风口, 开口, 气流, 挡水, air, hole, port, aperture, condition, electric, cabinet, box, water, condensat+, outdoor, board, plate, flap

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| PX | CN 208804791 U (GUANDONG MIDEA HVAC EQUIPMENT CO., LTD. ET AL.) 30 April 2019 (2019-04-30) claims 1-11, description, paragraphs [0003]-[0055], and figures 1-6 | 1-11 |
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| Y | CN 106440101 A (GUANGDONG MIDEA REFRIGERATION EQUIPMENT CO., LTD. ET AL.) 22 February 2017 (2017-02-22) description, paragraphs [0003]-[0053], and figures 1-6 | 1-11 |
| Y | CN 203810585 U (GUANDONG MIDEA HVAC EQUIPMENT CO., LTD. ET AL.) 03 September 2014 (2014-09-03) description, paragraphs [0005]-[0050], and figures 1-3 | 1-11 |
| A | CN 206226868 U (GUANDONG MIDEA HVAC EQUIPMENT CO., LTD. ET AL.) 06 June 2017 (2017-06-06) entire document | 1-11 |

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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“&” document member of the same patent family

Date of the actual completion of the international search

15 August 2019

Date of mailing of the international search report

02 September 2019

Name and mailing address of the ISA/CN

China National Intellectual Property Administration (ISA/
CN)
No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing
100088
China

Authorized officer

Facsimile No. (86-10)62019451

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2019/089862

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| A | CN 207146710 U (GUANGDONG MIDEA REFRIGERATION EQUIPMENT CO., LTD.) 27 March 2018 (2018-03-27) entire document | 1-11 |
| A | CN 207113183 U (GUANDONG MIDEA HVAC EQUIPMENT CO., LTD. ET AL.) 16 March 2018 (2018-03-16) entire document | 1-11 |
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INTERNATIONAL SEARCH REPORT
Information on patent family members

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PCT/CN2019/089862

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Form PCT/ISA/210 (patent family annex) (January 2015)

REFERENCES CITED IN THE DESCRIPTION

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- CN 201821480814X [0001]