

DESCRIPTION

OUTDOOR UNIT OF AIR CONDITIONER

5 Field

[0001] The present invention relates to an outdoor unit of an air conditioner.

Background

10 [0002] A conventional outdoor unit of an air conditioner is configured to include an air blower compartment in which an air blower fan is disposed, a machine compartment in which a compressor unit, a refrigerant pipe group, and an electrical-part storage are disposed, and a partition plate
15 that separates the air blower compartment and the machine compartment. When a function is to be added to the outdoor unit configured as described above or when the outdoor unit configured as described above controls greater performance than that of a conventional outdoor unit, it is necessary
20 to install additional parts corresponding to the additional function or the performance. In order to ensure the space for the additional parts as described above to be installed, it is necessary to increase the size of the control board or add an auxiliary board separate from the control board.
25 In the case where the size of the control board is increased, it is necessary to change peripheral parts around the control board, such as a side plate, a top plate, and a casing that constitute the outdoor unit. This means that these parts cannot be standardized and thus the
30 productivity and serviceability degrade.

[0003] In order to solve the problems as described above, the structure of a conventional outdoor unit is disclosed in Patent Literature 1 listed below in which a protective

cover that covers the control board is provided from the viewpoint of protecting workers, and an auxiliary board on which control elements are mounted is attached to the outer surface of the protective cover.

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Citation List

Patent Literature

[0004] Patent Literature 1: Japanese Patent Application Laid-open No. 2007-127380

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Summary

Technical Problem

[0005] In the conventional technique disclosed in Patent Literature 1 listed above, an electrical-part storage is disposed in a machine compartment, and further the electrical-part storage is disposed so as to extend in the vertical direction of the casing. Therefore, there is no problem with the workability of wiring between the control board and the auxiliary board. However, when the conventional technique described above is applied to a general outdoor unit that uses an electrical-part storage that extends in the horizontal direction of the casing of the outdoor unit so as to extend across the machine compartment and the air blower compartment, the auxiliary board is located on the lower surface side of a protective cover that covers the control board. That is, the auxiliary board is located on the lower surface side of the control board in such a manner that electrical parts installed on the control board are opposed to the electrical parts installed on the auxiliary board. Therefore, there is almost no wiring space between the control board and the auxiliary board. This degrades the workability of various types of wiring within the machine

compartment. Further, because it is difficult to visually recognize the wiring locations, this may cause faulty wiring. There is also a problem in that the serviceability with regard to board replacement is degraded.

5 [0006] The present invention has been achieved to solve the above problems, and an object of the present invention is to provide an outdoor unit of an air conditioner that can achieve further improvement in the productivity and serviceability.

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Solution to Problem

[0007] In order to solve the above problems and achieve the object, an aspect of the present invention is an outdoor unit of an air conditioner, including: a partition
15 plate that separates a machine compartment and an air blower compartment; an electrical-part storage that is disposed so as to extend from the machine compartment side of the partition plate to the air blower compartment side of the partition plate, and that stores therein an
20 electrical part; a board that is disposed in the machine compartment and on which an electrical part that is other than the electrical part installed in the electrical-part storage, is installed; and a board fixing portion that is interposed between the electrical-part storage located in
25 the machine compartment and the board to fix the board thereto.

Advantageous Effects of Invention

[0008] According to the present invention, further
30 improvement in the productivity and serviceability can be achieved.

Brief Description of Drawings

[0009] FIG. 1 is an exterior perspective view of an outdoor unit of an air conditioner according to an embodiment of the present invention.

FIG. 2 is an exploded perspective view of the outdoor unit illustrated in FIG. 1.

FIG. 3 is an interior perspective view of the outdoor unit with a board fixing portion attached to an electrical-part storage.

FIG. 4 is a front view of the outdoor unit illustrated in FIG. 3.

FIG. 5 is a perspective view of the electrical-part storage before it is attached to a main body of the outdoor unit, and a part fixing member and a board fixing member that are attached to the electrical-part storage.

FIG. 6 is a perspective view of members and parts to be attached to the electrical-part storage.

FIG. 7 is a perspective view of the board fixing member before it is attached to the electrical-part storage, and an auxiliary board before it is attached to the board fixing member.

FIG. 8 is a perspective view of the board fixing member before it is attached to the electrical-part storage.

FIG. 9 is a perspective view of the part fixing member with a terminal block attached thereto.

FIG. 10 is a perspective view of the board fixing member as viewed from an outdoor-unit side surface side.

FIG. 11 is a perspective view of the board fixing member as viewed from the side opposite to the outdoor-unit side plate.

FIG. 12 is a perspective view of the board fixing member in a state of being fixed to the part fixing member.

FIG. 13 is a partially enlarged view of FIG. 5.

FIG. 14 is a diagram of the board fixing member and

the part fixing member illustrated in FIG. 13 as viewed from the outdoor-unit side plate side.

Description of Embodiments

5 [0010] Exemplary embodiments of an outdoor unit of an air conditioner according to the present invention will be explained below in detail with reference to the accompanying drawings. The present invention is not limited to the embodiments.

10 [0011] Embodiment.

FIG. 1 is an exterior perspective view of an outdoor unit 100 of an air conditioner according to an embodiment of the present invention. FIG. 2 is an exploded perspective view of the outdoor unit 100 illustrated in FIG. 1. FIG. 3 is an interior perspective view of the outdoor unit 100 with a board fixing portion 30 attached to an electrical-part storage 16. FIG. 4 is an interior front view of the outdoor unit 100 illustrated in FIG. 3. FIG. 5 is a perspective view of the electrical-part storage 16 before it is attached to the main body of the outdoor unit, and a part fixing member 18 and a board fixing member 21 that are attached to the electrical-part storage 16. FIG. 6 is a perspective view of members and parts to be attached to the electrical-part storage 16. FIG. 7 is a perspective view of the board fixing member 21 before it is attached to the electrical-part storage 16, and an auxiliary board 20 before it is attached to the board fixing member 21. FIG. 8 is a perspective view of the board fixing member 21 before it is attached to the electrical-part storage 16.

30 [0012] As illustrated in FIGS. 1 and 2, the outdoor unit 100 is covered with a front plate 1, an outdoor-unit side plate 2, and a top plate 3 that constitute the outer casing of the outdoor unit 100. The outdoor-unit side plate 2 is

formed into an L-shaped cross section so as to cover the side surface of a machine compartment 6 and a part of the back surface of the machine compartment 6. The outdoor-unit side plate 2 is formed with an opening 2a for

5 electrical wiring. A protective cover 4 is disposed on the outdoor-unit side plate 2 so as to cover this opening 2a. The interior of the outdoor unit 100 is divided into an air blower compartment 5 and the machine compartment 6.

Specifically, a partition plate 7 is provided to stand
10 vertically on the upper surface of a bottom plate 9 having leg portions 8. The interior of the outdoor unit 100 is divided by the partition plate 7 serving as the border into the air blower compartment 5 on one side of the partition plate 7 and the machine compartment 6 on the other side of
15 the partition plate 7. Each of the parts within the outdoor unit 100 is held on the upper surface of the bottom plate 9.

[0013] In the machine compartment 6, a compressor unit 14, the part fixing member 18, the board fixing member 21,
20 the auxiliary board 20, a refrigerant pipe 15, and the compressor unit 14 are installed. In the air blower compartment 5, a heat exchanger 10, a motor mounting table 13, which holds a motor 12, and a propeller fan 11, which is fixed to the rotary shaft of the motor 12, are installed.

25 [0014] As illustrated in FIGS. 4 to 6, the electrical-part storage 16 is configured from a board attachment portion 16b, a bottom plate 16c, a frame body 16d, and a fixing-member installation portion 16a, for example. The board attachment portion 16b is formed into a frame shape.
30 For example, the board attachment portion 16b is disposed such that it extends in the horizontal direction of the casing of the outdoor unit 100 so as to extend across the machine compartment and the air blower compartment at the

top end of the partition plate 7. A control board 17 is attached to the inner peripheral portion of the board attachment portion 16b.

[0015] Various types of electrical parts 17a for
5 controlling a compressor (not illustrated) of the compressor unit 14 and for controlling the motor 12 are mounted on the control board 17, for example. On the control board 17, a radiator 31, which cools the electrical parts 17a, is disposed such that it is located on the air
10 blower compartment 5 side. On the auxiliary board 20, parts for suppressing noise generated by the electrical parts provided on the control board 17, and parts required for adding an additional function such as a communication function are mounted.

15 [0016] The bottom plate 16c is attached to the section of the board attachment portion 16b on the top plate 3 side (see FIG. 2), and is interposed between the top plate 3 and the control board 17. The frame body 16d is attached to the section of the board attachment portion 16b on the side
20 opposite to the top plate 3, and is formed to surround the periphery of the radiator 31. Providing the frame body 16d can prevent dust and small animals that are in the air blower compartment 5 from entering the control board 17 from the gap between the board attachment portion 16b and
25 the radiator 31.

[0017] The fixing-member installation portion 16a is formed in such a manner that its end at the section of the board attachment portion 16b located in the machine compartment 6, where the section is opposed to the outdoor-
30 unit side plate 2, is integral with the board attachment portion 16b, and the fixing-member installation portion 16a bends downward from the board attachment portion 16b. Between the auxiliary board 20 and an end portion 16a1 of

the fixing-member installation portion 16a on the outdoor-unit side plate 2 side, a board fixing portion 30 for fixing the auxiliary board 20 thereto is installed in such a manner that electrical parts 20a installed on the auxiliary board 20 are disposed opposed to the partition plate 7. For example, the board fixing portion 30 includes the part fixing member 18 and the board fixing member 21.

[0018] FIG. 6 illustrates an example of members and parts to be attached to the electrical-part storage 16.

10 The control board 17 is attached to the inner peripheral portion of the board attachment portion 16b. The bottom plate 16c is attached to the section of the board attachment portion 16b on the top plate 3 side. The frame body 16d is attached to the section of the board attachment portion 16b on the side opposite to the top plate 3.

Providing the frame body 16d can prevent dust and small animals that are present in the air blower compartment 5 from entering the control board 17 from the gap between the board attachment portion 16b and the radiator 31. As

20 illustrated in FIGS. 7 and 8, the auxiliary board 20 is attached to the board fixing member 21. The board fixing member 21 having the auxiliary board 20 attached thereto is attached to the part fixing member 18 by sliding it in the arrow direction illustrated in FIG. 8, that is, downwardly from above the part fixing member 18. The board fixing member 21 is disposed on the surface of the part fixing member 18 opposite to the surface on which a terminal block 19 is installed.

[0019] Next, configurations of the part fixing member 18 and the board fixing member 21 are specifically described with reference to FIGS. 9 to 14. FIG. 9 is a perspective view of the part fixing member 18 with the terminal block 19 attached thereto. FIG. 10 is a perspective view of the

board fixing member 21 as viewed from the outdoor-unit side plate 2 side. FIG. 11 is a perspective view of the board fixing member 21 as viewed from the side opposite to the outdoor-unit side plate 2. FIG. 12 is a perspective view of the board fixing member 21 in a state of being fixed to the part fixing member 18. FIG. 13 is a partially enlarged view of FIG. 5. FIG. 14 is a diagram of the board fixing member 21 and the part fixing member 18 illustrated in FIG. 13 as viewed from the outdoor-unit side plate 2 side.

10 [0020] As illustrated in FIG. 9, the part fixing member 18 is formed into a rectangular U-shaped cross section by bending both ends of a metallic plate member, for example. The part fixing member 18 is configured to include a part-installation surface 18f on which the terminal block 19 and
15 the board fixing member 21 are installed, and guide surfaces 18e that are formed at both ends of the part-installation surface 18f and that come in contact with guide pieces 21a of the board fixing member 21 (see FIG. 10).

20 [0021] In the part-installation surface 18f, two openings 18a and one screw hole 18b are formed. Each of the openings 18a is formed in such a manner that a catch 21b (see FIG. 10) of a fixing member 21j of the board fixing member 21 is engaged with the opening 18a.

25 [0022] The screw hole 18b is formed in such a manner that it communicates with a screw hole 21c of the board fixing member 21 when the catches 21b of the board fixing member 21 are engaged with the openings 18a. A screw 23 (see FIG. 12) is inserted into the screw hole 18b from the
30 outdoor-unit side plate 2 side of the part-installation surface 18f.

[0023] The two guide surfaces 18e are provided with respective seat portions 18g at the ends of the guide

surfaces 18e on the electrical-part storage side. The seat portions 18g are provided to fix the part fixing member 18 to the end portion 16a1 (see FIG. 12) of the fixing-member installation portion 16a. A screw hole 18c is formed in each of the seat portions 18g. Screws 24 (see FIG. 12) for fixing the seat portions 18g to the end portion 16a1 of the fixing-member installation portion 16a are inserted into the screw holes 18c.

[0024] The part-installation surface 18f of the part fixing member 18 is inclined in such a manner that the width between the outdoor-unit side plate 2 (see FIG. 2) and the part-installation surface 18f is reduced from the electrical-part storage 16 side toward the side opposite to the electrical-part storage 16. The terminal block 19 is screwed onto the part-installation surface 18f. For example, the terminal block 19 is provided to connect wires that electrically connect the outdoor unit 100 with an indoor unit (not illustrated).

[0025] As illustrated in FIG. 10, a counter-partition-plate-side surface 21h of the board fixing member 21 is formed with the fixing member 21j for fixing the board fixing member 21 to the part fixing member 18, a connector fixing portion 21g for fixing a lead connector 22 (see FIG. 13) to the board fixing member 21, and stoppers 21e that are located below the connector fixing portion 21g to restricts the downward movement of the lead connector 22. The board fixing member 21 is made of insulating resin, for example, in order to provide electrical insulation between the part fixing member 18 and the auxiliary board 20.

[0026] The fixing member 21j is formed into a convex shape projecting from the counter-partition-plate-side surface 21h toward the outdoor-unit side plate 2. At the end portion of the fixing member 21j, contact surfaces 21m,

which come in contact with the part-installation surface 18f of the part fixing member 18, and two guide pieces 21a are formed. Each of the guide pieces 21a regulates the lateral positional displacement of the board fixing member 21 relative to the part fixing member 18 when the board fixing member 21 is attached to the part fixing member 18 by sliding it downward from above the part fixing member 18. The guide pieces 21a are formed such that they come into contact with the two guide surfaces 18e of the part fixing member 18.

[0027] As illustrated in FIG. 11, a partition-plate-side surface 21i of the board fixing member 21 is formed with a surrounding wall 21k, which is formed so as to surround the periphery of the partition-plate-side surface 21i, and a plurality of catches 21f, which are provided on the inner peripheral side of the surrounding wall 21k to fix the auxiliary board 20 (see FIG. 4) to the board fixing member 21. The auxiliary board 20 is combined with the board fixing member 21 on the inner peripheral side of the surrounding wall 21k such that the outer peripheral portion of the auxiliary board 20 is engaged with the catches 21f. With this configuration, the auxiliary board 20 is fixed to the board fixing member 21.

[0028] FIG. 12 illustrates the board fixing member 21 in a state of being fixed to the part fixing member 18. As illustrated in the example, in a case of fixing the board fixing member 21 to the part fixing member 18, the electrical-part storage 16 is first installed in such a manner that the end portion 16a1 of the fixing-member installation portion 16a is directed upward, and then the part fixing member 18 is fixed to the end portion 16a1 by the screws 24 (see FIG. 8). Next, the board fixing member 21 is attached to the part fixing member 18 in a downwardly

sliding manner from above the part fixing member 18 in such a manner that the guide pieces 21a of the board fixing member 21 come into contact with the guide surfaces 18e of the part fixing member 18. Upon insertion of the catches
5 21b of the board fixing member 21 into the openings 18a of the part fixing member 18, the board fixing member 21 is temporarily fixed to the part fixing member 18. This brings the board fixing member 21 to a state where it is not removed from the part fixing member 18 even when the
10 board fixing member 21 is released from worker's hands. Therefore, fixing of the board fixing member 21 to the part fixing member 18 with the screw 23 can be performed more efficiently.

[0029] After the board fixing member 21 is fixed in the
15 manner as described above, the electrical-part storage 16 that has been inverted to direct the end portion 16a1 of the fixing-member installation portion 16a downward as illustrated in FIGS. 13 and 14 is disposed in the main body of the outdoor unit, for example, at the top end of the
20 partition plate 7 in FIG. 4. Thereafter, the lead connector 22 is fixed in such a manner as to be engaged with the catches 21f of the connector fixing portion 21g. This can simplify wiring of the leads connected to the lead connector 22, and also can prevent degradation in the
25 wiring workability as well as faulty wiring. Further, even when a load is applied to the leads in the direction of their own weight, that is, in the X-direction in FIG. 14, the lead connector 22 is still caught by the stoppers 21e disposed below the connector fixing portion 21g. This can
30 prevent the lead connector 22 from coming away from the connector fixing portion 21g.

[0030] Further, the terminal block 19 is installed on the outdoor-unit side plate 2 side of the part-installation

surface 18f, that is, on an opposed surface 18d side to the outdoor-unit side plate 2. Therefore, as compared to the case, for example, where the terminal block 19 is installed between the auxiliary board 20 and the control board 17, the number of wires that are present in an empty space between the auxiliary board 20 and the control board 17 is reduced. This can simplify the wiring.

[0031] As described above, because the part-installation surface 18f is inclined, the terminal block 19 is fixed to the part-installation surface 18f with its front surface positioned obliquely upward. Therefore, the connection point of the leads to the terminal block 19 can be easily identified, and thus the workability of wiring to the terminal block 19 is improved and faulty wiring can be prevented.

[0032] Next, an operation of the outdoor unit 100 is described. When an operation command is transmitted from an indoor unit (not illustrated) to the control board 17 of the outdoor unit 100, the control board 17 that has received the operation command controls the compressor unit 14 at an appropriate rotation speed. When the compressor unit 14 starts operating, a refrigerant circulates in the heat exchanger 10. Heat is exchanged between the refrigerant and the air around the heat exchanger 10. At this time, the control board 17 also controls rotations of the motor 12. A negative pressure is generated by rotations of the propeller fan 11 attached to the motor 12, and the air at the side and back of the outdoor unit is introduced into the air blower compartment 5. An air flow generated at this time passes through the heat exchanger 10, which promotes the heat exchange. Heat generated from the parts provided on the control board 17 is radiated into the air blower compartment 5 via the heat radiator 31. Heat

radiation is promoted by an air flow that passes through the air blower compartment 5. The air flow introduced into the air blower compartment 5 is led to the air outlet of the front plate 1 to flow to the outside of the outdoor unit 100.

[0033] In the present embodiment, the part fixing member 18 is made of metal. By making the part fixing member 18 of metal, for example, even when a cable (not illustrated) wired to the opposite side of the part fixing member 18 to the electrical-part storage side catches fire, the fire can be prevented from spreading to the control board 17 because the part fixing member 18 is flame retardant. Also in a case where the part fixing member 18 is made of a material other than metal, for example, the same material as that of the board fixing member 21 or the electrical-part storage 16, the workability of various types of wiring within the machine compartment 6, and the serviceability with regard to board replacement are improved as compared to the conventional technique described above, because the auxiliary board 20 is disposed on the partition-plate-side surface 21i (see FIG. 11) of the board fixing member 21.

[0034] In the present embodiment, the board fixing member 21 includes the guide pieces 21a. Therefore, the work efficiency when the board fixing member 21 is fixed to the part fixing member 18 can be improved. Even when the guide pieces 21a are not formed on the board fixing member 21, the board fixing member 21 can still be fixed to the part fixing member 18. Therefore, the auxiliary board 20 can be installed in such a manner as to efficiently use the empty space of the machine compartment 6.

[0035] The board fixing portion 30 in the present embodiment includes the part fixing member 18 and the board fixing member 21. However, for example, it suffices that

the part fixing member 18 and the board fixing member 21 are molded integrally from the same material as the electrical-part storage 16, such as metal or resin, into a single member, and this member is used as the board fixing portion 30. In the case where the board fixing portion 30 is configured as described above, a wiring space is also ensured between the control board 17 and the auxiliary board 20. This can prevent degradation in the wiring workability as well as faulty wiring.

10 [0036] In the electrical-part storage 16 in the illustrated example, the board attachment portion 16b, to which the control board 17 is attached, and the fixing-member installation portion 16a, on which the board fixing portion 30 is mounted, are formed integrally. However, it suffices that the board attachment portion 16b and the fixing-member installation portion 16a are separately manufactured and these portions are combined together as the electrical-part storage 16. Even in the case where the electrical-part storage 16 is configured as described above, it is still possible to fix the board fixing portion 30 to the electrical-part storage 16. However, as illustrated in the example, when the electrical-part storage 16 is integrally formed of a resin material, the manufacturing costs can be reduced as compared to the case where the board attachment portion 16b and the fixing-member installation portion 16a are separately manufactured.

25 [0037] As described above, the outdoor unit 100 of an air conditioner according to the present embodiment includes the partition plate 7 that separates the machine compartment 6 and the air blower compartment 5; the electrical-part storage 16 that is disposed so as to extend from the machine compartment 6 side of the partition plate 7 to the air blower compartment 5 side of the partition

plate 7 and that stores therein the electrical parts 17a;
the auxiliary board 20 that is disposed in the machine
compartment 6 and that is a board on which the electrical
parts 20a other than the electrical parts 17a installed in
5 the electrical-part storage 16 are installed; and the board
fixing portion 30 that is interposed between the
electrical-part storage 16 located in the machine
compartment 6 and the auxiliary board 20 to fix the
auxiliary board 20 thereto. In the above conventional
10 technique, an auxiliary board is located on the lower
surface side of a protective cover that covers a control
board. That is, the electrical parts installed on the
auxiliary board are disposed so as to be opposed to the
electrical parts installed on the control board. Therefore,
15 there is almost no wiring space between the control board
and the auxiliary board. This degrades the workability of
various types of wiring within the machine compartment.
Further, because it is difficult to visually recognize the
wiring locations, this may cause faulty wiring.
20 Furthermore, there is a problem in that the serviceability
with regard to board replacement is degraded. In contrast
thereto, in the outdoor unit 100 according to the present
embodiment, the auxiliary board 20 can be fixed in such a
manner that the electrical parts 20a are disposed to be
25 opposed to the partition plate 7. Therefore, without
changing the size of the control board 17, the wiring space
can be ensured between the control board 17 and the
auxiliary board 20. This can prevent degradation in the
wiring workability as well as faulty wiring.
30 [0038] Further, the peripheral parts around the control
board and the conventional parts can be common parts, and
therefore the outdoor unit of an air conditioner with high
serviceability can be obtained. There is no need to

increase the size of the control board 17 and the peripheral parts around the control board 17 can be standardized. Accordingly, not only the manufacturing yield of the constituent parts of the outdoor unit 100 is improved, but also a reduction in volume of the raw materials of these constituent parts and a reduction in amount of packaging can both be achieved. Furthermore, the transport efficiency of these constituent parts or the completed outdoor unit 100 can be improved.

10 [0039] The configuration described in the above embodiment is only an example of the configuration of the present invention. The configuration can be combined with other publicly known techniques, and it is needless to mention that the present invention can be configured while
15 modifying it without departing from the scope of the invention, such as omitting a part of the configuration.

Industrial Applicability

[0040] As described above, the present invention can be
20 applicable to an outdoor unit of an air conditioner, and is particularly useful as an invention that can achieve further improvement in the productivity and serviceability.

Reference Signs List

25 [0041] 1 front plate, 2 outdoor-unit side plate, 2a opening, 3 top plate, 4 protective cover, 5 air blower compartment, 6 machine compartment, 7 partition plate, 8 leg portion, 9 bottom plate, 10 heat exchanger, 11 propeller fan, 12 motor, 13 motor mounting table, 14
30 compressor unit, 15 refrigerant pipe, 16 electrical-part storage, 16a fixing-member installation portion, 16a1 end portion, 16b board attachment portion, 16c bottom plate, 16d frame body, 17 control board, 17a electrical part,

18 part fixing member, 18a opening, 18b screw hole, 18c
screw hole, 18d opposed surface, 18e guide surface, 18f
part-installation surface, 18g seat portion, 19 terminal
block, 20 auxiliary board, 20a electrical part, 21 board
5 fixing member, 21a guide piece, 21b catch, 21c screw
hole, 21d catch, 21e stopper, 21f catch, 21g connector
fixing portion, 21h counter-partition-plate-side surface,
21i partition-plate-side surface, 21j fixing member, 21k
surrounding wall, 21m contact surface, 22 lead connector,
10 23, 24 screw, 30 board fixing portion, 31 radiator, 100
outdoor unit.

CLAIMS

1. An outdoor unit of an air conditioner, comprising:
 - a partition plate that separates a machine compartment and an air blower compartment;
 - 5 an electrical-part storage that is disposed so as to extend from the machine compartment side of the partition plate to the air blower compartment side of the partition plate, and that stores therein an electrical part;
 - a board that is disposed in the machine compartment
 - 10 and on which an electrical part that is other than the electrical part installed in the electrical-part storage, is installed; and
 - a board fixing portion that is interposed between the electrical-part storage located in the machine compartment
 - 15 and the board to fix the board thereto.
2. The outdoor unit of an air conditioner according to claim 1, wherein the board fixing portion is interposed between the board and an end of the electrical-part storage
- 20 on an outdoor-unit side surface side, which is located in the machine compartment, and fixes the board such that the electrical part installed on the board are disposed opposed to the partition plate.
- 25 3. The outdoor unit of an air conditioner according to claim 1 or 2, wherein
 - the board fixing portion includes
 - a board fixing member that fixes the board thereto,
 - and
 - 30 a metallic part fixing member that is interposed between the board fixing member and the electrical-part storage to fix the board fixing member to the electrical-part storage.

4. The outdoor unit of an air conditioner according to claim 3, wherein a terminal block is installed on an outdoor-unit side plate side of the part fixing member.

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5. The outdoor unit of an air conditioner according to claim 4, wherein the board fixing member is disposed on a surface of the part fixing member, the surface being opposite to a surface on which the terminal block is installed.

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6. The outdoor unit of an air conditioner according to any one of claims 3 to 5, wherein the board fixing member includes a catch to be inserted into an opening formed in the part fixing member.

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7. The outdoor unit of an air conditioner according to any one of claims 3 to 6, wherein

the part fixing member includes a guide surface that regulates positional displacement of the board fixing member relative to the part fixing member, and

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the board fixing member includes a guide piece that comes in contact with the guide surface.

8. The outdoor unit of an air conditioner according to claim 6 or 7, wherein each of the board fixing member and the part fixing member includes an insertion hole for a screw to be inserted from an outdoor-unit side plate side of the part fixing member in a state where the catch is engaged with the opening.

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9. The outdoor unit of an air conditioner according to any one of claims 3 to 8, wherein the board fixing member

includes a connector fixing portion that fixes a lead connector thereto on a surface that is on a side opposite to the partition plate side.

- 5 10. The outdoor unit of an air conditioner according to any one of claims 3 to 9, wherein the board fixing member includes a stopper that restricts downward movement of a lead connector on a surface that is on a side opposite to the partition plate side.