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(54) **AIR CONDITIONER**

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(57) **ABSTRACT**

An air conditioner according to an aspect of the present disclosure includes a wall-mounted indoor unit which includes a heat exchanger, a blower, and a housing that accommodates the heat exchanger and the blower therein, and which is fixed to a wall surface, and a discharge unit which is disposed above the indoor unit outside the indoor unit, in which the housing includes a suction port that opens upward, the discharge unit includes a discharge device disposed above the suction port, at least a portion of air suctioned into the suction port passes through the discharge device, and a center of the discharge unit in a right-left direction of the indoor unit is disposed to be shifted to one side in the right-left direction with respect to a center of the indoor unit.

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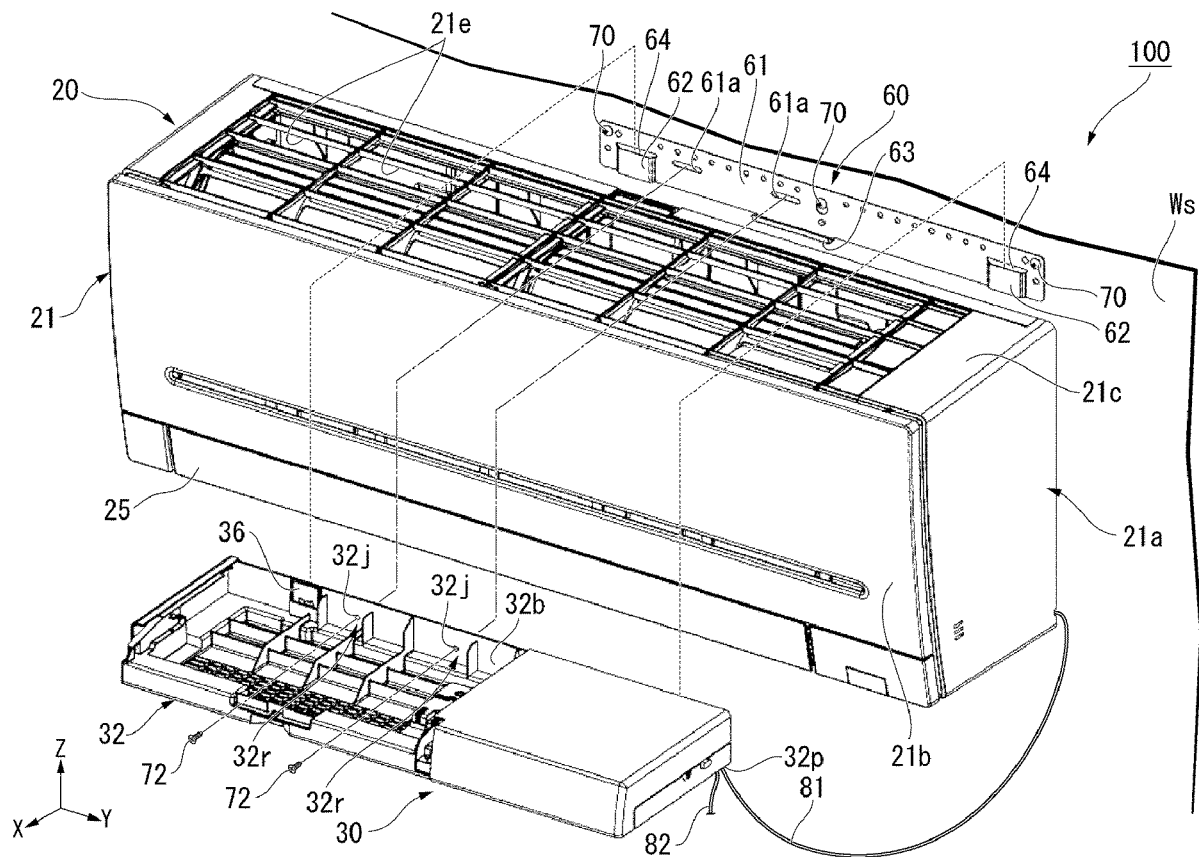
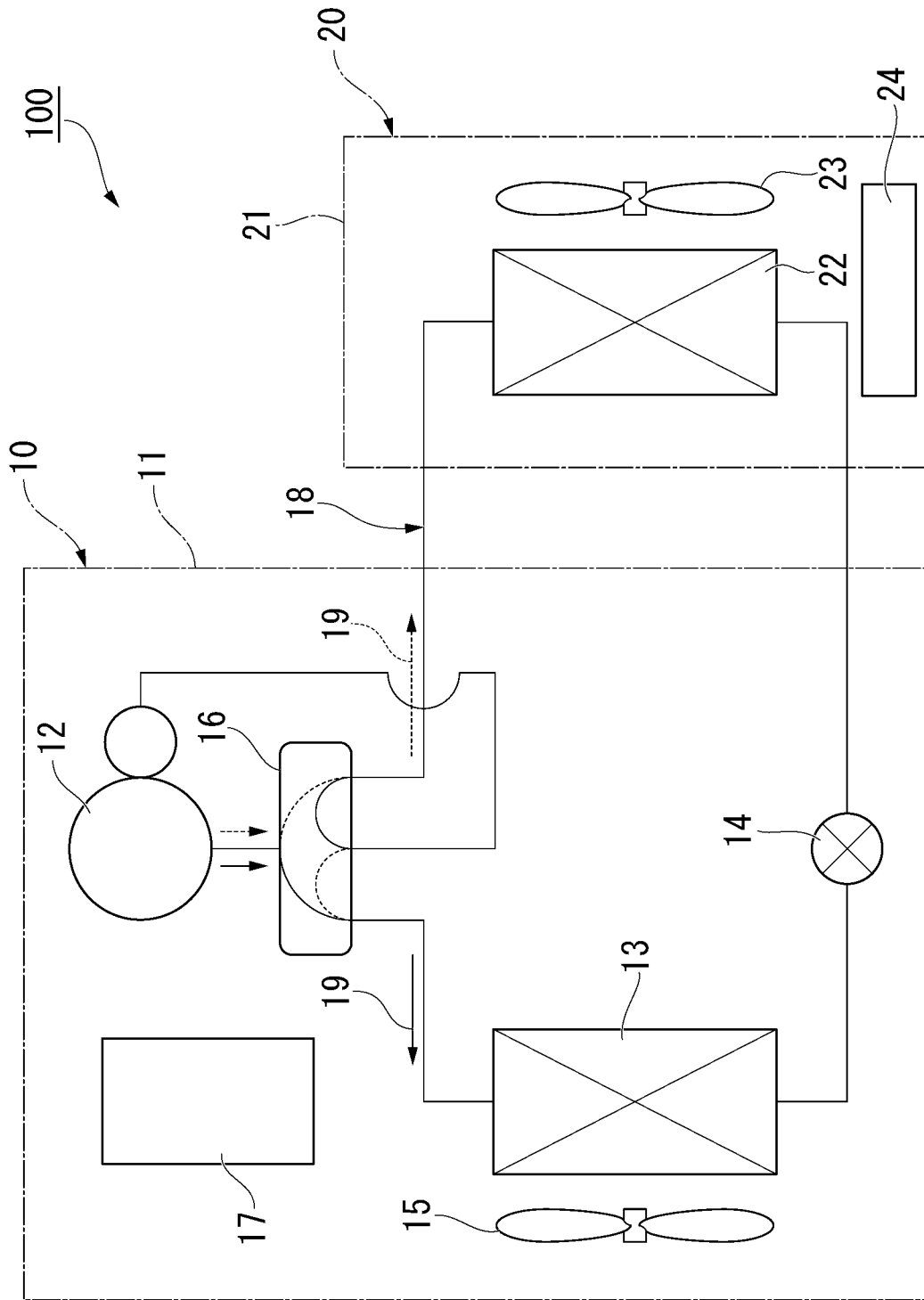
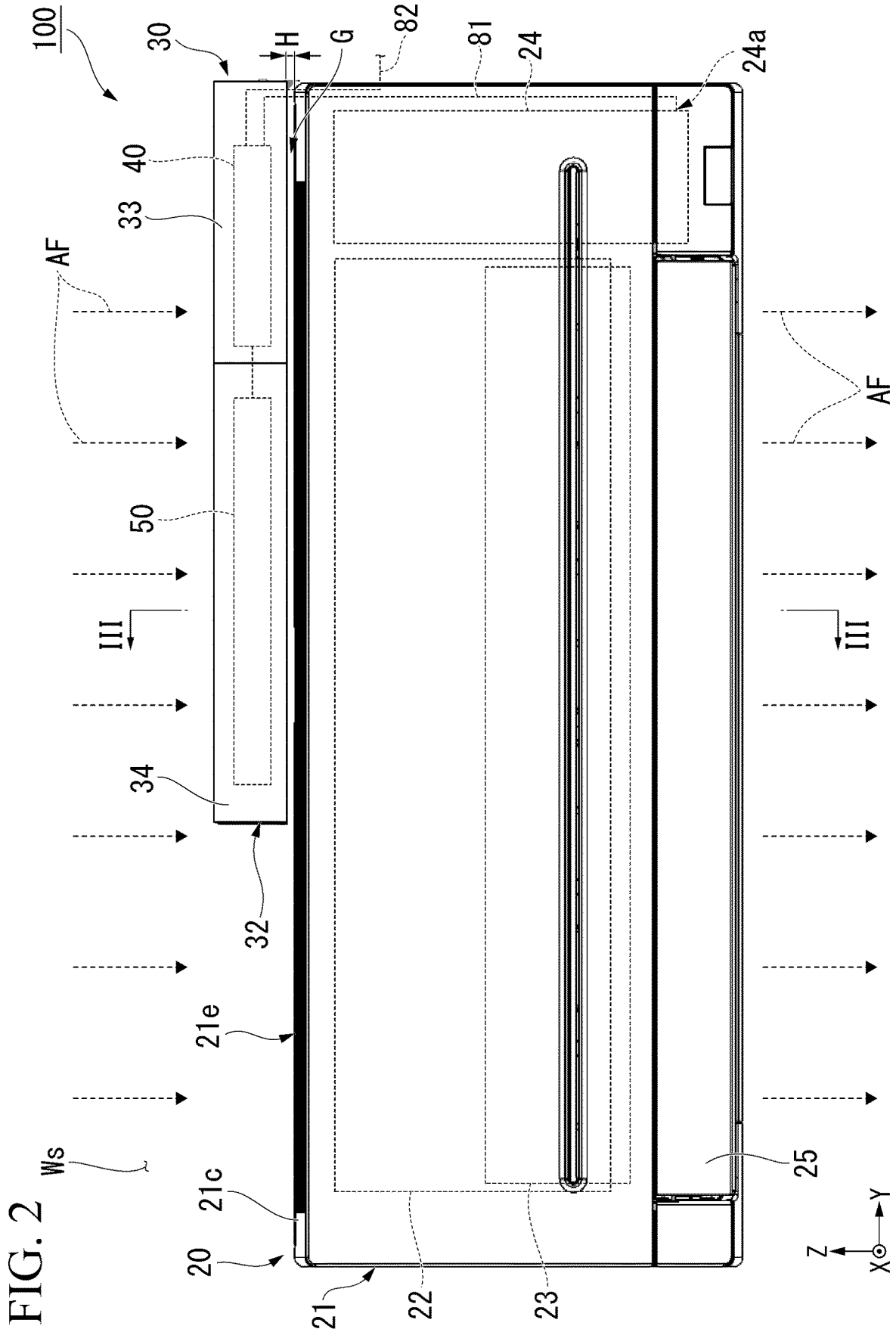
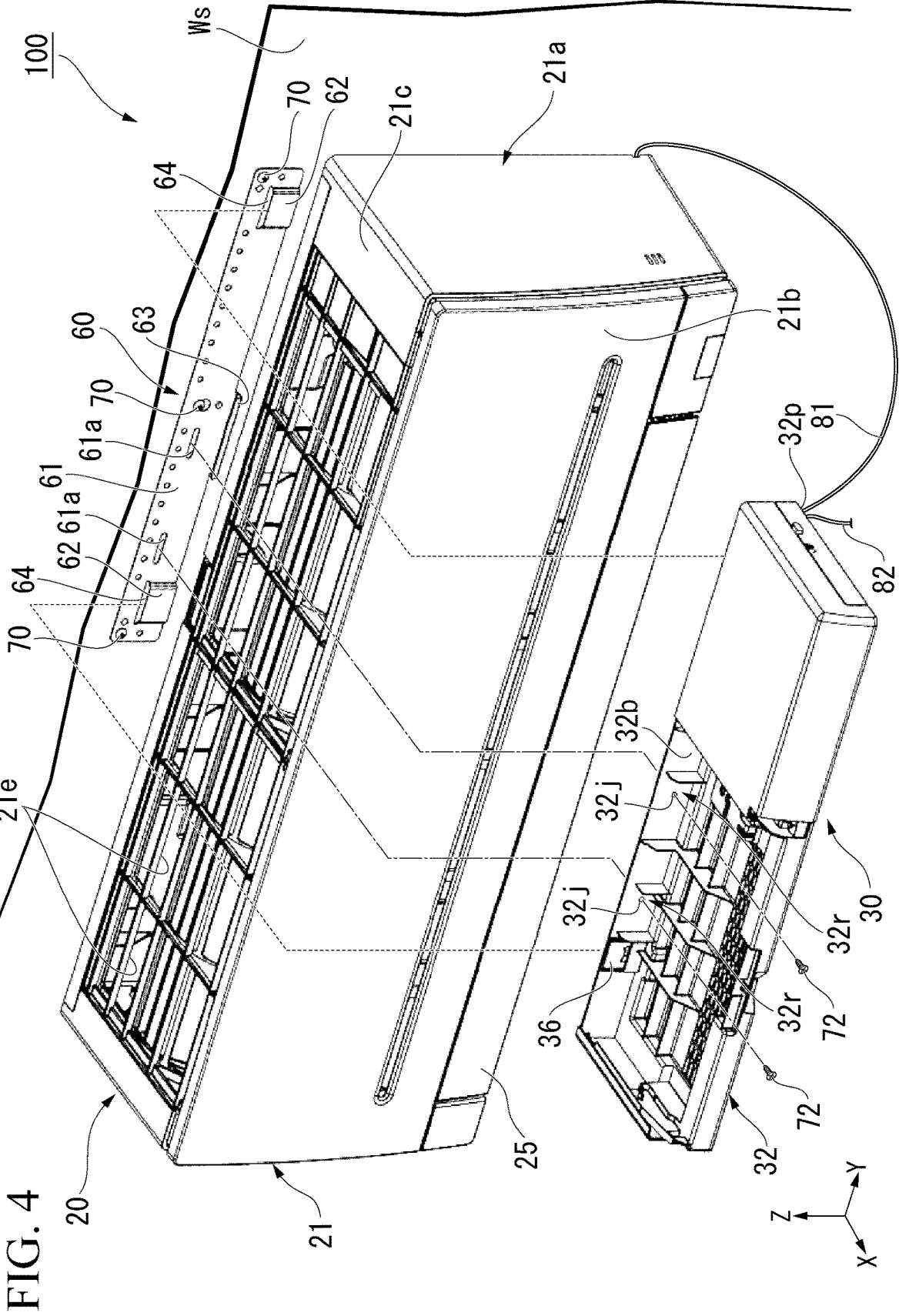


FIG. 1







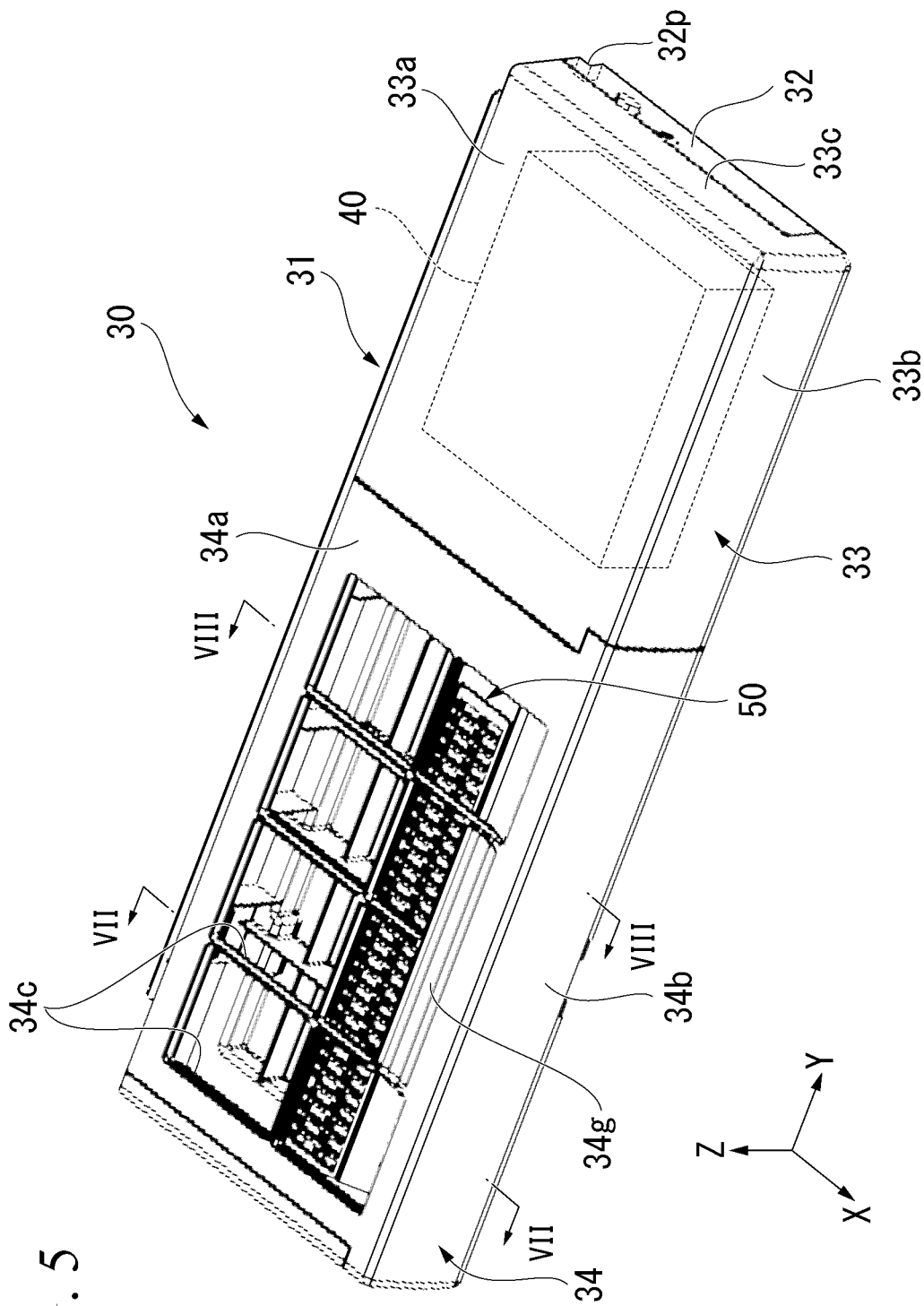


FIG. 5

FIG. 8

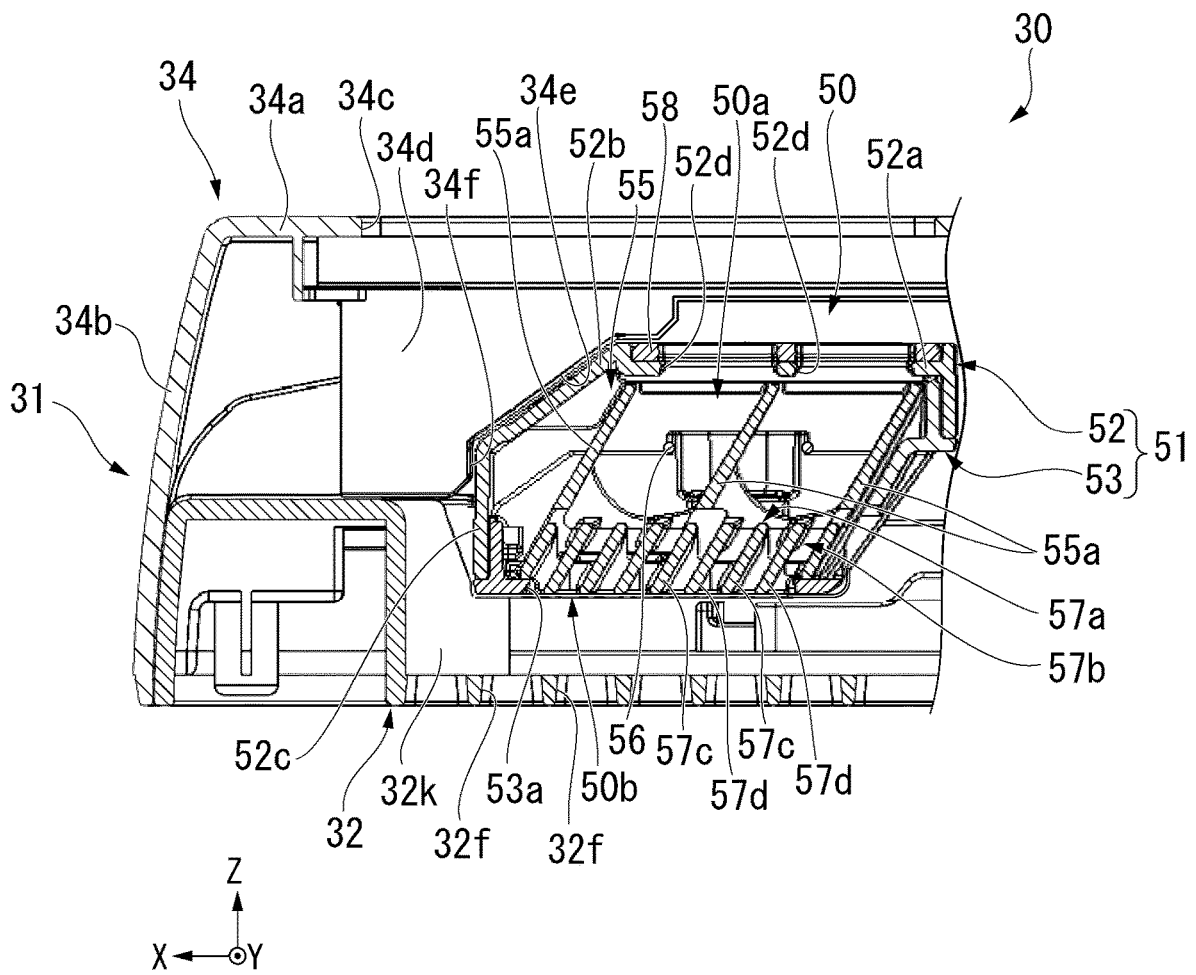
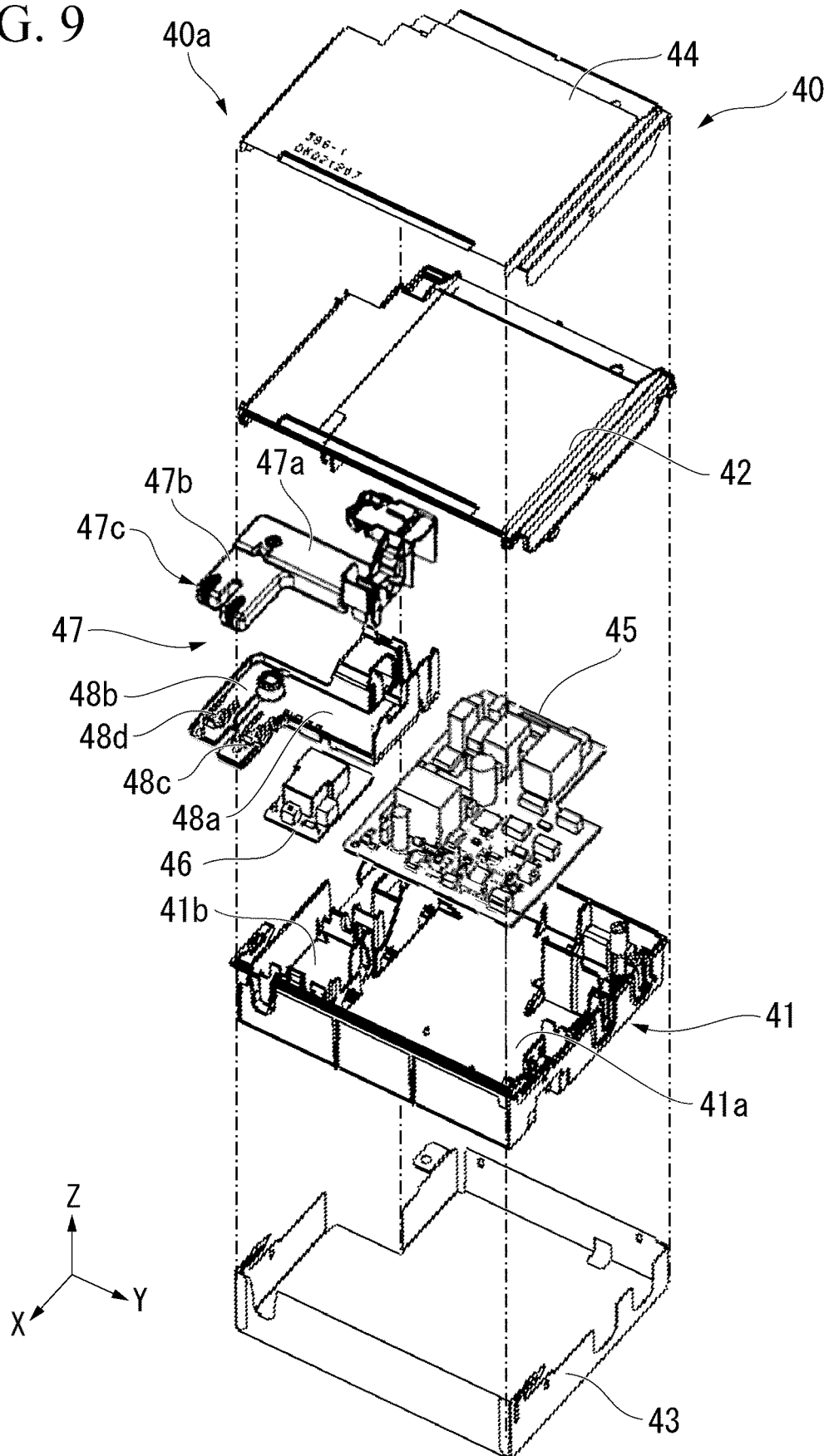
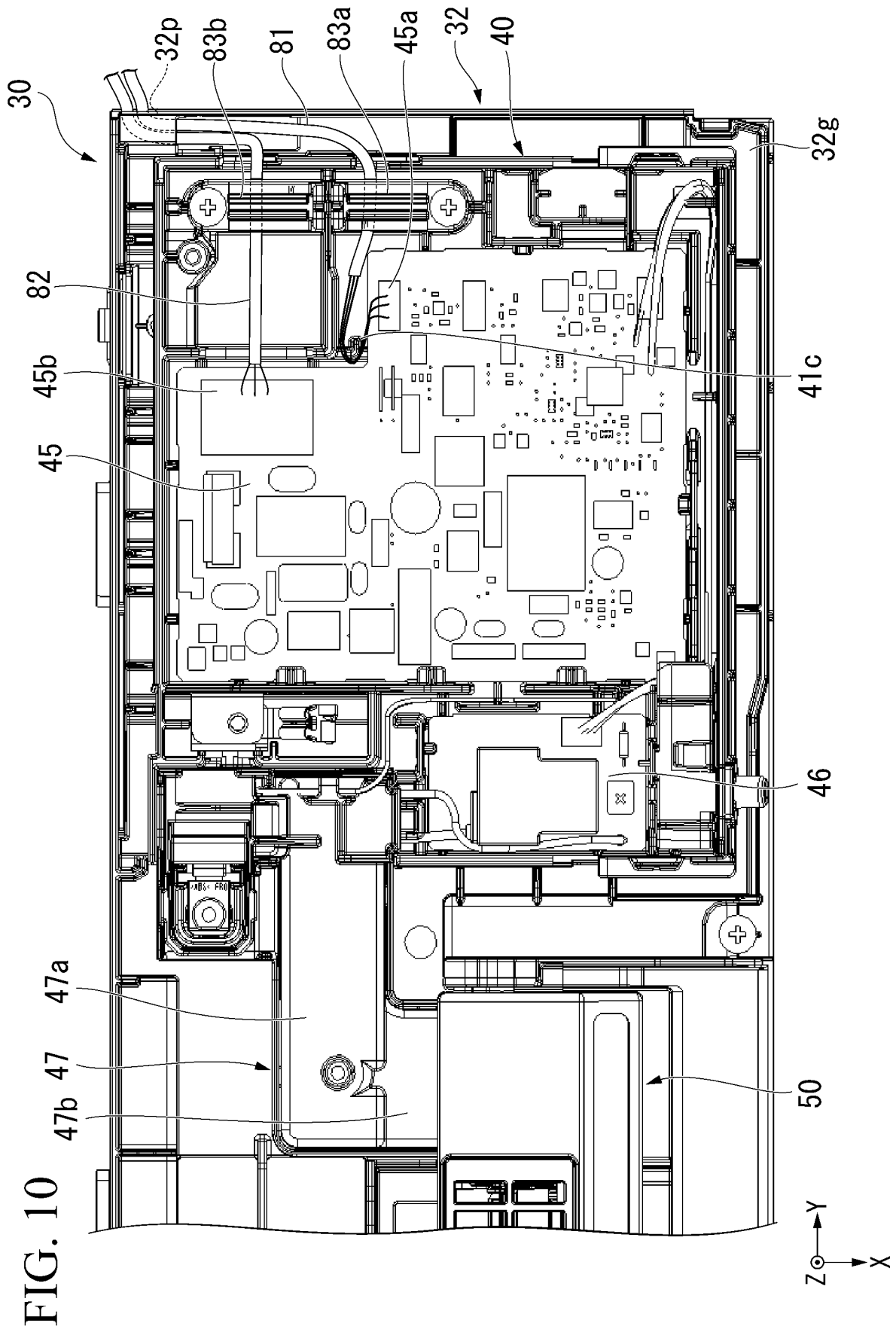


FIG. 9





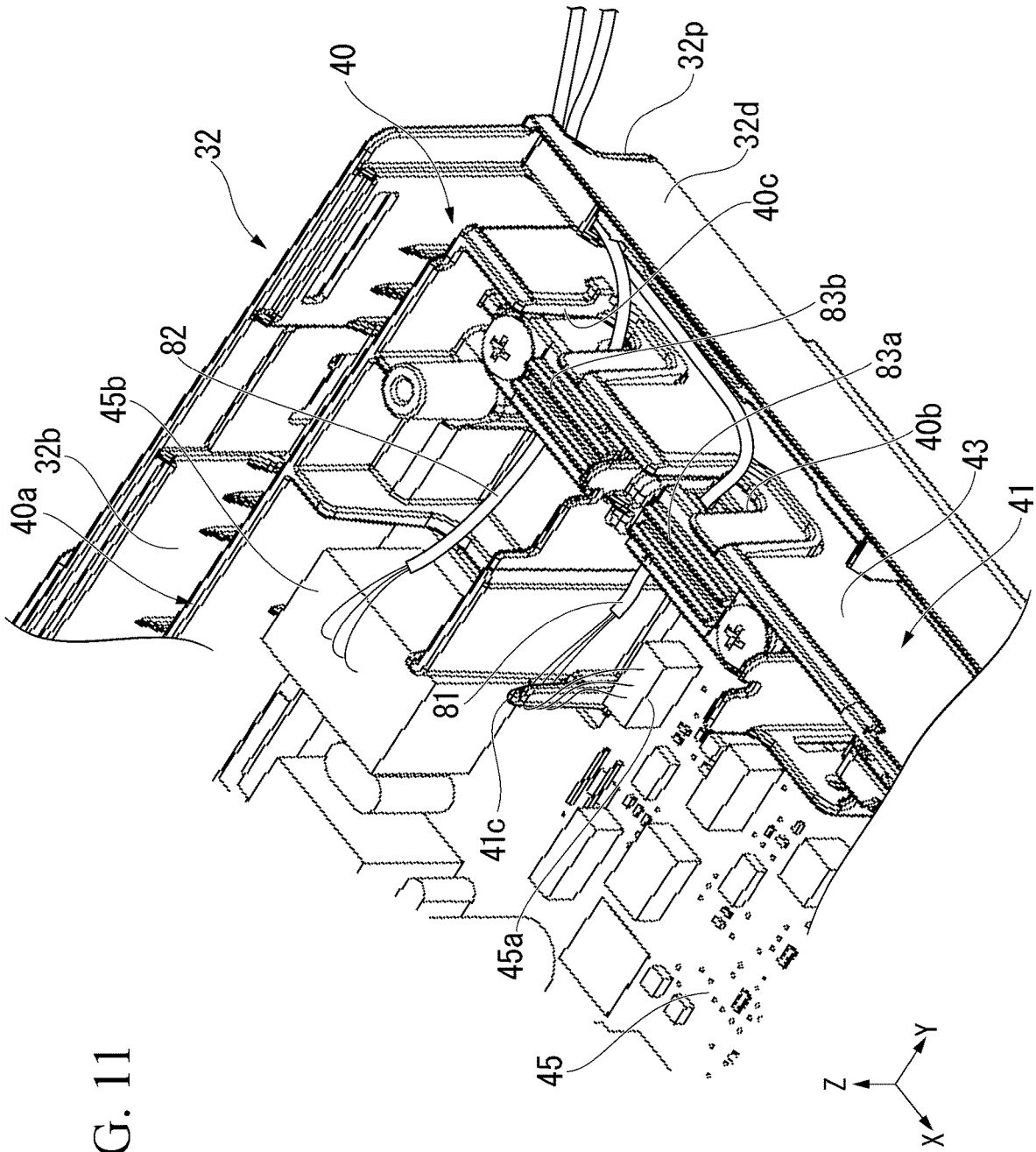


FIG. 11

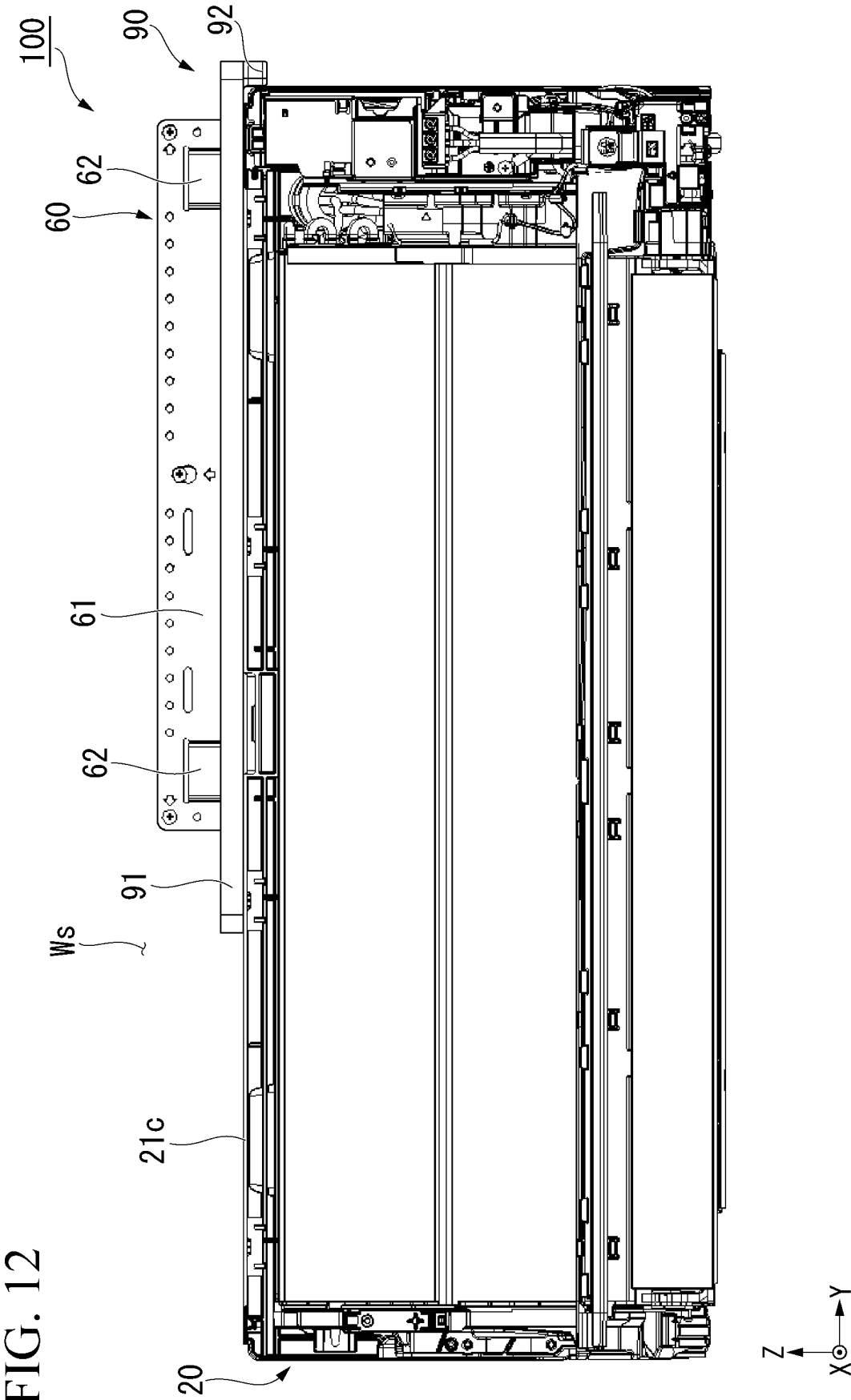
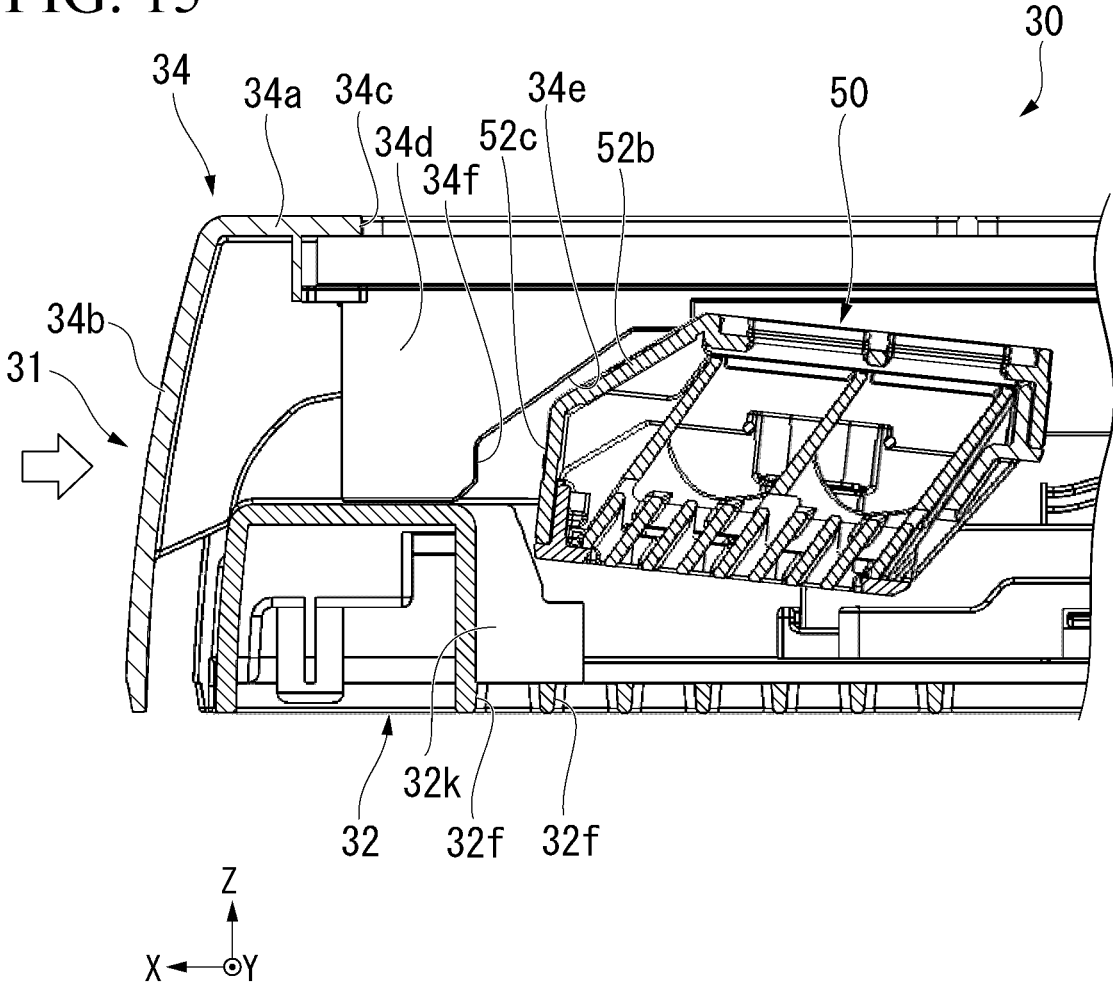


FIG. 15



AIR CONDITIONER

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is a U.S. National Stage Application of International Application No. PCT/JP2021/016025 filed Apr. 20, 2021, the contents of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present disclosure relates to an air conditioner.

BACKGROUND

[0003] An air conditioner including a discharge device inside an indoor unit is known. For example, in Patent Document 1, an air conditioner including an electric dust collector is described as a discharge device.

PATENT DOCUMENT

Patent Document 1

[0004] Japanese Unexamined Patent Application, First Publication No. 2015-131153

[0005] On the other hand, air conditioners that are not equipped with a discharge device are also known. There is a demand for incorporating a discharge device into such an air conditioner afterward. However, in a case where a discharge device is incorporated afterward, there is a problem of the large workload and amount of time required for incorporating the discharge device, such as that due to the need to replace a control substrate provided inside an indoor unit.

SUMMARY

[0006] The present disclosure has been made to solve the above-described problem, and one of the objects thereof is to provide an air conditioner having a structure in which a discharge device can be easily attached to an indoor unit.

[0007] An air conditioner according to an aspect of the present disclosure includes a wall-mounted indoor unit which includes a heat exchanger, a blower, and a housing that accommodates the heat exchanger and the blower therein, and which is fixed to a wall surface, and a discharge unit which is disposed above the indoor unit outside the indoor unit, in which the housing includes a suction port that opens upward, the discharge unit includes a discharge device disposed above the suction port, at least a portion of air suctioned into the suction port passes through the discharge device, and a center of the discharge unit in a right-left direction of the indoor unit is disposed to be shifted to one side in the right-left direction with respect to a center of the indoor unit.

[0008] According to the present disclosure, a discharge device can be easily attached to an indoor unit.

BRIEF DESCRIPTION OF DRAWINGS

[0009] FIG. 1 is a schematic diagram showing a schematic configuration of an air conditioner according to an embodiment.

[0010] FIG. 2 is a front view of an indoor unit and a discharge unit according to the embodiment.

[0011] FIG. 3 is a cross-sectional view showing the indoor unit and the discharge unit in the embodiment and taken along line III-III in FIG. 2.

[0012] FIG. 4 is an exploded perspective view showing portions of the indoor unit and the discharge unit in the embodiment.

[0013] FIG. 5 is a perspective view showing the discharge unit in the embodiment.

[0014] FIG. 6 is an exploded perspective view showing the discharge unit in the embodiment.

[0015] FIG. 7 is a cross-sectional view showing the discharge unit in the embodiment and taken along line VII-VII in FIG. 5.

[0016] FIG. 8 is a cross-sectional view showing a portion of the discharge unit in the embodiment and taken along line VIII-VIII in FIG. 5.

[0017] FIG. 9 is an exploded perspective view showing a second control unit in the embodiment.

[0018] FIG. 10 is a top view of a portion of the second control unit in the embodiment.

[0019] FIG. 11 is a perspective view showing a portion of the second control unit in the embodiment.

[0020] FIG. 12 is a front view of a state where a second mounting member is fixed to a wall surface in the embodiment.

[0021] FIG. 13 is a perspective view showing a state when the second mounting member is fixed to the wall surface in the embodiment.

[0022] FIG. 14 is a sectional view showing a state when the second mounting member is fixed to the wall surface in the embodiment.

[0023] FIG. 15 is a diagram showing an example when a discharge device cover is attached in the embodiment.

DETAILED DESCRIPTION

[0024] Hereinafter, an embodiment of the present disclosure will be described with reference to the drawings. Note that the scope of the present disclosure is not limited to the following embodiment and can be arbitrarily changed within the scope of the technical idea of the present disclosure. Further, in the following drawings, the scale, number, and the like of each structure may differ from the scale, number, and the like of the actual structure in order to facilitate the understanding of each configuration.

[0025] In the drawings, an X-axis, a Y-axis, and a Z-axis are indicated as appropriate. The X-axis indicates a front-rear direction of an indoor unit 20 in an air conditioner 100 of the following embodiment. The Y-axis indicates a right-left direction of the indoor unit 20. The Z-axis indicates a vertical direction. The front-rear direction, the right-left direction, and the vertical direction are directions perpendicular to each other. A side (+X side) that an X-axis arrow faces in the front-rear direction is a front side, and a side (-X side) opposite to the side that the X-axis arrow faces in the front-rear direction is a rear side. A side (+Y side) that a Y-axis arrow faces in the right-left direction is a left side, and a side opposite to the side that the Y-axis arrow faces in the right-left direction is a right side. A side (+Z side) that a Z-axis arrow faces in the vertical direction is an upper side, and a side (-Z side) opposite to the side that the Z-axis arrow faces in the vertical direction is a lower side. Note that the left side in the following embodiment is equivalent to "one side in the right-left direction".

[0026] FIG. 1 is a schematic diagram showing a schematic configuration of an air conditioner 100 according to an embodiment. As shown in FIG. 1, the air conditioner 100 includes an outdoor unit 10, an indoor unit 20, and a circulation path portion 18. The outdoor unit 10 is disposed outdoors. The indoor unit 20 is disposed indoors. The outdoor unit 10 and the indoor unit 20 are connected to each other by the circulation path portion 18 through which a refrigerant 19 circulates.

[0027] The air conditioner 100 can adjust the temperature of the indoor air by exchanging heat between the refrigerant 19 flowing through the circulation path portion 18 and air in the room in which the indoor unit 20 is disposed. Examples of the refrigerant 19 include a fluorine-based refrigerant having a low global warming potential (GWP), a hydrocarbon-based refrigerant, and the like.

[0028] The outdoor unit 10 includes an outdoor unit housing 11, a compressor 12, a heat exchanger 13, a flow control valve 14, a blower 15, a four-way valve 16, and a control unit 17. The compressor 12, the heat exchanger 13, the flow control valve 14, the blower 15, the four-way valve 16, and the control unit 17 are accommodated in the outdoor unit housing 11.

[0029] The compressor 12, the heat exchanger 13, the flow control valve 14, and the four-way valve 16 are provided in a portion of the circulation path portion 18 which is positioned inside the outdoor unit housing 11. The compressor 12, the heat exchanger 13, the flow control valve 14, and the four-way valve 16 are connected to each other by a portion of the circulation path portion 18 which is positioned inside the outdoor unit housing 11.

[0030] The four-way valve 16 is provided in a portion of the circulation path portion 18 which is connected to a discharge side of the compressor 12. The four-way valve 16 can reverse the direction of the refrigerant 19 flowing through the circulation path portion 18 by switching a path of a portion of the circulation path portion 18. When a path connected by the four-way valve 16 is a path indicated by a solid line in the four-way valve 16 in FIG. 1, the refrigerant 19 flows through the circulation path portion 18 in a direction indicated by a solid arrow in FIG. 1. On the other hand, when the path connected by the four-way valve 16 is a path indicated by a dashed line in the four-way valve 16 in FIG. 1, the refrigerant 19 flows through the circulation path portion 18 in a direction indicated by the dashed arrow in FIG. 1.

[0031] FIG. 2 is a front view of the indoor unit 20 and a discharge unit 30 which will be described later. FIG. 3 is a cross-sectional view showing the indoor unit 20 and the discharge unit 30 and taken along line in FIG. 2. FIG. 4 is an exploded perspective view showing portions of the indoor unit 20 and the discharge unit 30.

[0032] As shown in FIGS. 2 to 4, the indoor unit 20 is a wall-mounted indoor unit that is fixed to an indoor wall surface W_s . The wall surface W_s faces forward (+X direction). The indoor unit 20 has a substantially rectangular parallelepiped shape elongated in the right-left direction. As shown in FIG. 2, the indoor unit 20 includes an indoor unit housing (housing) 21, a heat exchanger 22, a blower 23, and a first control unit 24. In addition, as shown in FIG. 3, the indoor unit 20 includes a wind direction varying vane 25, drain pans 26a and 26b, and an air conditioner filter 27.

[0033] The indoor unit housing 21 is a housing that accommodates the heat exchanger 22, the blower 23, the

first control unit 24, the drain pans 26a and 26b, and the air conditioner filter 27 therein. The indoor unit housing 21 has a box-shaped main body portion 21a that opens forward (+X direction), and a front panel 21b attached to the front of the main body portion 21a. The front panel 21b is attached to the front of the main body portion 21a so as to be openable and closable. When the front panel 21b is opened, the first control unit 24 and the air conditioner filter 27 are exposed to the outside of the indoor unit 20.

[0034] The indoor unit housing 21 includes a suction port 21e that opens upward and a blow-out port 21f that opens downward. The suction port 21e is formed in a top wall portion 21c positioned on the upper side of the main body portion 21a. The upper surface of the top wall portion 21c is an upper surface of the indoor unit 20. In the present embodiment, the upper surface of the top wall portion 21c is an inclined surface positioned downward toward the front. As shown in FIG. 4, a plurality of suction ports 21e are disposed in a matrix along the front-rear direction and the right-left direction. Thereby, a portion of the top wall portion 21c where the plurality of suction ports 21e are provided has a lattice shape.

[0035] As shown in FIG. 3, the blow-out port 21f is provided in a front (+X direction) portion at a lower end portion of the main body portion 21a. The wind direction varying vane 25 is rotatably attached to the blow-out port 21f. The wind direction varying vane 25 can change the direction of air blown out from the blow-out port 21f in the vertical direction. Although not shown in the drawing, a wind direction varying vane capable of changing the direction of air blown out from the blow-out port 21f to the right-left direction is also provided at the back of the blow-out port 21f.

[0036] The blower 23 suctions indoor air AF from the suction port 21e and blows the suctioned air AF from the blow-out port 21f. In the present embodiment, the blower 23 is a cross-flow fan. As shown in FIG. 2, the blower 23 extends in the right-left direction. Note that the blower 23 may be any type of blower.

[0037] The heat exchanger 22 is provided in the circulation path portion 18 and performs heat exchange between the refrigerant 19 flowing through the circulation path portion 18 and the indoor air AF suctioned into the indoor unit housing 21. The heat exchanger 22 is disposed in an air passage formed by the blower 23. As shown in FIG. 3, the heat exchanger 22 in the present embodiment includes a first heat exchanger 22a, a second heat exchanger 22b, and a third heat exchanger 22c.

[0038] The first heat exchanger 22a is positioned in front (+X direction) of the blower 23. The second heat exchanger 22b is connected above the first heat exchanger 22a. When viewed in the right-left direction, the second heat exchanger 22b extends upward and obliquely rearward (-X direction) from the upper end portion of the first heat exchanger 22a. The third heat exchanger 22c is positioned behind the second heat exchanger 22b. When viewed in the right-left direction, the third heat exchanger 22c extends downward and obliquely rearward from the upper end portion of the second heat exchanger 22b. The second heat exchanger 22b and the third heat exchanger 22c are positioned above the blower 23. The first heat exchanger 22a, the second heat exchanger 22b, and the third heat exchanger 22c are disposed to surround the blower 23 in an air passage from the suction port 21e to the blow-out port 21f.

[0039] The air AF suctioned into the indoor unit housing 21 from the suction port 21e by the blower 23 passes through the heat exchanger 22 and exchanges heat with the refrigerant 19 at that time. After the heat exchange, the air AF is blown out of the indoor unit 20 from the blow-out port 21f. Thereby, the air AF heat-exchanged with the refrigerant 19 by the heat exchanger 22 is blown into the room from the blow-out port 21f.

[0040] Note that the heat exchanger 22 may have any structure as long as heat can be exchanged between the refrigerant 19 and the indoor air AF. For example, the heat exchanger 22 may be constituted by only the first heat exchanger 22a and the second heat exchanger 22b without including the third heat exchanger 22c.

[0041] The drain pan 26a is disposed below the first heat exchanger 22a. The drain pan 26b is disposed below the third heat exchanger 22c. The drain pans 26a and 26b are members for collecting dew condensation water.

[0042] The air conditioner filter 27 is disposed to cover the entire suction port 21e between the suction port 21e, the second heat exchanger 22b, and the third heat exchanger 22c. The air AF suctioned into the indoor unit housing 21 through the suction port 21e passes through the air conditioner filter 27 and then passes through the heat exchanger 22. The air conditioner filter 27 is a pre-filter capable of catching relatively large dust such as fibers mixed in the air AF. By providing the air conditioner filter 27, it is possible to prevent relatively large dust such as fibers mixed in the air AF from being caught between fins of the heat exchanger 22. Although not shown in the drawing, two air conditioner filters 27 are arranged side by side in the right-left direction in the present embodiment. Note that the fibers mixed into the air AF include, for example, relatively long fibers coming out of bedclothes.

[0043] The first control unit 24 is a control unit that controls the indoor unit 20. The first control unit 24 controls, for example, the blower 23, the wind direction varying vane 25, and the like. As shown in FIG. 2, the first control unit 24 is positioned inside the indoor unit housing 21 on the left side (+Y side) of the heat exchanger 22 and the blower 23. A connection portion 24a to which a signal wiring 81, which will be described later, is connected is provided in a left portion of the first control unit 24. Although not shown in the drawing, the first control unit 24 includes a control substrate.

[0044] In the present embodiment, the indoor unit 20 is capable of a cooling operation for cooling air in the room in which the indoor unit 20 is disposed and a heating operation for warming air in the room in which the indoor unit 20 is disposed.

[0045] When the indoor unit 20 is in a cooling operation mode, the refrigerant 19 flowing through the circulation path portion 18 flows in a direction indicated by the solid arrow in FIG. 1. That is, when the indoor unit 20 is in a cooling operation mode, the refrigerant 19 flowing through the circulation path portion 18 circulates to pass through the compressor 12, the heat exchanger 13 of the outdoor unit 10, the flow control valve 14, and the heat exchanger 22 of the indoor unit 20 in this order and return to the compressor 12. In the cooling operation, the heat exchanger 13 inside the outdoor unit 10 functions as a condenser, and the heat exchanger 22 inside the indoor unit 20 functions as an evaporator.

[0046] On the other hand, when the indoor unit 20 is in a heating operation mode, the refrigerant 19 flowing through

the circulation path portion 18 flows in a direction indicated by the dashed line in FIG. 1. That is, when the indoor unit 20 is in a heating operation mode, the refrigerant 19 flowing through the circulation path portion 18 circulates to pass through the compressor 12, the heat exchanger 22 of the indoor unit 20, the flow control valve 14, and the heat exchanger 13 of the outdoor unit 10 in this order and return to the compressor 12. In the heating operation, the heat exchanger 13 inside the outdoor unit 10 functions as an evaporator, and the heat exchanger 22 inside the indoor unit 20 functions as a condenser.

[0047] As shown in FIGS. 2 to 4, the air conditioner 100 includes a discharge unit 30 disposed outside the indoor unit 20 and above the indoor unit 20. In the present embodiment, the discharge unit 30 is a device having a function of cleaning the indoor air AF. The discharge unit 30 is disposed above the indoor unit 20 with a predetermined gap G therebetween. A dimension H of the gap G in the vertical direction is, for example, 5 mm or more and 50 mm or less. The dimension H of the gap G in the vertical direction is, for example, preferably 5 mm. In the present embodiment, the gap G increases in the vertical direction toward the front. The dimension H is a dimension in the vertical direction at a rear-side (-X side) end portion of the gap G, and is the minimum dimension of the gap G in the vertical direction.

[0048] FIG. 5 is a perspective view showing the discharge unit 30. FIG. 6 is an exploded perspective view showing the discharge unit 30. FIG. 7 is a cross-sectional view showing the discharge unit 30 and taken along line VII-VII in FIG. 5. FIG. 8 is a cross-sectional view showing a portion of the discharge unit 30 and taken along line VIII-VIII in FIG. 5.

[0049] As shown in FIG. 5, the discharge unit 30 has a substantially rectangular parallelepiped shape extending in the right-left direction and flattened in the vertical direction. As shown in FIG. 2, in the right-left direction of the indoor unit 20, the center of the discharge unit 30 is disposed to be shifted to the left side (+Y side) in the right-left direction with respect to the center of the indoor unit 20. The dimension of the discharge unit 30 in the right-left direction is smaller than the dimension of the indoor unit 20 in the right-left direction. In the present embodiment, the dimension of the discharge unit 30 in the right-left direction is at least half the dimension of the indoor unit 20 in the right-left direction. The left end portion of the discharge unit 30 is disposed at the same position in the right-left direction as the left end portion of the indoor unit 20. Note that "the left end portion of the discharge unit 30 is disposed at the same position in the right-left direction as the left end portion of the indoor unit 20" also includes a case where the position in the right-left direction at the left end portion of the discharge unit 30 is slightly shifted with respect to the position in the right-left direction at the left end portion of the indoor unit 20 due to dimensional tolerance, assembly tolerance, or the like.

[0050] As shown in FIG. 6, the discharge unit 30 includes a case 31, a pre-filter 35, a second control unit 40, a discharge device 50, a signal wiring 81, and a power supply wiring 82.

[0051] The case 31 accommodates the second control unit 40 and the discharge device 50 therein. The case 31 extends in the right-left direction. The case 31 is made of, for example, a resin. The case 31 includes a base member 32, and a control unit cover 33 and a discharge device cover 34 attached above the base member 32. The base member 32

includes a substantially rectangular bottom wall portion **32a** elongated in the right-left direction, a rear wall portion **32b** protruding upward from a rear-side ($-X$ side) edge portion of the bottom wall portion **32a**, a right wall portion **32c** protruding upward from a right-side ($-Y$ side) edge portion of the bottom wall portion **32a**, and a left wall portion **32d** protruding upward from a left-side ($+Y$ side) edge portion of the bottom wall portion **32a**.

[0052] The bottom wall portion **32a** has a plate shape with a plate surface facing the vertical direction. The bottom wall portion **32a** includes a first fixed portion **32g** to which the second control unit **40** is fixed, and a second fixed portion **32h** to which the discharge device **50** is fixed. The first fixed portion **32g** supports the second control unit **40** from below. The second fixed portion **32h** supports the discharge device **50** from below.

[0053] The first fixed portion **32g** is a portion on the left side ($+Y$ side) of the bottom wall portion **32a**. No through hole is provided in the first fixed portion **32g**. For this reason, the air **AF** cannot pass through the first fixed portion **32g** in the vertical direction.

[0054] The second fixed portion **32h** is a front-side ($+X$ side) portion of a right-side ($-Y$ side) portion of the bottom wall portion **32a**. The second fixed portion **32h** is provided with a ventilation hole **32f** that penetrates the second fixed portion **32h** in the vertical direction. A plurality of ventilation holes **32f** are provided in a matrix in the front-rear direction and the right-left direction. Thereby, a portion of the second fixed portion **32h** which is provided with the plurality of ventilation holes **32f** has a lattice shape. Air **AF** can pass through the second fixed portion **32h** in the vertical direction via the plurality of ventilation holes **32f**.

[0055] A ventilation holes **32e** is provided in a portion positioned on the rear side ($-X$ side) of the second fixed portion **32h** in the right-side ($-Y$ side) portion of the bottom wall portion **32a**. A plurality of ventilation holes **32e** are provided in a matrix in the front-rear direction and the right-left direction. Thereby, a portion of the bottom wall portion **32a** which is provided with the plurality of ventilation holes **32e** has a lattice shape. An opening area of each ventilation hole **32e** is larger than an opening area of each ventilation hole **32f** provided in the second fixed portion **32h**. That is, the opening area of each ventilation hole **32f** provided in the second fixed portion **32h** is smaller than the opening area of each ventilation hole **32e**. For this reason, it is possible to prevent fingers of a user or the like from entering the case **31** from the lower side of the bottom wall portion **32a** through the ventilation holes **32f**. Thereby, it is possible to prevent the fingers of the user or the like from contacting the discharge device **50** supported by the second fixed portion **32h**.

[0056] The control unit cover **33** is positioned above the first fixed portion **32g** in the bottom wall portion **32a**. The control unit cover **33** is positioned above the second control unit **40** and covers the second control unit **40** from above. The control unit cover **33** is fixed to the base member **32**, for example, by screwing. The control unit cover **33** includes a top wall portion **33a** having a substantially square shape when viewed in the vertical direction, a front wall portion **33b** protruding downward from a front-side ($+X$ side) edge portion of the top wall portion **33a**, and a left wall portion **33c** protruding downward from a left-side ($+Y$ side) edge portion of the top wall portion **33a**. No through hole is provided in the top wall portion **33a**. For this reason, the air

AF cannot pass through the top wall portion **33a** in the vertical direction. The left wall portion **33c** is disposed in contact with the left wall portion **32d** of the base member **32** in the vertical direction. The front surface of the front wall portion **33b** constitutes a left portion of the front surface of the case **31**. The front surface of the front wall portion **33b** is a design surface.

[0057] The discharge device cover **34** is positioned above a right-side ($-Y$ side) portion of the bottom wall portion **32a** which includes the second fixed portion **32h**. The discharge device cover **34** is positioned above the discharge device **50**. As shown in FIG. 5, the discharge device cover **34** is adjacent to the right side ($-Y$ side) of the control unit cover **33**. The dimension of the discharge device cover **34** in the right-left direction is larger than the dimension of the control unit cover **33** in the right-left direction. The discharge device cover **34** includes a substantially rectangular top wall portion **34a** when viewed in the vertical direction, a front wall portion **34b** protruding downward from the front-side ($+X$ side) edge portion of the top wall portion **34a**, and a finger hook portion **34g** provided in a front-side edge portion of the upper surface of the top wall portion **34a**.

[0058] The top wall portion **34a** is provided with ventilation holes **34c** penetrating the top wall portion **34a** in the vertical direction. The plurality of ventilation holes **34c** are provided in a matrix in the front-rear direction and the right-left direction. Thereby, a portion of the top wall portion **34a** which is provided with the plurality of ventilation holes **34c** has a lattice shape. Air **AF** passes through the top wall portion **34a** in the vertical direction through the plurality of ventilation holes **34c**. The front surface of the front wall portion **34b** constitutes the right-side ($-Y$ side) portion of the front surface of the case **31**. The front surface of the front wall portion **34b** is a design surface.

[0059] The discharge device cover **34** is detachably attached to the base member **32**. In the present embodiment, the discharge device cover **34** is detached from the base member **32** by being slid forward ($+X$ direction). A user or the like can easily detach the discharge device cover **34**, for example, by grasping the finger hook portion **34g** and pulling the discharge device cover **34** forward.

[0060] A lead-out hole **32p** is provided in a left-side ($+Y$ side) end portion of the case **31**. In the present embodiment, the lead-out hole **32p** is provided in a rear-side ($-X$ side) end portion of the left-side end portion of the case **31**. The lead-out hole **32p** is provided in the base member **32**. The lead-out hole **32p** connects the inside of the case **31** and the outside of the case **31**.

[0061] As shown in FIG. 6, the pre-filter **35** is a substantially rectangular plate-shaped member. The pre-filter **35** is positioned above the discharge device **50**. The pre-filter **35** is positioned vertically between the discharge device **50** and the discharge device cover **34**. As shown in FIG. 7, the pre-filter **35** is attached to the lower surface of the top wall portion **34a** in the discharge device cover **34**.

[0062] The air **AF** flowing into the case **31** through the ventilation holes **34c** of the top wall portion **34a** from above the discharge unit **30** passes through the pre-filter **35** and then flows into the discharge device **50**. The pre-filter **35** is a filter capable of catching relatively large dust such as fibers mixed in the air **AF**.

[0063] Although not shown in the drawing, rails for supporting the pre-filter **35** so as to be movable in the front-rear direction are provided at both edge portions in the right-left

direction on the lower surface of the top wall portion 34a. A user or the like can attach the pre-filter 35 to the discharge device cover 34 by inserting the pre-filter 35 from the rear (-X direction) below the top wall portion 34a.

[0064] The discharge unit 30 includes rectifying filters 37a and 37b. The rectifying filter 37a is positioned between the pre-filter 35 and the discharge device 50 in the vertical direction. The rectifying filter 37b is positioned between the bottom wall portion 32a and the discharge device 50 in the vertical direction. The rectifying filters 37a and 37b are, for example, filters having honeycomb ventilation holes. Each of ventilation holes provided in the rectifying filters 37a and 37b is, for example, a regular hexagon with sides facing each other at a distance of approximately 6 mm. The rectifying filters 37a and 37b suitably transmit the air AF in the vertical direction through the ventilation holes.

[0065] The honeycomb-shaped rectifying filters 37a and 37b are made of, for example, a sheet-shaped aluminum alloy. Since the rectifying filters 37a and 37b are made of a metal, they are resistant to fire. Here, for example, all parts constituting the discharge device 50 are made of a flame retardant or a metal. By sandwiching the discharge device 50 between the honeycomb-shaped rectifying filters 37a and 37b made of a metal, even when the discharge device 50 ignites, it is possible to make fire less likely to reach the surrounding members and to secure time for self-extinguishing in the discharge device 50. The rectifying filter 37b disposed below the discharge device 50, that is, on the downstream side of the flow of the air AF, exhibits the above-described effect more effectively when the blower 23 of the indoor unit 20 suctions the air AF from the suction port 21e. The rectifying filter 37a disposed above the discharge device 50, that is, on the upstream side of the flow of the air AF, exhibits the above-described effect more effectively when the blower 23 is stopped.

[0066] As shown in FIG. 6, the discharge unit 30 includes a plurality of hook portions (attachment portions) 36. In the present embodiment, a pair of hook portions 36 are provided with an interval therebetween in the right-left direction. The hook portion 36 is attached to the rear side (-X side) of the base member 32. One hook portion 36 is attached across the first fixed portion 32g and the rear wall portion 32b. The other hook portion 36 is attached across the rear wall portion 32b and a portion of the bottom wall portion 32a which is positioned behind the second fixed portion 32h.

[0067] In the present embodiment, the hook portion 36 is an L-shaped sheet metal member. As shown in FIG. 7, the hook portion 36 includes a support portion 36a extending in the front-rear direction, an extending portion 36b extending upward from a rear-side (-X side) end portion of the support portion 36a, and a claw portion 36c protruding rearward from the extending portion 36b.

[0068] The support portion 36a is screwed to the lower surface of the bottom wall portion 32a. The support portion 36a protrudes further forward than an engaging portion 62, which will be described later, and supports the case 31 from below. A portion of the bottom wall portion 32a to which the support portion 36a is fixed is recessed upward. The support portion 36a is positioned above the lower end surface of the case 31.

[0069] The upper portion of the extending portion 36b is inserted into a slit portion 32i, which is provided in the rear wall portion 32b of the base member 32, from below and is inserted into the case 31. The upper portion of the extending

portion 36b contacts the front surface of the rear wall portion 32b from the front (+X direction). A protruding portion 36f protruding rearward (-X direction) is provided in a portion of the extending portion 36b which is positioned below the claw portion 36c. The protruding portion 36f is formed by bending a portion of the extending portion 36b rearward. A rear-side end portion of the protruding portion 36f is in contact with a front surface of the engaging portion 62, which will be described later.

[0070] The claw portion 36c includes a base portion 36d protruding rearward (-X direction) from the extending portion 36b, and a claw body portion 36e protruding downward from a rear-side end portion of the base portion 36d. The base portion 36d protrudes rearward from a portion of the extending portion 36b which is positioned below the portion inserted into the case 31. The claw body portion 36e is inserted into a hole portion 64, which will be described later, from above and hooked on the engaging portion 62 from behind. In the present embodiment, the claw portion 36c is formed by cutting and raising a portion of the extending portion 36b rearward.

[0071] An upper end portion of the hook portion 36 is positioned below an upper end portion of the case 31. A lower end portion of the hook portion 36 is positioned above a lower end portion of the case 31. That is, the hook portion 36 is disposed to fall within the dimensions of the case 31 in the vertical direction.

[0072] The second control unit 40 is a control unit that controls the discharge device 50. As shown in FIG. 2, the second control unit 40 is positioned on the left side (+Y side) of the discharge device 50. At least a portion of the second control unit 40 is disposed to be superimposed above the first control unit 24. In the present embodiment, the left-side portion of the second control unit 40 is positioned above the first control unit 24.

[0073] FIG. 9 is an exploded perspective view showing the second control unit 40. FIG. 10 is a top view of a portion of the second control unit 40. FIG. 11 is a perspective view showing a portion of the second control unit 40. As shown in FIG. 9, the second control unit 40 includes a substrate case 40a, a control substrate 45 and a boosting substrate 46 that are accommodated in the substrate case 40a, and a terminal portion 47.

[0074] The substrate case 40a includes a box-shaped lower resin cover 41 that opens upward, an upper resin cover 42 fixed above the lower resin cover 41, a lower sheet metal cover 43 positioned below the lower resin cover 41, and an upper sheet metal cover 44 positioned above the upper resin cover 42. The lower sheet metal cover 43 has a box shape that opens upward and covers the lower resin cover 41. The upper sheet metal cover 44 is fixed above the lower sheet metal cover 43 and covers the upper resin cover 42.

[0075] The lower resin cover 41 includes a control substrate fixing portion 41a to which the control substrate 45 is fixed, and a boosting substrate fixing portion 41b to which the boosting substrate 46 is fixed. The boosting substrate fixing portion 41b is connected to the right side (-Y side) of the front side (+X side) portion of the control substrate fixing portion 41a.

[0076] As shown in FIGS. 10 and 11, terminal blocks 45a and 45b are mounted on the control substrate 45. A signal wiring 81 is connected to the terminal block 45a. A power supply wiring 82 is connected to the terminal block 45b. The

terminal block **45b** is positioned on the right side (-Y direction) and the rear side (-X direction) of the terminal block **45a**.

[0077] As shown in FIG. 11, the signal wiring **81** is hooked on a protruding portion **41c** inside the substrate case **40a**. The protruding portion **41c** protrudes upward from the bottom of the lower resin cover **41**. The protruding portion **41c** is positioned to the right side (-Y direction) and the rear side (-X direction) of the terminal block **45a**. The signal wiring **81** extends rightward from the terminal block **45a**, is hooked on the protruding portion **41c** from the right side, and is folded back leftward (+Y direction). The signal wiring **81** folded back leftward extends leftward and is led out from the substrate case **40a** from a penetration portion **40b** provided on a left wall portion of the substrate case **40a**.

[0078] In this manner, the signal wiring **81** is connected to the second control unit **40** via the penetration portion **40b** from the left side (+Y side). The penetration portion **40b** penetrates the left wall portion of the lower resin cover **41** and the left wall portion of the lower sheet metal cover **43** in the right-left direction. The penetration portion **40b** opens upward. A portion of the signal wiring **81** is fixed from above by a clamp member **83a** inside the substrate case **40a**.

[0079] The signal wiring **81** led out from the substrate case **40a** extends rearward (-X direction) through a gap between the substrate case **40a** and the case **31** in the right-left direction and is led out of the discharge unit **30** from the lead-out hole **32p**. As shown in FIG. 2, the signal wiring **81** led out from the discharge unit **30** passes between the indoor unit and the wall surface **Ws**, is inserted into the indoor unit housing **21**, and is electrically connected to a connection portion **24a** of the first control unit **24** from the left side (+Y side). Thereby, the signal wiring **81** electrically connects the discharge device **50** and the first control unit **24**.

[0080] Although not shown in the drawing, the power supply wiring **82** includes a power supply line and a ground line. As shown in FIG. 11, the power supply wiring **82** extends leftward (+Y direction) from the terminal block **45b** and is led out from the substrate case **40a** from a penetration portion **40c** provided in the left wall portion of the substrate case **40a**. In this manner, the power supply wiring **82** is connected to the second control unit **40** from the left side through the penetration portion **40c**. The penetration portion **40c** penetrates the left wall portion of the lower resin cover **41** and the left wall portion of the lower sheet metal cover **43** in the right-left direction. The penetration portion **40c** opens upward. The penetration portion **40c** is positioned separately behind (-X direction) the penetration portion **40b**. A portion of the power supply wiring **82** is fixed from above by a clamp member **83b** inside the substrate case **40a**.

[0081] The power supply wiring **82** led out from the substrate case **40a** extends rearward (-X direction) through a gap between the substrate case **40a** and the case **31** in the right-left direction and is led out of the discharge unit **30** from the lead-out hole **32p**. As shown in FIG. 2, a portion of the power supply wiring **82** led out from the discharge unit **30** passes between the indoor unit **20** and the wall surface **Ws**. The power supply wiring **82** is connected to a power source separate from the indoor unit **20**, for example, via a plug socket, which is not shown in the drawing, provided on the wall surface **Ws**.

[0082] The control substrate **45** and the boosting substrate **46** are electrically connected to each other via a wiring. The control substrate **45** converts, for example, an AC voltage of

200 V (volt) or more and 240 V (volt) or less applied from a power line of the power supply wiring **82** into a relatively low DC voltage of approximately 12 V (volt). The boosting substrate **46** converts, for example, the DC voltage converted by the control substrate **45** into a relatively high DC voltage of approximately 6000 V (volt). Although not shown in the drawing, a pair of wirings electrically connected to a pair of terminals **48c** and **48d** provided in the terminal portion **47** are connected to the boosting substrate **46**.

[0083] As shown in FIG. 9, the terminal portion **47** has a substantially L shape including a first extending portion **47a** extending rightward (-Y direction) from the rear-side (-X direction) of the boosting substrate **46**, and a second extending portion **47b** extending forward (+X direction) from a right-side end portion of the first extending portion **47a**. The terminal portion **47** includes a pair of wiring members **48a** and **48b**, a pair of terminals **48c** and **48d** electrically connected to the pair of wiring members **48a** and **48b**, respectively, and a holding member **47c** that holds the pair of wiring members **48a** and **48b**. The holding member **47c** is constituted by a pair of resin members that sandwich the pair of wiring members **48a** and **48b** in the vertical direction.

[0084] The terminal **48c** is electrically connected to the boosting substrate **46** via the wiring member **48a**. The terminal **48d** is electrically connected to the boosting substrate **46** via the wiring member **48b**. One of the pair of terminals **48c**, **48d** is a high voltage terminal, and the other is a low voltage terminal. The low voltage terminal is grounded. The pair of terminals **48c** and **48d** are made of, for example, spring steel. The pair of terminals **48c** and **48d** are disposed at a front-side (+X side) end portion of the second extending portion **47b**.

[0085] As shown in FIG. 3, the discharge device **50** is disposed above the suction port **21e** provided in the indoor unit **20**. As shown in FIG. 6, the discharge device **50** has a substantially rectangular parallelepiped shape extending in the right-left direction and flattened in the vertical direction. As shown in FIG. 8, the discharge device **50** in the present embodiment is an electric dust collector including a discharge portion **50a** and a dust collecting portion **50b**.

[0086] The discharge portion **50a** includes a discharge electrode **56** and a counter electrode **55**. The discharge electrode **56** is a metal wire. The counter electrode **55** is constituted by a plurality of flat plate-shaped electrodes **55a**. The plurality of flat plate-shaped electrodes **55a** are arranged side by side with gaps therebetween in the front-rear direction. The discharge electrode **56**, which is a wire, passes between the flat plate-shaped electrodes **55a** adjacent to each other. In the present embodiment, the number of flat plate-shaped electrodes **55a** is three. The discharge electrode **56** passes between the flat plate-shaped electrode **55a** positioned on the frontmost side and the flat plate-shaped electrode **55a** positioned at an intermediate location, is folded back, and passes between the flat plate-shaped electrode **55a** positioned at an intermediate location and the flat plate-shaped electrode **55a** positioned on the rearmost side. Note that the number of flat plate-shaped electrodes **55a** can be changed as appropriate. The number of times the discharge electrode **56** is folded back can be changed in accordance with the number of flat plate-shaped electrodes **55a**.

[0087] In the discharge portion **50a**, different voltages are applied to the discharge electrode **56** and the counter electrode **55**, thereby causing discharge and an electric field.

This discharge and electric field can charge particles in the air AF passing through the discharge portion 50a. The particles in the air AF include, for example, dust, bacteria, mold, viruses, and allergens. In addition, the discharge and electric field occurring in the discharge portion 50a act on bacteria, mold, viruses, and the like in the air AF passing through the discharge portion 50a, so that the bacteria, mold, viruses, and the like can be inactivated.

[0088] The voltage applied to the discharge electrode 56 is relatively high. Specifically, for example, a DC voltage of 4000 V (volt) or more and 6000 V (volt) or less is applied to the discharge electrode 56. The voltage applied to the counter electrode 55 is relatively low. Specifically, for example, a voltage of 0 V (volt) is applied to the counter electrode 55. That is, the counter electrode 55 is grounded in the present embodiment.

[0089] The dust collecting portion 50b is disposed below the discharge portion 50a, that is, on the downstream side of the discharge portion 50a in a direction in which the air AF flows. The dust collecting portion 50b includes a first electrode 57a and a second electrode 57b. The first electrode 57a is configured by connecting a plurality of first flat plate-shaped electrodes 57c with a connecting member which is not shown in the drawing. The second electrode 57b is configured by connecting a plurality of second flat plate-shaped electrodes 57d with a connecting member which is not shown in the drawing. The plurality of first flat plate-shaped electrodes 57c and the plurality of second flat plate-shaped electrodes 57d are arranged side by side with gaps therebetween in the front-rear direction. The first flat plate-shaped electrodes 57c and the second flat plate-shaped electrodes 57d are alternately arranged in the front-rear direction.

[0090] The dust collecting portion 50b generates an electrostatic force by applying different voltages to the first electrode 57a and the second electrode 57b from the second control unit 40 via a pair of terminals which are not shown in the drawing. The dust collecting portion 50b can collect particles charged in the discharge portion 50a by the electrostatic force.

[0091] The voltage applied to the first electrode 57a is relatively high. Specifically, for example, a DC voltage of 4000 V (volt) or more and 6000 V (volt) or less is applied to the first electrode 57a. The voltage applied to the second electrode 57b is relatively low. Specifically, for example, a voltage of 0 V (volt) is applied to the second electrode 57b. That is, the second electrode 57b is grounded in the present embodiment.

[0092] The first electrode 57a is made of an antistatic resin having electrical conductivity and a resistance value of 10^{12} Ω/cm^2 (ohms per square centimeter) or less. The second electrode 57b is formed by plating a resin with a metal. The second electrode 57b may be formed of a metal plate such as stainless steel, or may be formed of a conductive resin in which carbon is kneaded and of which the resistance value is 10^4 Ω/cm^2 (ohms per square centimeter) or less.

[0093] The discharge device 50 includes a discharge device case 51 that accommodates the discharge portion 50a and the dust collecting portion 50b therein. The discharge device case 51 includes an upper case 52 and a lower case 53 positioned below the upper case 52. The upper case 52 and the lower case 53 are fixed to each other.

[0094] The upper case 52 includes a top wall portion 52a positioned above, an inclined wall portion 52b extending

forward and obliquely downward from a front-side (+X side) edge portion of the top wall portion 52a, and a front wall portion 52c extending downwardly from a front-side edge portion of the inclined wall portion 52b. An opening 52d is provided in the top wall portion 52a. As shown in FIG. 6, a plurality of openings 52d are provided in a matrix in the front-rear direction and the right-left direction. Thereby, a portion of the top wall portion 52a which is provided with the plurality of openings 52d has a lattice shape. A pre-filter 58 is attached to the upper surface of the top wall portion 52a. The pre-filter 58 covers the openings 52d from above. A handle portion 54 protruding forward is provided at a central portion in the right-left direction of the front-side (+X side) portion of the upper case 52.

[0095] As shown in FIG. 8, the lower case 53 is provided with an opening 53a. Air AF that has flowed into the discharge device case 51 through the openings 52d of the upper case 52 passes through the discharge portion 50a and the dust collecting portion 50b in this order, and flows out of the discharge device case 51 from the opening 53a. Thereby, the air AF that has been cleaned by the dust collecting portion 50b capturing dust is discharged from the lower side of the discharge device 50. The cleaned air AF discharged from the lower side of the discharge device 50 is discharged below the discharge unit 30 through the ventilation holes 32f of the case 31 and suctioned into the indoor unit 20 from the suction port 21e.

[0096] In the present embodiment, the discharge device 50 is supported from below by a support convex portion 32k provided in the base member 32 of the case 31 of the discharge unit 30. The support convex portion 32k protrudes upward from the bottom wall portion 32a. The support convex portion 32k supports the front-side (+X side) end portion of the discharge device 50 from below.

[0097] The discharge device 50 is pressed from above and from the front (+X direction) by the protruding portion 34d provided in the discharge device cover 34. The protruding portion 34d protrudes downward from the top wall portion 34a of the discharge device cover 34. The protruding portion 34d is positioned above and in front of the front-side portion of the discharge device 50. The protruding portion 34d has a substantially triangular shape when viewed in the right-left direction.

[0098] The protruding portion 34d includes an inclined surface 34e and a rear surface 34f. The inclined surface 34e faces downward and obliquely rearward (-X direction), and is disposed to face the upper side of the inclined wall portion 52b. The inclined surface 34e is along the outer surface of the inclined wall portion 52b and is in contact with the outer surface of the inclined wall portion 52b. The rear surface 34f extends downward from the front-side end portion of the inclined surface 34e. The rear surface 34f faces rearward and is disposed to face the front of the upper portion of the front wall portion 52c. The rear surface 34f is along the outer surface of the front wall portion 52c and is in contact with the outer surface of the front wall portion 52c.

[0099] As shown in FIG. 10, the left-side (+Y side) end portion of the discharge device 50 is disposed to be superimposed above the front-side (+X side) end portion of the second extending portion 47b in the terminal portion 47 of the second control unit 40. Although not shown in the drawing, a pair of terminals are provided on the lower surface of the left-side end portion of the discharge device 50. The pair of terminals are electrically connected to the

pair of terminals **48c** and **48d** provided in the terminal portion **47** by the discharge device **50** being disposed inside the case **31**. Thereby, a high voltage can be applied from the second control unit **40** to the discharge device **50** via the terminal portion **47**.

[0100] In the present embodiment, the discharge device **50** is detachably accommodated in the case **31** with the discharge device cover **34** removed. Although not shown in the drawing, both ends of the discharge device **50** in the right-left direction are supported by a pair of rails provided separately in the right-left direction inside the case **31** so as to be slidable in the front-rear direction. With the discharge device cover **34** detached, the discharge device **50** is exposed to the outside of the discharge unit **30**. The discharge device **50** is slidable forward in a state where the discharge device cover **34** is detached from the case **31**. After detaching the discharge device cover **34**, a user or the like can detach the discharge device **50** from the case **31** by grasping the handle portion **54** and pulling the discharge device **50** forward (+X direction). In addition, the discharge device **50** can be attached to the inside of the case **31** by sliding the discharge device **50** from the front to the rear along the rails provided in the case **31** and inserting it. By inserting the discharge device **50** to the deepest part, a pair of terminals of the discharge device **50** which are not shown in the drawing are electrically connected to the pair of terminals **48c** and **48d** of the second control unit **40**.

[0101] Since the discharge device **50** is detachable in this manner, the user or the like can clean the discharge device **50** with water or the like to easily remove dust collected in the dust collecting portion **50b**. The discharge device **50** does not need to be replaced unlike an air cleaning filter or the like, and can be used repeatedly by cleaning as described above. By cleaning the dust collecting portion **50b**, the performance of the discharge device **50** can be maintained at the initial performance without deteriorating the electrical characteristics of the discharge device **50** due to a voltage and a current.

[0102] The discharge device **50** is driven based on a signal received from the first control unit **24**. The discharge device **50** is driven in association with the blower **23** of the indoor unit **20**. The first control unit **24** transmits a signal for driving the discharge device **50** to the second control unit **40** of the discharge unit **30** together with a signal for driving the blower **23**. Thereby, when air AF starts to be drawn into the indoor unit **20** by the blower **23**, electric power is also supplied from the second control unit **40** to the discharge device **50**.

[0103] At least a portion of the air AF suctioned into the suction port **21e** by driving the blower **23** as shown in FIG. 3 passes through the discharge device **50** and then is suctioned into the suction port **21e**. In the present embodiment, a portion of the air AF suctioned into the suction port **21e** passes through the discharge device **50** and is suctioned into the suction port **21e**, and the other portion of the air AF is suctioned into the suction port **21e** without passing through the discharge device **50**. The air AF can be cleaned as described above by passing through the discharge device **50**. Thus, the indoor air AF can be purified by continuously operating the indoor unit **20**.

[0104] The air conditioner **100** includes a first mounting member **28** and a second mounting member **60**. The first mounting member **28** and the second mounting member **60** are fixed to the wall surface **Ws**. The first mounting member

28 and the second mounting member **60** are separate members. The first mounting member **28** is a back plate to which the indoor unit **20** is attached. The second mounting member **60** is a back plate to which the discharge unit **30** is attached. The first mounting member **28** is, for example, screwed to the wall surface **Ws**. The indoor unit **20** is attached to the wall surface **Ws** via the first mounting member **28**.

[0105] The second mounting member **60** is fixed above the first mounting member **28** on the wall surface **Ws**. As shown in FIG. 4, the second mounting member **60** has a substantially rectangular plate shape extending in the right-left direction. The second mounting member **60** includes a substantially rectangular plate-shaped back plate portion **61** extending in the right-left direction, a plurality of engaging portions **62** protruding forward (+X direction) from the back plate portion **61**, and a positioning convex portion **63** protruding downward from the central portion of the back plate portion **61** in the right-left direction and extending in the right-left direction.

[0106] The plate surface of the back plate portion **61** faces in the front-rear direction. A rear-side (-X side) surface of the back plate portion **61** is in contact with the wall surface **Ws**. In the present embodiment, the back plate portion **61** is configured such that both ends in the right-left direction and the central portion in the right-left direction are fixed to the wall surface **Ws** by a screw **70**. The back plate portion **61** has an elongated hole **61a** that penetrates the back plate portion **61** in the front-rear direction. The elongated hole **61a** extends in the right-left direction. A pair of elongated holes **61a** are disposed at an interval in the right-left direction. The pair of elongated holes **61a** are provided in a right-side (-Y side) portion of the back plate portion **61**. A screw **72** for fixing the rear wall portion **32b** of the case **31** of the discharge unit **30** to the wall surface **Ws** passes through each of the elongated holes **61a**.

[0107] The screw **72** passes through a through hole **32j** provided in the rear wall portion **32b** from the front thereof and is screwed into the wall surface **Ws** through the elongated hole **61a**. The through holes **32j** are a pair of circular holes that are provided at an interval in the right-left direction. The pair of through holes **32j** are provided in the right-side portion of the rear wall portion **32b**. The case **31** is fixed to the back plate portion **61** by the screws **72**. In this manner, the peripheral edge portion of the through hole **32j** in the rear wall portion **32b** is a screwing portion (attachment portion) **32r** that is screwed to the second mounting member **60**. In a state where the discharge device cover **34** and the discharge device **50** are detached from the base member **32**, the through hole **32j** and the screwing portion **32r** are exposed forward. For this reason, in a state where the discharge device cover **34** and the discharge device **50** are detached from the base member **32**, an operator or the like can easily fix the screwing portion **32r** to the second mounting member **60** with the screws **72**.

[0108] Note that the back plate portion **61** may be provided with a through hole similar to the through hole **32j** provided in the rear wall portion **32b** instead of the elongated hole **61a**. In this case, an elongated hole similar to the elongated hole **61a** may be provided in the rear wall portion **32b** instead of the through hole **32j**.

[0109] The plurality of engaging portions **62** are provided at intervals in the right-left direction. In the present embodiment, one engaging portion **62** is provided on each of both ends of the back plate portion **61** in the right-left direction.

The engaging portion 62 is formed, for example, by cutting and raising a portion of the back plate portion 61 forward (+X direction). By forming the engaging portion 62 in this manner, a hole portion 64 that opens upward is provided behind (-X direction) the engaging portion 62. The hole portion 64 also opens downward. The claw portion 36c is hooked on the engaging portion 62 by inserting the claw body portion 36e of the hook portion 36 into the hole portion 64 from above. The upper end portion of the engaging portion 62 is positioned below the upper end portion of the back plate portion 61. The lower end portion of the engaging portion 62 is positioned at the same position as the lower end portion of the back plate portion 61 in the vertical direction. That is, the engaging portion 62 is disposed to fall within the dimensions of the back plate portion 61 in the vertical direction.

[0110] In the present embodiment, the two hook portions 36 are hooked on the two engaging portions 62, respectively, and the screwing portion 32r is fixed to the back plate portion 61 by the screws 72, so that the discharge unit 30 is attached to the second mounting member 60. That is, in the present embodiment, the discharge unit 30 is attached to the second mounting member 60 via the screwing portion 32r and the hook portion 36 as attachment portions attached to the wall surface Ws.

[0111] FIG. 12 is a front view of a state where the second mounting member 60 is fixed to the wall surface Ws. FIG. 13 is a perspective view showing a state where the second mounting member 60 is fixed to the wall surface Ws. FIG. 14 is a cross-sectional view showing a state where the second mounting member 60 is fixed to the wall surface Ws.

[0112] As shown in FIGS. 12 to 14, the air conditioner 100 includes a spacer member 90 for positioning the second mounting member 60 in the vertical direction. The spacer member 90 is a substantially rectangular plate-shaped member that extends in the right-left direction and of which the plate surface faces in the vertical direction. A material forming the spacer member 90 is, for example, foamed polystyrene or the like. The spacer member 90 includes a substantially rectangular plate-shaped spacer body portion 91 extending in the right-left direction, and a protruding portion 92 protruding downward from the spacer body portion 91.

[0113] A positioning concave portion 91a recessed forward (+X direction) is provided in the central portion of the rear-side (-X side) edge portion of the spacer body portion 91 in the right-left direction. Both sides of the positioning concave portion 91a open in the vertical direction. The positioning concave portion 91a extends in the right-left direction. The dimension of the positioning concave portion 91a in the right-left direction is substantially the same as the dimension of the positioning convex portion 63 of the second mounting member 60 in the right-left direction. A substantially rectangular concave portion 91c recessed downward is provided on the upper surface of the spacer body portion 91. A pair of concave portions 91c are provided to sandwich the positioning concave portion 91a in the right-left direction. The pair of concave portions 91c can respectively accommodate the pair of engaging portions 62 therein, for example, when the spacer member 90 is packed together with the second mounting member 60.

[0114] The spacer body portion 91 includes a placement portion 91b. The placement portions 91b are portions that sandwich the positioning concave portion 91a in the right-

left direction in the rear-side (-X side) edge portion of the spacer body portion 91. The placement portion 91b is recessed below a portion of the spacer body portion 91 which is positioned in front of the placement portion 91b. The placement portions 91b extend in the right-left direction. The second mounting member 60 is placed on the placement portion 91b from above. The protruding portion 92 protrudes downward from the rear-side portion in the left-side (+Y side) end portion of the spacer body portion 91.

[0115] The operator or the like who installs the air conditioner 100 fixes the indoor unit 20 to the wall surface Ws and then disposes the spacer member 90 on the upper surface of the indoor unit 20 as shown in FIG. 12. The operator or the like places the spacer body portion 91 of the spacer member 90 on the rear-side (-X side) edge portion of the upper surface of the indoor unit 20 and brings the rear-side surface of the spacer body portion 91 into contact with the wall surface Ws. Thereby, the spacer member 90 can be positioned in the vertical direction and the front-rear direction with respect to the indoor unit 20. In addition, the operator or the like hooks the protruding portion 92 on the wall portion on the left side (+Y side) of the indoor unit 20 from the left. Thereby, the spacer member 90 can be positioned in the right-left direction with respect to the indoor unit 20.

[0116] The operator or the like places the second mounting member 60 on the placement portion 91b of the spacer member 90 from above. Thereby, the second mounting member 60 can be positioned in the vertical direction with respect to the spacer member 90. As shown in FIG. 13, at this time, the operator or the like fits the positioning convex portion 63 of the second mounting member 60 into the positioning concave portion 91a. Thereby, the second mounting member 60 can be positioned in the right-left direction with respect to the spacer member 90. Thus, the second mounting member 60 is placed on the spacer member 90 in a state where the spacer member 90 is positioned with respect to the indoor unit 20 as described above, and thus the second mounting member 60 can be positioned in the vertical direction and the right-left direction with respect to the indoor unit 20. In this state, the operator or the like fixes the second mounting member 60 to the wall surface Ws. The operator or the like fixes the second mounting member 60 to the wall surface Ws and then detach the spacer member 90 from the upper surface of the indoor unit 20.

[0117] According to the present embodiment, the discharge unit 30 including the discharge device 50 is provided outside the indoor unit 20 as a unit separate from the indoor unit 20, and the discharge unit 30 is disposed above the indoor unit 20. For this reason, the discharge unit 30 can be attached to the indoor unit 20 without changing the internal structure of the existing indoor unit 20. Thereby, the discharge unit 30 can be easily attached to any indoor unit 20 having any internal structure as long as the indoor unit 20 includes the suction port 21e that opens upward. Thus, according to the present embodiment, the discharge device 50 can be easily attached to the indoor unit 20.

[0118] Further, the discharge device 50 is disposed above the suction port 21e of the indoor unit 20, and at least a portion of the air AF suctioned into the suction port 21e passes through the discharge device 50. For this reason, the air AF can pass through the discharge device 50 by using the blower 23 of the indoor unit 20. Thereby, it is not necessary to provide the blower 23 in the discharge device 50. Thus,

the dimension of the discharge device 50 in the vertical direction can be reduced. In addition, it is possible to reduce the number of parts of the discharge device 50 and reduce the manufacturing cost of the discharge device 50.

[0119] In addition, according to the present embodiment, the discharge device 50 is driven based on a signal received from the first control unit 24 of the indoor unit 20. For this reason, the discharge device 50 can be preferably driven in accordance with driving conditions of the blower 23. Thereby, the discharge device 50 can be efficiently driven. Further, for example, unlike a case where the discharge device 50 is driven by detecting a flow of the air AF generated by the blower 23, the discharge unit 30 does not need to be provided with a sensor for detecting the flow of the air AF. For this reason, an increase in the number of parts of the discharge unit 30 can be suppressed. In addition, it is also possible to suppress the occurrence of a problem such as the discharge device 50 not being driven due to a failure of the sensor, or the like.

[0120] Further, according to the present embodiment, the discharge unit 30 includes the signal wiring 81 that electrically connects the discharge device 50 and the first control unit 24. For this reason, compared to a case where a signal of the first control unit 24 is wirelessly transmitted to the discharge unit 30, it is not necessary to provide a transmission unit and a reception unit for wireless communication, and an increase in the number of parts of the discharge unit 30 can be suppressed.

[0121] In addition, the shape of the upper surface of the indoor unit 20 varies depending on the model of the indoor unit 20. For this reason, for example, in the case of a structure in which the discharge unit 30 is attached to be placed on the upper surface of the indoor unit 20, it may be difficult to attach the discharge unit 30 depending on the shape of the upper surface of the indoor unit 20. In addition, a vibration of a motor that rotates the blower 23 of the indoor unit 20 is directly transmitted to the discharge unit 30, and there is a concern that the discharge unit 30 will generate an abnormal sound and that parts inside the discharge unit 30 will resonate.

[0122] On the other hand, according to the present embodiment, the discharge unit 30 is disposed above the indoor unit 20 at a predetermined gap G therebetween. For this reason, the discharge unit 30 can be easily attached to the indoor unit 20 regardless of the shape of the upper surface of the indoor unit 20. In addition, since the discharge unit 30 does not come into direct contact with the indoor unit 20, it is possible to prevent the vibration of the motor that rotates the blower 23 from being transmitted to the discharge unit 30. Thereby, it is possible to prevent an abnormal sound from being generated from the discharge unit 30 and prevent parts inside the discharge unit 30 from resonating. Thus, it is possible to omit evaluation of a vibration and a transmitted sound between the indoor unit 20 and the discharge unit 30, and it is easy to attach the discharge unit 30 safely without concerning the quality.

[0123] Further, according to the present embodiment, the discharge unit 30 includes the hook portion 36 and the screwing portion 32r as attachment portions to be attached to the wall surface Ws. For this reason, the discharge unit 30 can be fixed to the wall surface Ws. Thereby, the discharge unit 30 can be easily disposed at a position spaced upward from the indoor unit 20. In addition, it is easier to stably fix the discharge unit 30 than in a case where the discharge unit

30 is fixed to the indoor unit 20. For this reason, compared to a case where the discharge unit 30 is fixed to the indoor unit 20, the discharge unit 30 can be preferably prevented from falling. Thereby, it is easy to omit evaluations of fixation and falling of the discharge unit 30, and it is easier to safely attach the discharge unit 30 without concerning the quality.

[0124] Further, according to the present embodiment, the air conditioner 100 includes the first mounting member 28 which is fixed to the wall surface Ws and to which the indoor unit is attached, and the second mounting member 60 which is fixed to the wall surface Ws and to which the discharge unit 30 is attached via the hook portion 36 and the screwing portion 32r as attachment portions. The first mounting member 28 and the second mounting member 60 are separate members. For this reason, even for the indoor unit 20 that has already been attached to the wall surface Ws, the discharge unit 30 can be fixed and attached to the wall surface Ws by using the second mounting member 60. Thereby, it is easy to stably attach the discharge unit 30 to the already installed indoor unit 20 later.

[0125] Further, according to the present embodiment, the second mounting member 60 includes the plurality of engaging portions 62 provided at intervals in the right-left direction of the indoor unit 20. The attachment portion of the discharge unit 30 includes the plurality of hook portions 36 hooked on the plurality of engaging portions 62 respectively. For this reason, the discharge unit 30 can be easily attached to the second mounting member 60 by hooking the hook portions 36 on the engaging portions 62. Thereby, the discharge unit 30 can be easily fixed to the wall surface Ws. In addition, since the hook portion 36 is hooked on the engaging portion 62, it is possible to prevent the posture of the discharge unit 30 from being inclined downward. For this reason, it is possible to prevent the discharge unit 30 from coming into contact with the upper surface of the indoor unit 20. Thereby, it is possible to further prevent an abnormal sound from being generated from the discharge unit and prevent the parts inside the discharge unit 30 from resonating.

[0126] Further, according to the present embodiment, the hook portion 36 includes the support portion 36a that protrudes forward from the indoor unit 20 more than the engaging portion 62 and supports the case 31 of the discharge unit 30 from below. For this reason, the case 31 of the discharge unit 30 can be preferably supported from below by the support portion 36a. Thus, it is possible to preferably prevent the attachment position of the discharge unit 30 from deviating downward.

[0127] Further, according to the present embodiment, the attachment portion of the discharge unit 30 includes the screwing portion 32r screwed to the second mounting member 60. For this reason, the discharge unit 30 can be more firmly fixed to the second mounting member 60. Thereby, the discharge unit 30 can be more stably fixed to the wall surface Ws. In the present embodiment, the through hole 32j and the screwing portion 32r are exposed forward in a state where the discharge device cover 34 and the discharge device 50 are detached from the base member 32. For this reason, in a state where the base member 32 is attached to the second mounting member 60 by the hook portion 36, it is easy to insert a tool such as a screwdriver into the case 31 from the front to screw the screwing portion 32r.

[0128] Further, in a case where the discharge unit 30 is disposed separately above the indoor unit 20 as in the present embodiment, a suction force received by air AF from the blower 23 is reduced as the discharge unit 30 is separated above the indoor unit 20, and the flow rate of the air AF passing through the discharge unit 30 is reduced. For this reason, the amount of air AF that passes through the discharge device 50 and is cleaned per unit time is reduced. That is, the ability of the discharge unit 30 to clean the air AF is lowered. Thus, it is preferable to make the gap G between the indoor unit 20 and the discharge unit 30 as small as possible within a range in which the discharge unit 30 and the indoor unit 20 do not come into contact with each other.

[0129] On the other hand, according to the present embodiment, the air conditioner 100 includes the spacer member 90 for positioning the second mounting member 60 in the vertical direction. The spacer member 90 has the placement portion 91b on which the second mounting member 60 is placed from above. The second mounting member 60 is positioned in the vertical direction by being placed on the placement portion 91b of the spacer member 90 disposed on the upper surface of the indoor unit 20. For this reason, the second mounting member 60 can be preferably positioned at a position separated from the upper surface of the indoor unit 20 by the dimension of the spacer member 90 in the vertical direction. Thereby, it is possible to adjust the gap G between the indoor unit 20 and the discharge unit 30 attached to the second mounting member 60 by adjusting the dimension of the spacer member 90 in the vertical direction. Thus, it is easy to adjust the gap G to a suitable size, and it is possible to suppress a decrease in the flow rate of the air AF passing through the discharge device 50 while sufficiently separating the discharge unit 30 from the indoor unit 20. For this reason, it is possible to suppress a decrease in the ability of the discharge unit 30 to clean the air AF.

[0130] Specifically, the dimension H of the gap G in the vertical direction between the indoor unit 20 and the discharge unit 30 is, for example, 5 mm or more and 50 mm or less. When the dimension H is 5 mm or more, the discharge unit 30 can be preferably prevented from coming into contact with the indoor unit 20 even when the attached discharge unit 30 is slightly inclined downward due to its own weight. In addition, when the dimension H is 50 mm or less, it is possible to suppress a large decrease in the ability of the discharge unit 30 to clean the air AF. When the dimension H is 50 mm or less, a decrease in the ability of the discharge unit 30 to clean the air AF is suppressed to less than 50% as compared with a case where the dimension H is 5 mm. By setting the dimension H to 5 mm, it is possible to preferably prevent the discharge unit 30 from coming into contact with the indoor unit 20 and preferably prevent the ability of the discharge unit 30 to clean the air AF from deteriorating.

[0131] Further, according to the present embodiment, the case 31 includes the control unit cover 33 positioned above the second control unit 40, and the discharge device cover 34 positioned above the discharge device 50. The discharge device cover 34 is detachably attached. The discharge device 50 is detachably accommodated in the case 31 with the discharge device cover 34 removed. For this reason, a user or the like can detach the discharge device 50 from the discharge unit 30 by removing the discharge device cover 34 when the discharge device 50 is cleaned, or the like. Thereby, compared to a case where it is necessary to remove

both the control unit cover 33 and the discharge device cover 34 of the discharge unit 30, the user or the like can easily perform work such as cleaning the discharge device 50. In addition, the discharge device 50 can be detached with the control unit cover 33 attached. For this reason, when the user or the like detaches the discharge device 50, it is possible to prevent the user or the like from coming into contact with the second control unit 40.

[0132] Further, according to the present embodiment, the discharge device cover 34 includes the protruding portion 34d that presses the discharge device 50 from above and from the front (+X direction). For this reason, for example, when the discharge device cover 34 is inserted from the front to the rear (-X direction) with the discharge device 50 being inclined with respect to the base member 32 as shown in FIG. 15, a rearward force and a downward force can be applied to the discharge device 50 by the protruding portion 34d. Thereby, it is easy to correct the posture of the discharge device 50 with respect to the base member 32 to the correct posture by the protruding portion 34d. In the example of FIG. 15, a corner portion at which the inclined wall portion 52b and the front wall portion 52c are connected is pressed rearward and downward by the inclined surface 34e of the protruding portion 34d, thereby correcting the posture of the discharge device 50 to the correct posture.

[0133] For this reason, even when the discharge device 50 is disposed in a slightly inclined state when the discharge device 50 is disposed on the base member 32, the user or the like can correctly attach the discharge device 50 to the inside of the case 31 by attaching the discharge device cover 34. For this reason, it is possible to easily and preferably perform the work of attaching the discharge device 50 to the inside of the case 31. Thereby, it is possible to prevent the discharge device 50 from being electrically disconnected from the second control unit 40. Thus, it is possible to prevent an abnormal sound from being generated due to electric leakage, noise, and short-gap discharge caused by electrical disconnection between the discharge device 50 and the second control unit 40.

[0134] Further, according to the present embodiment, the discharge device 50 is an electric dust collector including the discharge portion 50a and the dust collecting portion 50b. For this reason, a user or the like can purify the indoor air AF by the discharge device 50 by attaching the discharge unit 30 to the existing indoor unit 20 later.

[0135] Further, according to the present embodiment, the discharge unit 30 includes the pre-filter 35 that is positioned above the discharge device 50. For this reason, the pre-filter 35 can catch relatively large dust such as fibers mixed in the air AF before passing through the discharge device 50. Thereby, it is possible to prevent the discharge device 50 from being clogged with dust.

[0136] Further, according to the present embodiment, in the right-left direction of the indoor unit 20, the center of the discharge unit 30 is disposed to be shifted to one side with respect to the center of the indoor unit 20 in the right-left direction, that is, the left side (+Y side) in the present embodiment. For this reason, for example, a portion of the discharge unit 30 through which the air AF cannot pass is disposed above a portion of the indoor unit 20 through which the air AF cannot pass, and thus it is possible to prevent the discharge unit 30 from blocking a portion of the suction port 21e. Thereby, it is possible to efficiently make the discharge unit 30 pass through the air AF while suppressing a decrease

in the amount of the air AF suctioned into the indoor unit 20. Further, in a case where the indoor unit 20 and the discharge unit 30 are connected by the signal wiring 81 as in the present embodiment, it is possible to make it easy to electrically connect the indoor unit 20 and the discharge unit 30 at an end portion on the same side in the right-left direction. Thereby, it is possible to facilitate the work of connecting the indoor unit 20 and the discharge unit 30 via the signal wiring 81. In addition, since the signal wiring 81 can be easily shortened, it is possible to prevent the signal wiring 81 from becoming an obstacle. In addition, since it is not necessary to align the dimension of the discharge unit 30 in the right-left direction with the dimension of the indoor unit 20 in the right-left direction, the discharge unit 30 can be easily attached to a plurality of types of indoor units 20 having different dimensions in the right-left direction.

[0137] Further, according to the present embodiment, the dimension of the discharge unit 30 in the right-left direction is smaller than the dimension of the indoor unit 20 in the right-left direction. For this reason, the discharge unit 30 can be disposed to be shifted in the right-left direction with respect to the indoor unit 20 in a state where the discharge unit 30 does not protrude in the right-left direction with respect to the indoor unit 20. Thereby, it is possible to prevent the discharge unit 30 from interfering with an indoor wall or the like. Further, for example, by making the dimension of the discharge unit 30 in the right-left direction smaller than any dimension of the existing indoor unit 20 in the right-left direction, it is possible to prevent the discharge unit 30 from protruding more in the right-left direction than the indoor unit 20 even when the discharge unit 30 is attached to any type of existing indoor unit 20.

[0138] Further, according to the present embodiment, the left-side (+Y side) end portion of the discharge unit 30 is disposed at the same position in the right-left direction as the left-side end portion of the indoor unit 20. For this reason, the discharge unit 30 does not protrude in the right-left direction with respect to the indoor unit 20, and it is possible to preferably prevent the discharge unit 30 from interfering with the indoor wall or the like. Further, for example, as compared with a case where the left-side end portion of the discharge unit 30 is positioned on the right side (-Y side) of the left-side end portion of the indoor unit 20, a portion of the discharge unit 30 through which the air AF cannot pass can be easily disposed to be superimposed above a portion of the indoor unit 20 through which the air AF cannot pass.

[0139] Further, according to the present embodiment, the first control unit 24 of the indoor unit 20 is positioned on the left side (+Y side) of the heat exchanger 22 and the blower 23 inside the indoor unit housing 21. The second control unit 40 of the discharge unit 30 is positioned on the left side of the discharge device 50. That is, the control units of the indoor unit 20 and the discharge unit 30 are disposed on a side where the discharge unit 30 is shifted with respect to the indoor unit 20. For this reason, it is easy to dispose the second control unit 40 of the discharge unit 30 above the first control unit 24 of the indoor unit 20. In the present embodiment, at least a portion of the second control unit 40 is disposed to be superimposed above the first control unit 24. Air AF cannot pass through each control unit in the vertical direction. For this reason, by disposing at least a portion of the second control unit 40 to be superimposed above the first control unit 24, a portion of the discharge unit 30 through which the air AF cannot pass can be preferably

disposed above a portion of the indoor unit 20 through which the air AF cannot pass. In addition, the first control unit 24 and the second control unit 40 can be disposed at positions close to each other in the right-left direction, and the first control unit 24 and the second control unit 40 can be easily connected to each other by the signal wiring 81.

[0140] In addition, according to the present embodiment, the left-side (+Y side) end portion of the case 31 is provided with the lead-out hole 32_p through which the signal wiring 81 is led out. The left-side portion of the first control unit 24 is provided with the connection portion 24_a to which the signal wiring 81 is connected. For this reason, it is possible to make it easier to connect the signal wiring 81 led out from the discharge unit 30 to the first control unit 24.

[0141] Further, according to the present embodiment, the discharge unit 30 includes the power supply wiring 82 connected to a power supply different from that of the indoor unit 20. For this reason, in a case where the discharge unit 30 is attached to the indoor unit 20, it is not necessary to supply a portion of power supplied to the indoor unit 20 to the discharge unit 30. Thereby, in a case where the discharge unit 30 is attached, it is not necessary to change a power supply system in the indoor unit 20, or the like. Thus, the discharge device 50 can be attached to the indoor unit 20 more easily.

[0142] Further, according to the present embodiment, the power supply wiring 82 is led out from the lead-out hole 32_p through which the signal wiring 81 is led out. For this reason, in a case where the power supply wiring 82 is led out to the outside of the discharge unit 30, it is not necessary to provide a separate lead-out hole, and the number of holes provided in the case 31 of the discharge unit 30 can be reduced. In addition, it is easy to collectively manage wirings led out from the discharge unit 30.

[0143] Further, according to the present embodiment, the power supply wiring 82 is connected to the second control unit 40 from the left side (+Y side). For this reason, as compared to a case where the power supply wiring 82 is connected to the second control unit from the rear side (-X side), the power supply wiring 82 is less likely to interfere with the wall surface Ws, and the work of connecting the power supply wiring 82 to the second control unit 40 can be easily performed.

[0144] Further, according to the present embodiment, a portion of the signal wiring 81 and a portion of the power supply wiring 82 pass between the indoor unit 20 and the wall surface Ws. For this reason, a portion of the signal wiring 81 and a portion of the power supply wiring 82 can be covered with the indoor unit 20 so as not to be seen from the front. Thereby, as compared with a case where the signal wiring 81 and the power supply wiring 82 are exposed along the side surface of the indoor unit 20, the appearance seen from a user or the like can be improved.

[0145] Further, according to the present embodiment, the hook portion 36 is disposed to fit within the dimensions of the case 31 in the vertical direction. For this reason, even when the hook portion 36 is provided, it is possible to suppress an increase in the size of the discharge unit 30. Thereby, it is easy to pack the discharge unit 30 before it is attached to the indoor unit 20. In addition, the engaging portion 62 on which the hook portion 36 is hooked is disposed to fit within the dimensions of the back plate portion 61 in the vertical direction. For this reason, the position in the vertical direction where the hook portion 36

is hooked can be easily set near the center of the back plate portion **61** in the vertical direction. Thereby, it is possible to suppress an increase in the size of the second mounting member **60** in the vertical direction. Thus, a dimension in the vertical direction required for attaching the discharge unit **30** to the wall surface *Ws* can be reduced. For this reason, even when a distance between the indoor unit **20** and the ceiling is relatively small, it is easy to dispose the discharge unit **30** above the indoor unit **20**.

[0146] Although the embodiment of the present disclosure has been described above, the present disclosure is not limited to only the configurations of the above-described embodiment, and the following configurations and methods can also be adopted.

[0147] A discharge unit may be fixed to the upper surface of an indoor unit. The dimension of the discharge unit in the right-left direction is not particularly limited. The dimension of the discharge unit in the right-left direction may be larger than the dimension of the indoor unit in the right-left direction, or may be the same as the dimension of the indoor unit in the right-left direction. The discharge device may be any device as long as it performs discharge. The discharge device may be an ozone generator.

[0148] The discharge device may be connected to the indoor unit in any way as long as it is driven based on a signal received from a first control unit of the indoor unit. The discharge device may wirelessly receive a signal from the first control unit of the indoor unit and be driven based on the received signal. In this case, the discharge unit includes a terminal to which a wireless adapter is connected. According to this configuration, it is not necessary to perform the work of connecting a signal wiring. For this reason, the discharge unit can be attached to the indoor unit more easily. The discharge device may be driven independently of the signal received from the first control unit of the indoor unit. In this case, the discharge device may be driven, for example, based on a detector that detects air suctioned into a suction port.

[0149] A mounting member to which an attachment portion of the discharge unit is attached, that is, the second mounting member **60** in the above-described embodiment, may be provided in the discharge unit. For example, the indoor unit and the discharge unit may be fixed to a wall surface by one mounting member, or may be fixed directly to the wall surface.

[0150] The configurations and methods described above in this specification can be appropriately combined as long as they do not contradict each other.

1. An air conditioner comprising:
 - a wall-mounted indoor unit which includes a heat exchanger, a blower, a first control unit, and a housing that accommodates the heat exchanger, the blower, and the first control unit therein, and which is fixed to a wall surface; and
 - a discharge unit which is disposed above the indoor unit outside the indoor unit, wherein the housing includes a suction port that opens upward, the discharge unit includes
 - a discharge device disposed above the suction port,
 - a second control unit that controls the discharge device, and
 - a case that accommodates the discharge device and the second control unit therein,

- a center of the discharge unit in a right-left direction of the indoor unit is disposed to be shifted to one side in the right-left direction with respect to a center of the indoor unit,

- a dimension of the discharge unit in the right-left direction is smaller than a dimension of the indoor unit in the right-left direction,

- the first control unit is positioned on the one side with respect to the heat exchanger and the blower inside the housing,

- the second control unit is positioned on the one side with respect to the discharge device inside the case, and at least a portion of the second control unit is disposed to be superimposed above the first control unit,

the case includes

- a first ventilation hole provided in a portion out of a wall portion of the case on an upper side, the portion being positioned above the discharge device, and

- a second ventilation hole provided in a portion out of a wall portion of the case on a lower side, the portion being positioned below the discharge device, and

- at least a portion of air that has flowed into the case through the first ventilation hole from above the discharge unit passes through the discharge device in a vertical direction, and air that has passed through the discharge device in the vertical direction is discharged below the discharge unit through the second ventilation hole and suctioned into the suction port.

2. (canceled)

3. The air conditioner according to claim **1**, wherein an end portion of the discharge unit on the one side is disposed at the same position in the right-left direction as an end portion of the indoor unit on the one side.

4. (canceled)

5. (canceled)

6. The air conditioner according to claim **1**, wherein the discharge device is driven based on a signal received from the first control unit.

7. The air conditioner according to claim **6**, wherein the discharge unit includes

- a signal wiring that electrically connects the discharge device and the first control unit,

- an end portion of the case on the one side is provided with a lead-out hole through which the signal wiring is led out, and

- a portion of the first control unit on the one side is provided with a connection portion to which the signal wiring is connected.

8. The air conditioner according to claim **7**, wherein the discharge unit includes a power supply wiring connected to a power source separate from the indoor unit.

9. The air conditioner according to claim **8**, wherein the power supply wiring is led out from the lead-out hole.

10. (canceled)

11. (canceled)

12. The air conditioner according to claim **6**, wherein the discharge unit includes a terminal to which a wireless adapter is connected.

13. The air conditioner according to claim **8**, wherein the power supply wiring is connected to the second control unit from the one side.

14. The air conditioner according to claim **9**, wherein the power supply wiring is connected to the second control unit from the one side.

15. The air conditioner according to claim **8**, wherein a portion of the signal wiring and a portion of the power supply wiring pass between the indoor unit and the wall surface.

16. The air conditioner according to claim **9**, wherein a portion of the signal wiring and a portion of the power supply wiring pass between the indoor unit and the wall surface.

17. The air conditioner according to claim **13**, wherein a portion of the signal wiring and a portion of the power supply wiring pass between the indoor unit and the wall surface.

18. The air conditioner according to claim **14**, wherein a portion of the signal wiring and a portion of the power supply wiring pass between the indoor unit and the wall surface.

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