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(54) **INDOOR UNIT OF AIR-CONDITIONING APPARATUS**

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F24F 1/0063	(2006.01)

(52) **U.S. Cl.**

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(57) **ABSTRACT**

An indoor unit includes a lateral airflow adjusting unit that adjusts in a lateral direction, the angle of air that is blown from an air outlet. The lateral airflow adjusting unit includes a plurality of lateral airflow adjusting plates that are arranged in a blowout flow passage at defined intervals in the lateral direction, and a drive device that includes a drive motor and swings the plurality of lateral airflow adjusting plates with power generated by the drive motor. The blowout flow passage causes a heat exchanger and the air outlet to communicate with each other. A casing of the indoor unit includes an accommodating chamber that is isolated from the blowout flow passage and communicates with a suction flow passage that causes an air inlet and the heat exchanger to communicate with each other. The drive motor is accommodated in the accommodating chamber.

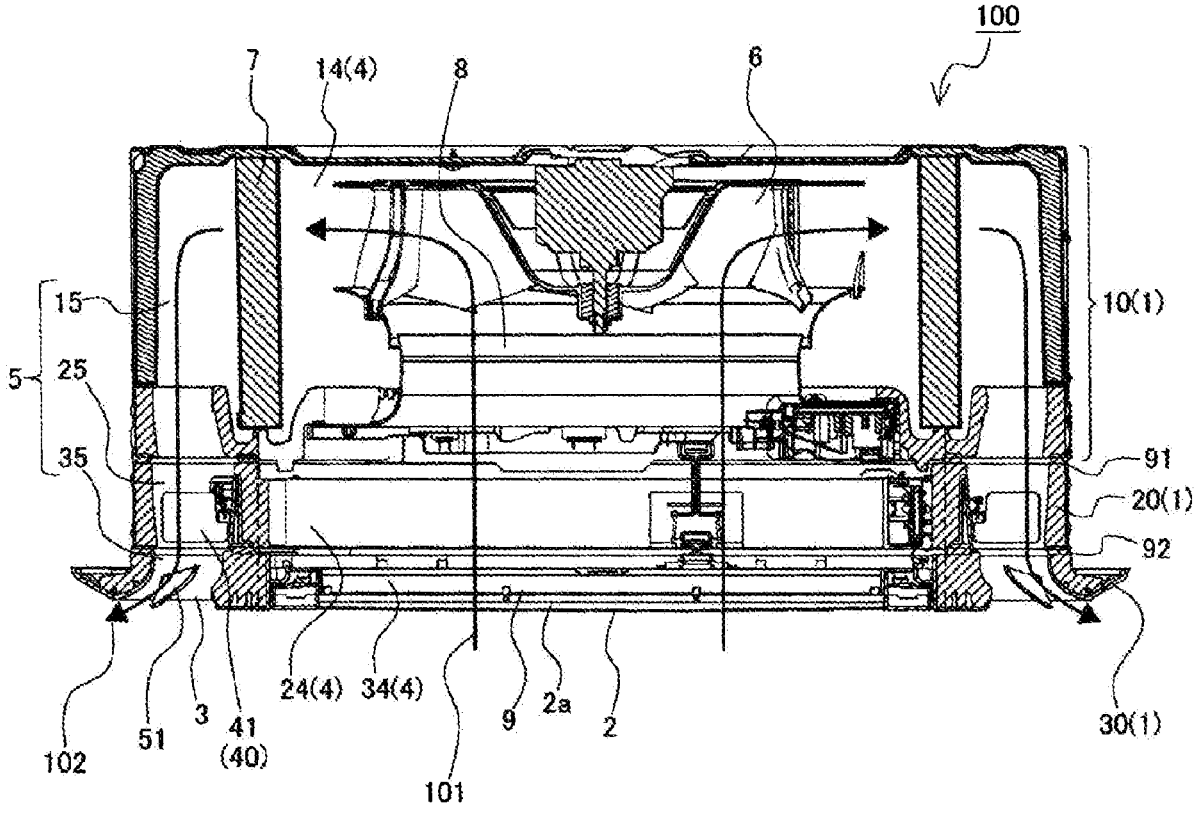


FIG. 1

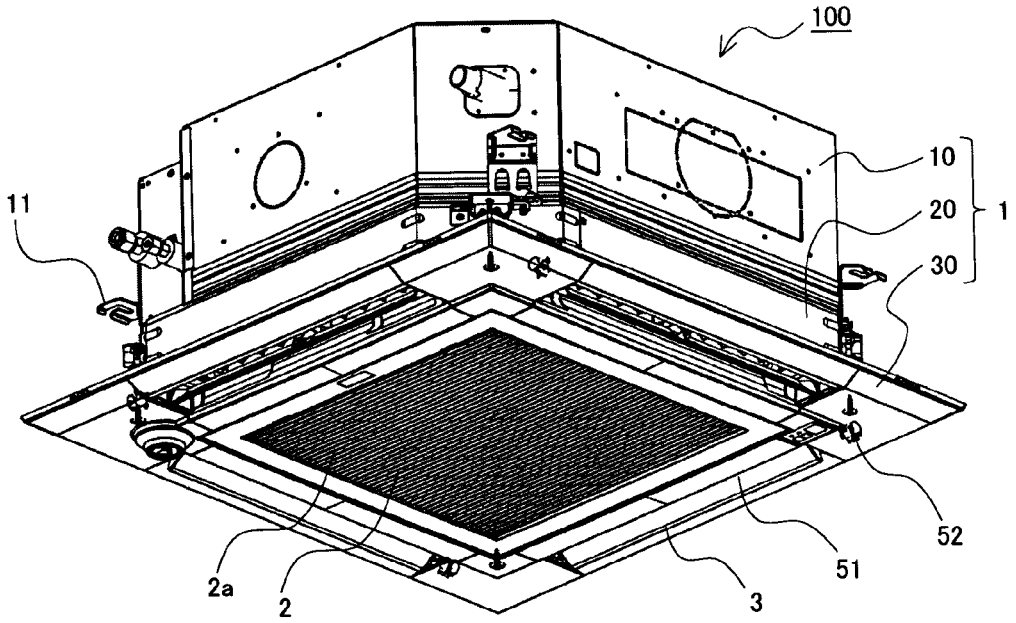

100
10
20
30
1
11
52
51
2a
2
3

FIG. 2

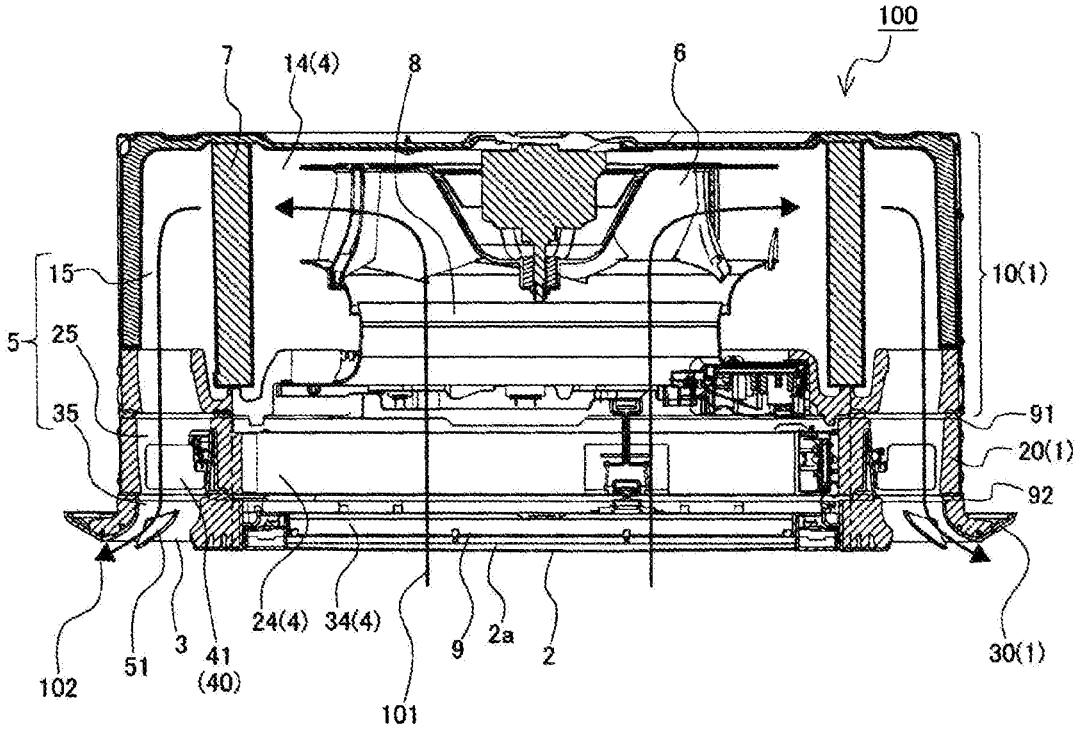

100
7
14(4)
8
6
15
25
35
5
10(1)
91
20(1)
92
102
51
3
41
(40)
24(4)
34(4)
101
9
2a
2
30(1)

FIG. 3

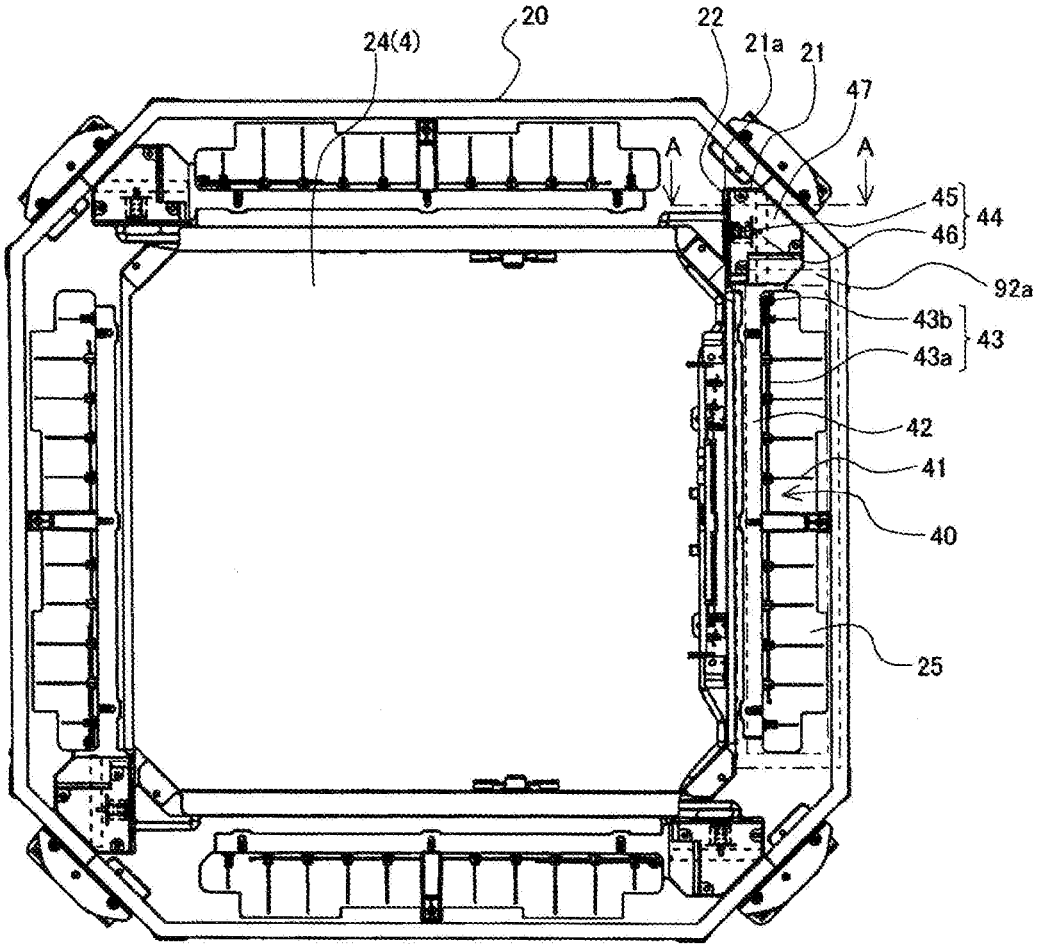


FIG. 4

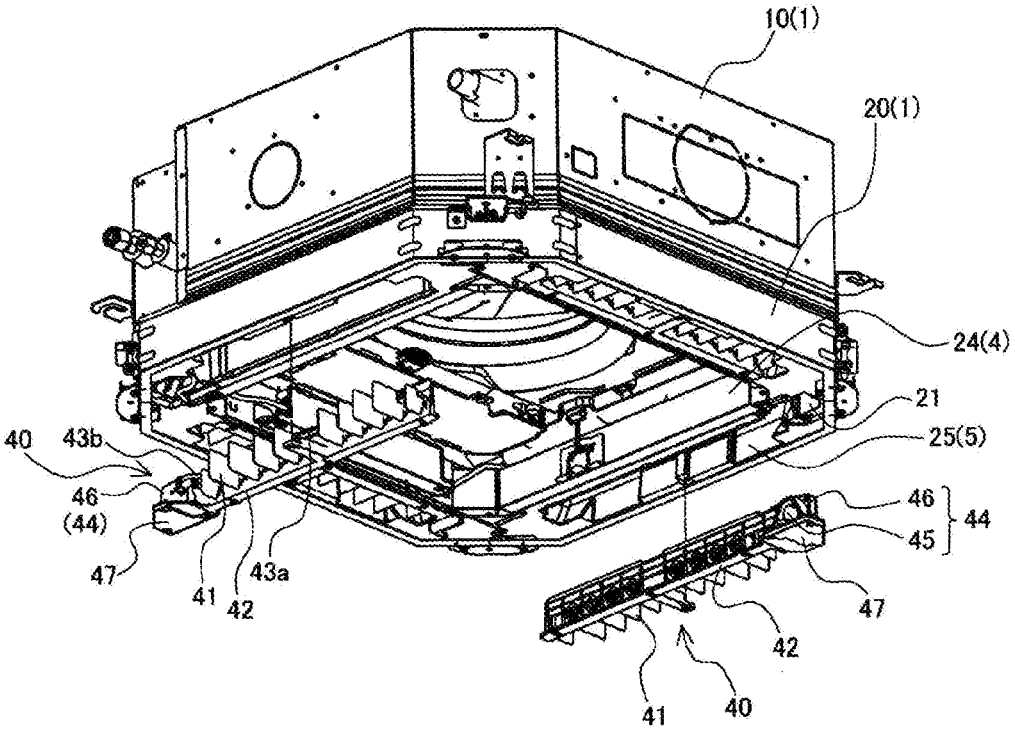

10(1)
20(1)
24(4)
21
25(5)
40
43b
46
(44)
47
41
42
43a
46
45
44
47
42
41
40

FIG. 5

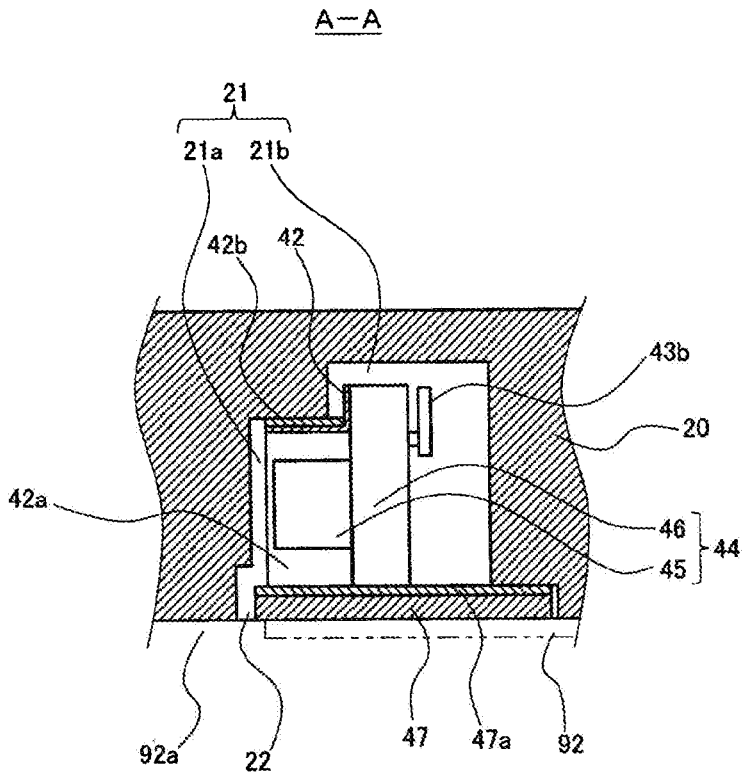

A—A
21
21a
21b
42b
42
43b
20
42a
46
45
44
92a
22
47
47a
92

FIG. 6

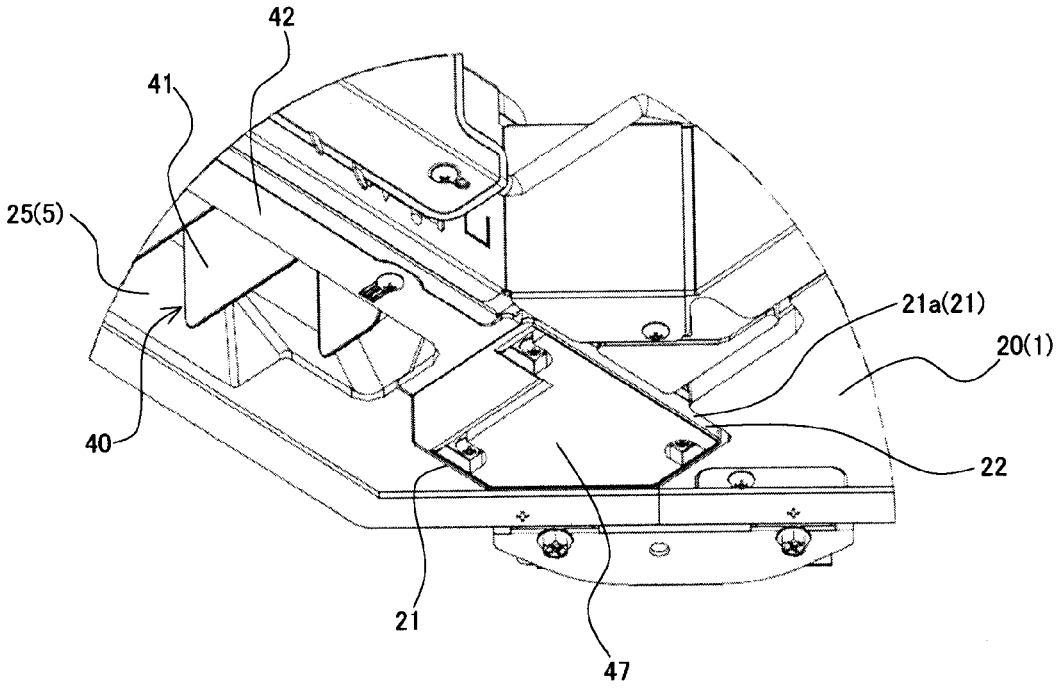


FIG. 7

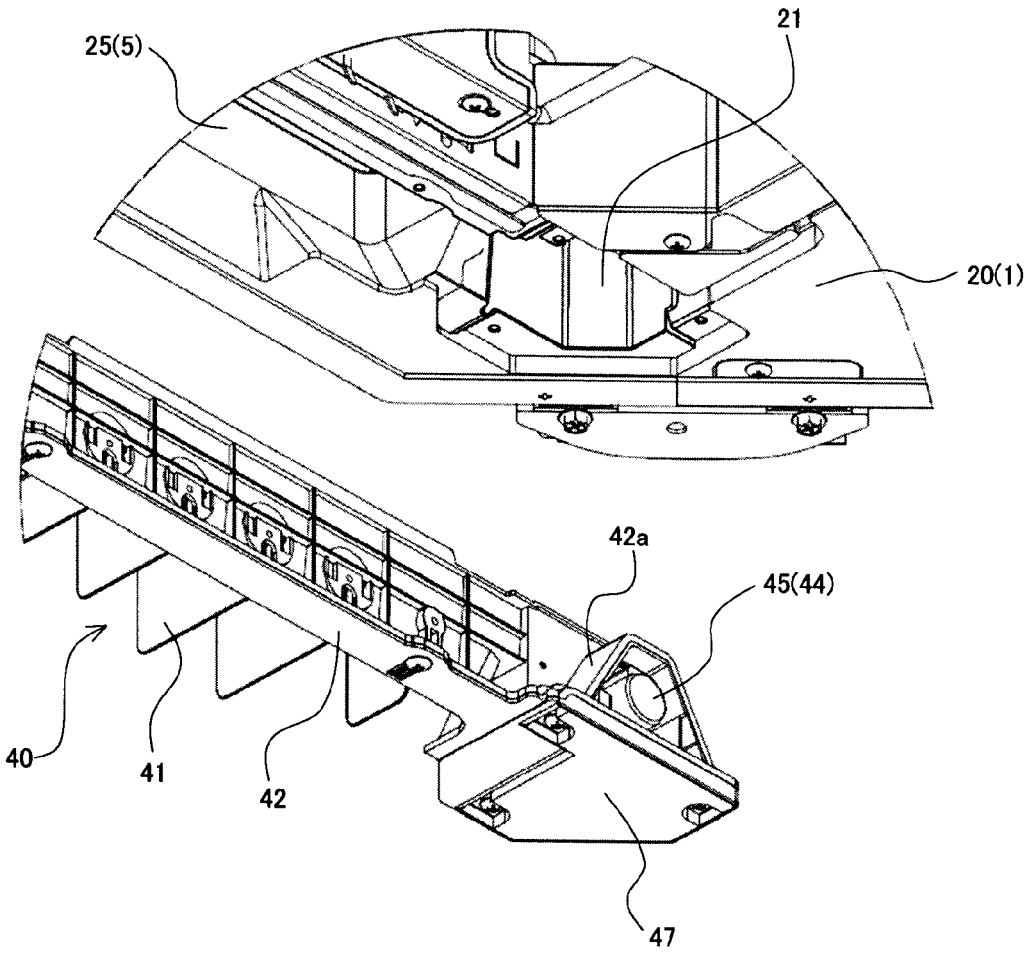


FIG. 8

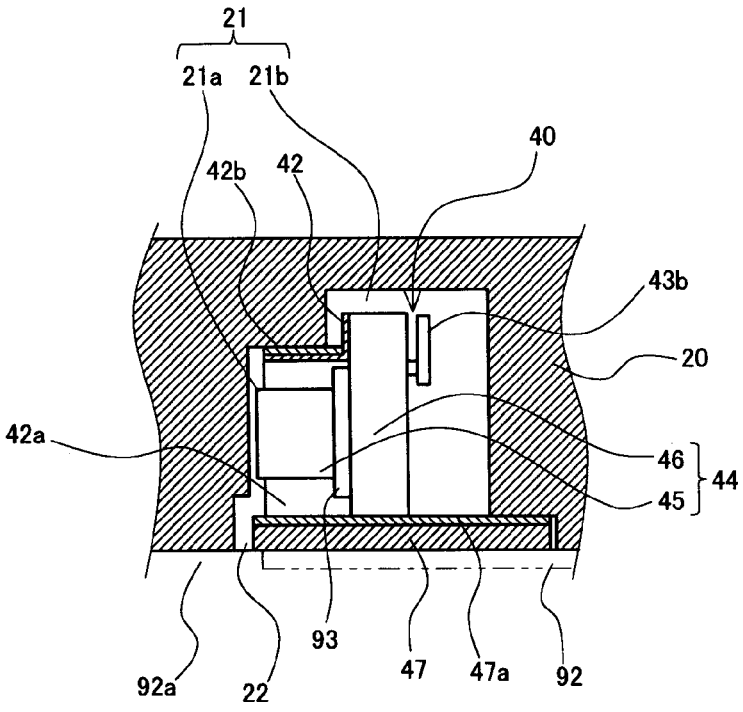


FIG. 9

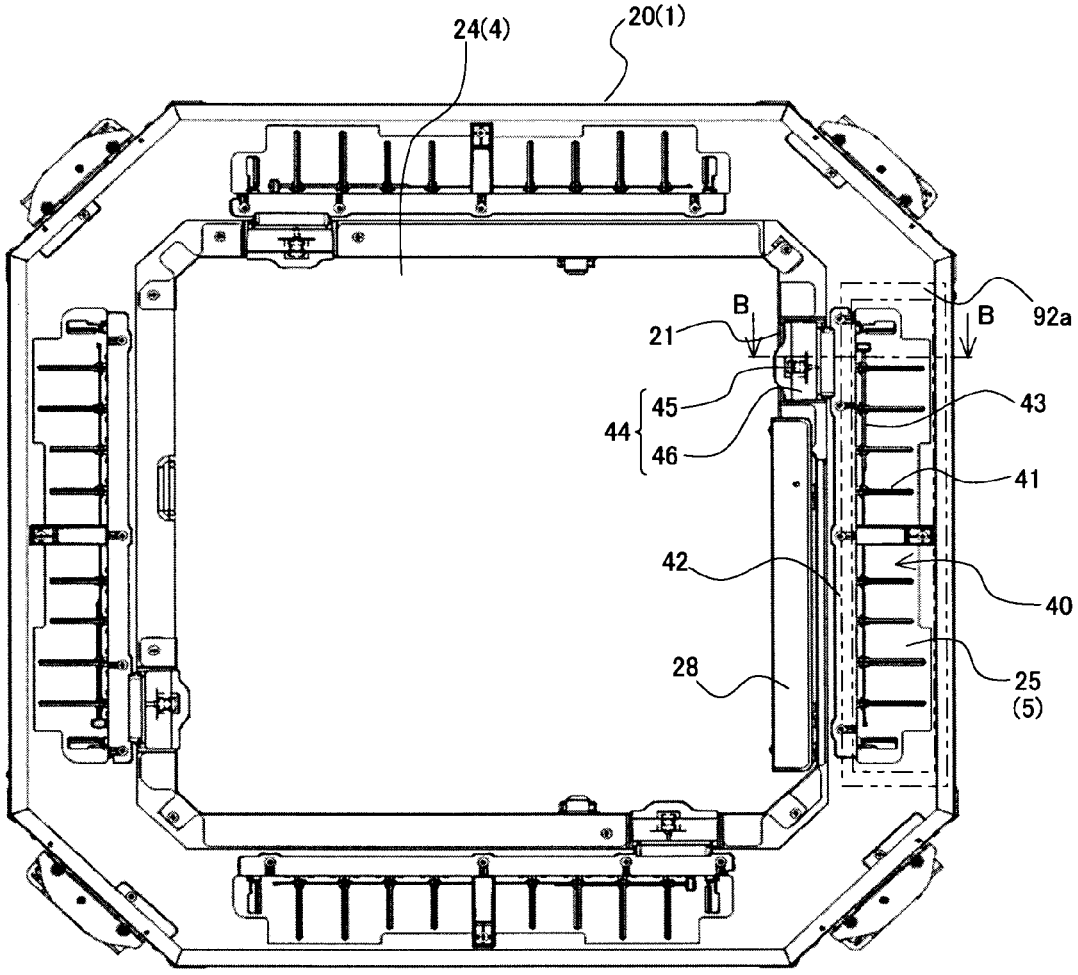
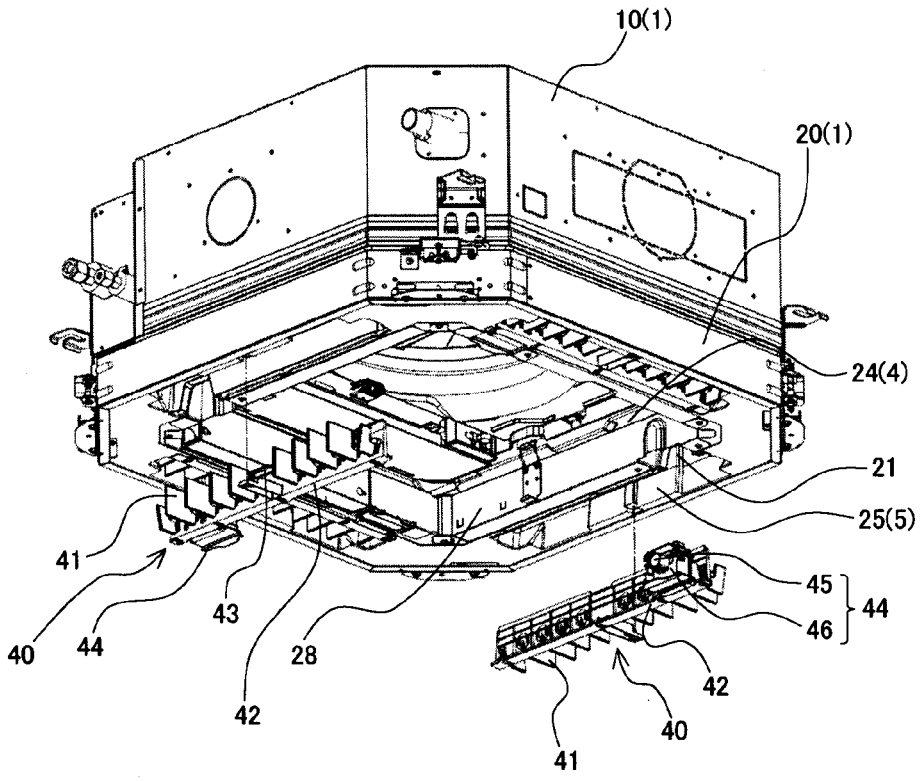


FIG. 10


10(1)
20(1)
24(4)
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25(5)
41
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40
41

FIG. 11

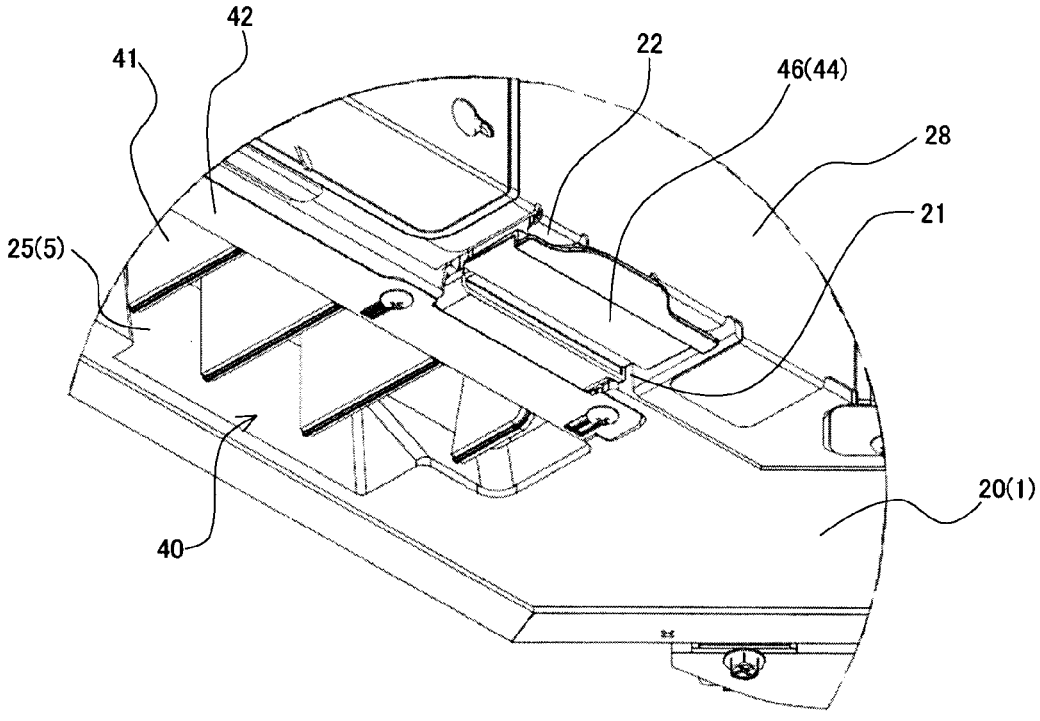

42
41
22
46(44)
28
21
25(5)
40
20(1)

FIG. 12

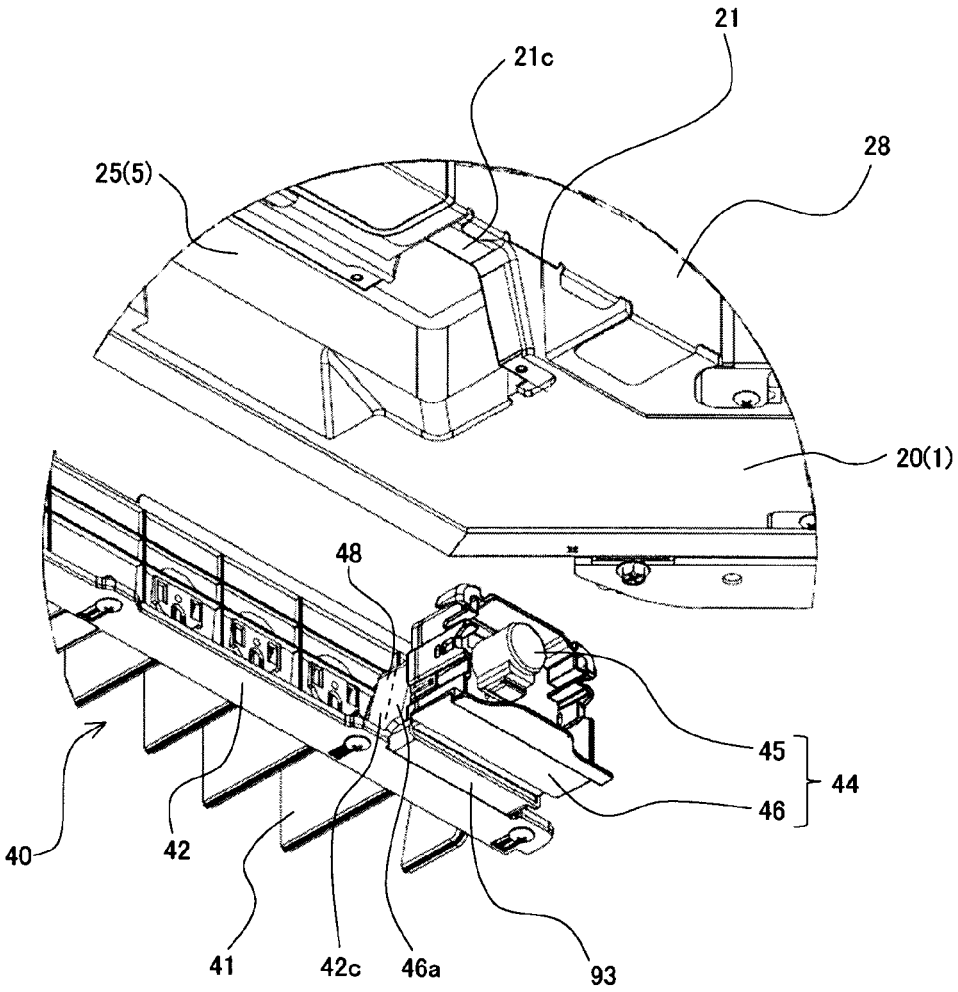
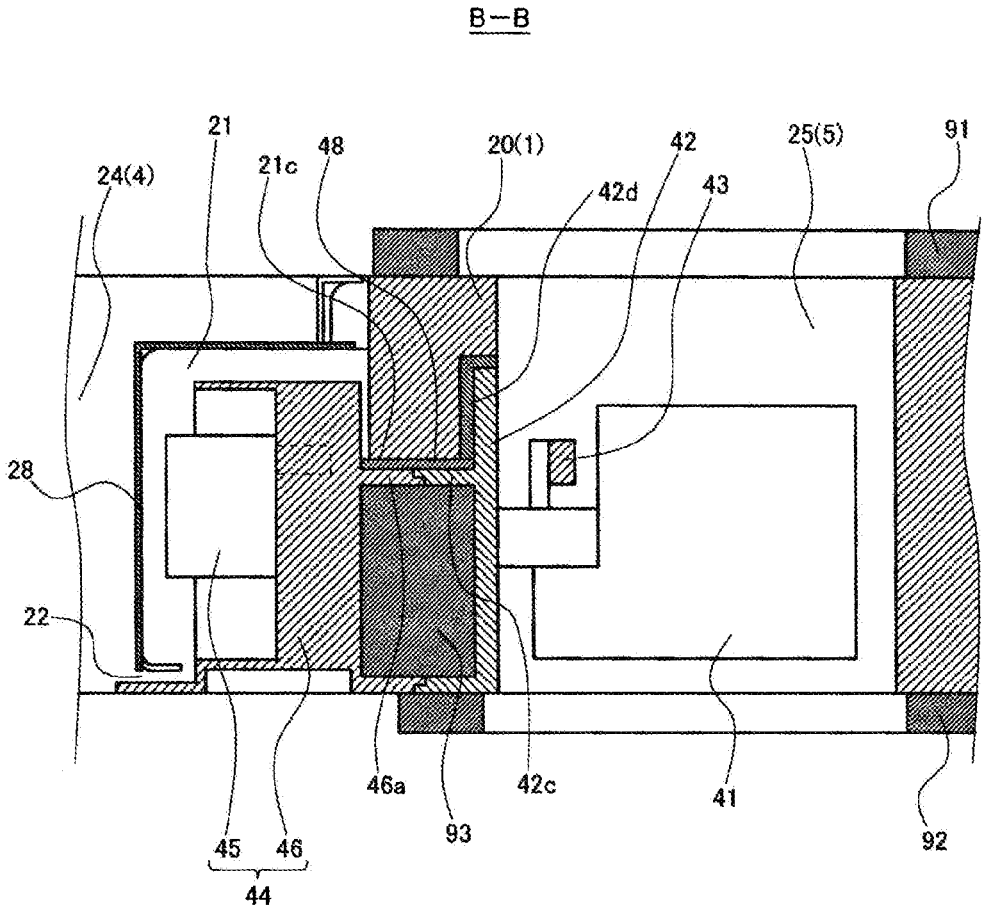


FIG. 13



INDOOR UNIT OF AIR-CONDITIONING APPARATUS

TECHNICAL FIELD

[0001] The present disclosure relates to an indoor unit of an air-conditioning apparatus embedded in or suspended from a ceiling located above an air-conditioned space, and more particularly to a structure of an airflow adjusting unit.

BACKGROUND ART

[0002] In an existing air-conditioning apparatus, an indoor unit is embedded in or suspended from a ceiling located above an air-conditioned space. As existing indoor units installed in such a manner, for example, the following indoor units are known. A given type of indoor unit includes an air inlet that is open at a substantially center portion of a lower surface of a casing, and four air outlets that are open in such a manner as to surround four sides of the air inlet in the lower surface, and can blow air subjected to heat exchange at a heat exchanger in four directions. Another type of indoor unit includes four air outlets and lateral airflow adjusting units that are provided in association with the respective four air outlets, and that adjust in a lateral direction, the angle of air blown from the air outlets (see, for example, Patent Literature 1).

[0003] To be more specific, blowout flow passages communicates with the air outlets, and allow air subjected to heat exchange at the heat exchanger to be sent to the air outlets. The lateral airflow adjusting units each include a plurality of lateral airflow adjusting plates arranged at defined intervals in the lateral direction in the blowout flow passages and a drive motor that swings the plurality of lateral airflow adjusting plates. The plurality of lateral airflow adjusting plates are swung, and inclination angles of the plurality of lateral airflow adjusting plates are changed, whereby the angle of the air blown from the air outlets can be adjusted in the lateral direction.

CITATION LIST

Patent Literature

[0004] Patent Literature 1: Japanese Unexamined Patent Application Publication No. 2003-194389

SUMMARY OF INVENTION

Technical Problem

[0005] In the indoor unit of the existing air-conditioning apparatus, drive motors of the lateral airflow adjusting units are arranged in such a manner as to communicate with the blowout flow passages. That is, in the indoor unit of the existing air-conditioning apparatus, the drive motors of the lateral airflow adjusting units are arranged such that they contact air subjected to heat exchange at the heat exchanger. Thus, for example, during a cooling operation, condensation occurs at a drive motor because of the difference between the temperature of air cooled at the heat exchanger and that of the drive motor heated. Also, for example, during a heating operation, the drive motor is heated by air heated at the heat exchanger. As a result, the temperature of the drive motor rises. In such a manner, in the indoor unit of the existing air-conditioning apparatus, the temperature of the air subjected to heat exchange at the heat exchanger affects the drive motors of the lateral airflow adjusting units, thereby worsening the durability of the drive motors.

[0006] The present disclosure is applied to solve the above problem, and relates to an indoor unit of an air-conditioning apparatus that can ensure the durability of drive motors of lateral airflow adjusting units.

Solution to Problem

[0007] An indoor unit of an air-conditioning apparatus according to the present disclosure includes: a casing having an air inlet and an air outlet that are provided as openings formed in a lower surface portion of the casing; a fan housed in the casing to suction air in an air-conditioned space from the air inlet into the casing and blow the air from the air outlet; a heat exchanger housed in the casing to cause heat exchange to be performed between refrigerant that flows in the heat exchanger and the air sucked into the casing; and a lateral airflow adjusting unit that adjusts in a lateral direction, adjust the angle of air that is blown from the air outlet. In the casing, a suction flow passage and a blowout flow passage are provided. The suction flow passage causes the air inlet and the heat exchanger to communicate with each other, and the blowout flow passage causes the heat exchanger and the air outlet to communicate with each other. The lateral airflow adjusting unit includes a plurality of lateral airflow adjusting plates that are arranged in the blowout flow passage at defined intervals in the lateral direction, and a drive device that includes a drive motor and swing the plurality of lateral airflow adjusting plates with power generated by the drive motor. The casing includes a accommodating chamber isolated from the blowout flow passage and communicating with the suction flow passage. The drive motor is accommodated in the accommodating chamber.

Advantageous Effects of Invention

[0008] The indoor unit of an air-conditioning apparatus according to the present disclosure can prevent the drive motor of the lateral adjusting unit from being affected by the temperature of air subjected to heat exchange at the heat exchanger. Thus, the indoor unit of the air-conditioning apparatus according to the present disclosure can ensure the durability of the drive motor of the lateral airflow adjusting unit.

BRIEF DESCRIPTION OF DRAWINGS

[0009] FIG. **1** is a perspective view illustrating an entire indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, as viewed from obliquely below.

[0010] FIG. **2** is a vertical sectional view of the entire indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure.

[0011] FIG. **3** is a bottom view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with a decorative panel removed.

[0012] FIG. **4** is an exploded perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below.

[0013] FIG. **5** is a sectional view taken along line A-A in FIG. **3**.

[0014] FIG. **6** is a perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of a drive motor of a lateral airflow adjusting unit.

[0015] FIG. **7** is an exploded perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of the drive motor of the lateral airflow adjusting unit.

[0016] FIG. **8** is an enlarged view of related portions of another example of the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure.

[0017] FIG. **9** is a bottom view illustrating an indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with a decorative panel removed.

[0018] FIG. **10** is an exploded perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below.

[0019] FIG. **11** is a perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of a drive motor of a lateral airflow adjusting unit.

[0020] FIG. **12** is an exploded perspective view of the indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of the drive motor of the lateral airflow adjusting unit.

[0021] FIG. **13** is a sectional view taken along line B-B in FIG. **9**.

DESCRIPTION OF EMBODIMENTS

[0022] Embodiments of an air-conditioning apparatus according to the present disclosure will be described in detail.

Embodiment 1

[0023] FIG. **1** is a perspective view illustrating an entire indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, as viewed from obliquely below. FIG. **2** is a vertical sectional view of the entire indoor unit of the air-conditioning apparatus according to Embodiment 1 of the present disclosure.

[0024] An indoor unit **100** of an air-conditioning apparatus according to Embodiment 1 is embedded in or suspended from a ceiling located above an air-conditioned space such as a room. The indoor unit **100** includes a casing **1** having an air inlet **2** and air outlets **3** that are provided as openings formed in a lower surface portion of the casing **1**. It should be noted that in Embodiment 1, for example, four air outlets **3** are formed. The casing **1** is, for example, a hollow box having a substantially rectangular cuboid shape. The air inlet **2** is open, for example, in a substantially center portion of the lower surface portion of the casing **1**. The four air outlets **3** are located in such a manner as to surround four sides of the air inlet **2**. Each of the air outlets **3** is, for example, rectangular, and is provided such that long sides of each air outlet **3** extend along an associated one of sides of the lower surface portion of the casing **1**. The air inlet **2** includes a suction grille **2***a* and a filter **9**.

[0025] In the casing **1**, a fan **6** is provided to face the air inlet **2**, and is a centrifugal fan such as a turbo fan. For example, as viewed in plan view, a central axis of the fan **6** is located at substantially the same position as the center of the air inlet **2**. The fan **6** sucks air in the air-conditioned space from the air inlet **2** into the casing **1**, and blows the air from the air outlets **3**. In the casing **1**, a heat exchanger **7**, which is, for example, of a fin-and-tube type, is also provided to surround the fan **6**. The heat exchanger **7** causes heat exchange to be performed between refrigerant that flows in the heat exchanger **7** and air in the air-conditioned space that is sucked into the casing **1** by the fan **6**.

[0026] The heat exchanger **7** is located outward of the air inlet **2** and inward of the air outlets **3**, as viewed in plan view. To be more specific, the casing **1** includes a suction flow passage **4** through which the air inlet **2** and the heat exchanger **7** communicate with each other, and blowout flow passages **5** through which the heat exchanger **7** and the air outlets **3** communicate with each other. Thus, the fan **6** is rotated to cause air in the air-conditioned space to be sucked into the casing **1** from the air inlet **2** and to flow into the heat exchanger **7** through the suction flow passage **4**, as suction air **101** and blowout air **102** indicated by arrows in FIG. **2**. Also, the air in the air-conditioned space that has flowed into the heat exchanger **7** exchanges heat with refrigerant that flows through a refrigerant flow passage in the heat exchanger **7**, and is provided as conditioned air. The conditioned air passes through the blowout flow passages **5**, and is blown from the air outlets **3** to the air-conditioned space.

[0027] In Embodiment 1, since the number of the air outlets **3** is four, that of the blowout flow passages **5** is also four. Each blowout flow passage **5**, as well as each air outlet **3**, has, for example, a rectangular cross section, and is located such that long sides of each blowout flow passage **5** extend along an associated one of the sides of the lower surface portion of the casing **1**. The indoor unit **100** according to Embodiment 1 also includes a bell mouth **8** between the air inlet **2** and the fan **6**, and the bell mouth **8** guides to the fan **6**, the air in the air-conditioned space that is sucked from the air inlet **2** into the suction flow passage **4**.

[0028] In the indoor unit **100** according to Embodiment 1, in each of the blowout flow passages **5**, a vertical airflow adjusting plate **51** and a plurality of lateral airflow adjusting plates **41** are provided in such a manner as to be swingable and also provided to adjust the angle of conditioned air that is blown from an associated one of the air outlets **3**.

[0029] The vertical airflow adjusting plate **51** adjusts in a vertical direction, the angle of the conditioned air that is blown from the associated air outlet **3**. The vertical airflow adjusting plate **51** extends in the longitudinal direction of the blowout flow passage **5**. The vertical airflow adjusting plate **51** is swung in the vertical direction around its rotation axis extending in the longitudinal direction of the blowout flow passage **5**. This swinging operation of the vertical airflow adjusting plate **51** in the vertical direction can be performed by a drive device such as a drive motor. Thus, as an outer peripheral end of the vertical airflow adjusting plate **51** moves more upwards, the angle between a direction in which the conditioned air is blown from the air outlet **3** and a horizontal direction decreases. Furthermore, as the outer

peripheral end of the vertical airflow adjusting plate **51** moves more downwards, the conditioned air is blown more downwards from the air outlet **3**.

[0030] The plurality of lateral airflow adjusting plates **41** form a lateral airflow adjusting unit **40**, which will be described later. The lateral airflow adjusting unit **40** adjusts in the lateral direction, the angle of the conditioned air that is blown from the associated air outlet **3**. To be more specific, in the air outlets **3**, respective lateral airflow adjusting units **40** are provided. The plurality of lateral airflow adjusting plates **41** of each of the lateral airflow adjusting units **40** are arranged in an associated blowout flow passage **5** at defined intervals in the longitudinal direction (lateral direction) of the blowout flow passage **5**. The lateral airflow adjusting plates **41** are arranged in the blowout flow passage **5** such that they are swingable. For example, lower ends of the lateral airflow adjusting plates **41** are swung in the lateral direction. Then, the conditioned air that is blown from the air outlet **3** is curved and blown in a direction in which the lower ends of the lateral airflow adjusting plates **41** are moved. The lateral airflow adjusting plates **41** are swung by power generated by a drive motor **45** of the lateral airflow adjusting unit **40**, which will be described later. Also, the lateral airflow adjusting unit **40** will be described later in detail.

[0031] In Embodiment 1, an indoor unit body **10**, a lateral airflow casement **20**, and a decorative panel **30** form the casing **1**.

[0032] The indoor unit body **10** is, for example, a box formed in the shape of a substantially rectangular cuboid that has chamfered corners as viewed in plan view. The indoor unit body **10** houses the fan **6**, the heat exchanger **7**, and the bell mouth **8**. In the indoor unit body **10**, a first suction flow passage **14** and first blowout flow passages **15** are provided. The first suction flow passage **14** forms part of the suction flow passage **4**, and the first blowout flow passages **15** form part of the respective blowout flow passages **5**. An end of the first suction flow passage **14** that is located opposite to the heat exchanger **7** is open, for example, in a substantially center portion of a lower surface portion of the indoor unit body **10**. Ends of the first blowout flow passages **15** that are located opposite to the heat exchanger **7** are open in the lower surface portion of the indoor unit body **10** such that the ends of the first blowout flow passages **15** surround four sides of an opening portion of the first suction flow passage **14**. At an outer periphery of the indoor unit body **10**, fittings **11** are provided, and are used when the indoor unit body **10** is suspended from the ceiling located above the air-conditioned space.

[0033] The lateral airflow casement **20** is attached to a lower portion of the indoor unit body **10**. The lateral airflow casement **20** has substantially the same shape as the indoor unit body **10** as viewed in plan view. To be more specific, the lateral airflow casement **20** is formed in the shape of a substantially rectangular cuboid that has chamfered corners as viewed in plan view. In the lateral airflow casement **20**, a second suction flow passage **24** and second blowout flow passages **25** are formed. The second suction flow passage **24** forms part of the suction flow passage **4** and communicates with the first suction flow passage **14**. The second suction flow passage **24** is a through hole formed in a substantially center portion of the lateral airflow casement **20** as viewed in plan view. The second blowout flow passages **25** form part of the blowout flow passages **5** and communicate with the first blowout flow passages **15**. The second blowout flow passage **25** are through holes arranged in such a manner as to surround four sides of the second suction flow passage **24** as viewed in plan view.

[0034] Sealants **91** are provided on an upper surface portion of the lateral airflow casement **20**. The sealant **91** is intended to isolate the suction flow passage **4** (the first suction flow passage **14** and the second suction flow passage **24**) from the blowout flow passages **5** (the first blowout flow passages **15** and the second blowout flow passages **25**) when the lateral airflow casement **20** is secured to the indoor unit body **10**.

[0035] In Embodiment 1, the lateral airflow adjusting units **40**, which will be described later, are provided in the lateral airflow casement **20**. To be more specific, the lateral airflow adjusting plates **41** are arranged in the second blowout flow passages **25** such that they can be swung.

[0036] The decorative panel **30** is attached to a lower portion of the lateral airflow casement **20**, and is, for example, a plate having a substantially rectangular shape. To be more specific, the decorative panel **30** forms the lower surface portion of the casing **1**. The decorative panel **30** includes the air inlet **2**, a third suction flow passage **34**, third blowout flow passages **35**, and the air outlets **3**. The third suction flow passage **34** forms part of the suction flow passage **4** and communicates with the second suction flow passage **24** and the air inlet **2**. The third suction flow passage **34** is a through hole formed in a substantially center portion of the decorative panel **30** as viewed in plan view. The third blowout flow passages **35** form part of the blowout flow passages **5** and communicates with the second blowout flow passage **25** and the air outlets **3**. The third blowout flow passages **35** are through holes arranged in such a manner as to surround four sides of the third suction flow passage **34** as viewed in plan view.

[0037] Sealants **92** are provided on an upper surface portion of the decorative panel **30**. The sealants **92** are intended to separate the suction flow passage **4** (the second suction flow passage **24** and the third suction flow passage **34**) from the blowout flow passages **5** (the second blowout flow passages **25** and the third blowout flow passages **35**) when the decorative panel **30** is secured to the lateral airflow casement **20**.

[0038] In Embodiment 1, the vertical airflow adjusting plates **51** as described above are provided in the third blowout flow passages **35** such that they can be swung. Drive devices **52** that swing the respective vertical airflow adjusting plates **51** are provided on the decorative panel **30**.

[0039] The indoor unit of the air-conditioning apparatus embedded in or suspended from the ceiling located above the air-conditioned space may be sometimes required not to include the lateral airflow adjusting units **40** in terms of cost reduction, etc. In such a case, from the indoor unit including the lateral airflow adjusting units, the lateral airflow adjusting units are removed. That is, the housing can be applied to both the case the lateral airflow adjusting units are necessary and the case where the lateral airflow adjusting units are not necessary. Thus, also in the indoor unit **100** according to Embodiment 1, the lateral airflow adjusting units **40** are removed when they are not necessary.

[0040] In the case where the indoor unit body **10** and the lateral airflow casement **20** are formed integrally with each other, that is, the lower part of the indoor unit body **10** is extended and is used as the lateral airflow casement **20**, the lateral airflow adjusting units **40** are provided in the indoor

unit body **10**. In such a case, in the case where the lateral airflow adjusting units **40** are removed from the indoor unit **100**, space is made in the indoor unit body **10**. Thus, in the case where the lateral airflow adjusting units **40** are not necessary, the indoor unit body **10** formed integrally with the lateral airflow casement **20** is large in size more than necessary. That is, in the case where the indoor unit body **10** and the lateral airflow casement **20** are formed integrally with each other and the lateral airflow adjusting units **40** are not necessary, the indoor unit **100** is large in size more than necessary.

[0041] By contrast, in the indoor unit **100** according to Embodiment 1, the indoor unit body **10** and the lateral airflow casement **20** are formed as separate elements, and the lateral airflow adjusting units **40** are provided in the lateral airflow casement **20** as described above. Thus, in the indoor unit **100** according to Embodiment 1, in the case where the lateral airflow adjusting units **40** are not necessary, it suffices that the lateral airflow casement **20** is removed and the decorative panel **30** is attached to the lower part of the indoor unit body **10**. Thereby, the indoor unit **100** is prevented from being large in size more than necessary in the case where the lateral airflow adjusting units **40** are not necessary.

[0042] Next, the lateral airflow adjusting units **40** will be described in detail.

[0043] FIG. **3** is a bottom view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed. FIG. **4** is an exploded perspective view illustrating the indoor unit of an air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below. FIG. **5** is a sectional view taken along line A-A in FIG. **3**. FIG. **6** is a perspective view illustrating the indoor unit of the air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of a drive motor of a lateral airflow adjusting unit. FIG. **7** is an exploded perspective view illustrating the indoor unit of the air-conditioning apparatus according to Embodiment 1 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and also illustrating the vicinity of the drive motor of the lateral airflow adjusting unit. FIG. **4** illustrates the lateral airflow casement **20** to which two of four lateral airflow adjusting units **40** are attached, but remaining two of the four lateral airflow adjustment units **40** are not attached. In FIG. **5**, a drive device **44** of a lateral airflow adjusting unit **40** is illustrated, but the shape of the drive device **44** illustrated is not a cross section of the drive device **44**.

[0044] Each of the lateral airflow adjusting units **40** includes the lateral airflow adjusting plates **41** as described above, a support base **42**, a coupling member **43**, and the drive device **44**. The lateral airflow adjusting plates **41** are supported at a side surface portion of the support base **42** such that it can be swung. The support base **42** is attached to the lateral airflow casement **20** in the longitudinal direction of the second blowout flow passage **25**. Because of the support base **42** is attached to the lateral airflow casement **20**, the lateral airflow adjusting plates **41** are provided in the second blowout flow passage **25**. In this case, in the second blowout flow passage **25**, the lateral airflow adjusting plates **41** are located closer to an outer peripheral side of the lateral airflow casement **20** than the support base **42**. In other words, in the second blowout flow passage **25**, the support base **42** is located closer to an inner peripheral side of the lateral airflow casement **20** than the lateral airflow adjusting plates **41**, that is, it is located closer to the second suction flow passage **24** than the lateral airflow adjusting plates **41**.

[0045] The lateral airflow adjusting plates **41** are coupled to each other by the coupling member **43**. The coupling member **43** is also connected to the drive device **44**. In Embodiment 1, the coupling member **43** includes a first coupling member **43***a* that couples the lateral airflow adjusting plates **41** to each other, and a second coupling member **43***b* that couples the first coupling member **43***a* and the drive device **44** to each other.

[0046] The drive device **44** includes the drive motor **45** and a power transmission mechanism **46** that connects the drive motor **45** and the second coupling member **43***b*. The power transmission mechanism **46** is, for example, a gear, and transmits power generated by the drive motor **45** to the second coupling member **43***b*. To be more specific, when the drive motor **45** is rotated, a rotational power generated thereby is transmitted to the lateral airflow adjusting plates **41** by the power transmission mechanism **46** and the coupling member **43**. Specifically, when the drive motor **45** is rotated in a certain rotational direction, lower end portions of the lateral airflow adjusting plates **41** are moved in a certain single direction. When the drive motor **45** is rotated in the opposite direction to the rotational direction, the lower end portions of the lateral airflow adjusting plates **41** are moved in the opposite direction to the above certain single direction. The drive device **44** having the above configuration is attached to the support base **42**.

[0047] When the drive device **44** is attached to the support base **42**, the drive motor **45** protrudes from the power transmission mechanism **46** toward the inner peripheral side of the lateral airflow casement **20** as viewed in plan view. In other words, as the drive motor **45** is viewed with respect to part of the support base **42** that supports the lateral airflow adjusting plates **41**, the drive motor **45** protrudes from the above part of the support base **42** toward the inner peripheral side of the lateral airflow casement **20**. A lid **47** is provided on a lower portion of the drive device **44**.

[0048] The lateral airflow casement **20** includes accommodating chambers **21** on lateral sides of the respective second blowout flow passages **25**. In other words, the accommodating chambers **21** are provided at respective corners of the lateral airflow casement **20** as the lateral airflow casement **20** is viewed from below. Furthermore, in other words, the accommodating chambers **21** are provided at the corners of the casing **1** as the housing **1** is viewed from the lower surface portion. The accommodating chambers **21** house the respective drive devices **44** when the lateral airflow adjusting units **40** are attached to the lateral airflow casement **20**. The accommodating chambers **21** are recesses which are open on their lower side. The accommodating chambers **21** communicate with side end portions of the respective second blowout flow passages **25** when the drive devices **44** are not accommodated in the accommodating chambers **21**.

[0049] By contrast, when a drive device **44** is accommodated in an associated accommodating chamber **21**, as illustrated in FIG. **5**, the accommodating chamber **21** is partitioned into a second accommodating chamber **21***b* and a first accommodating chamber **21***a* that accommodates the

drive motor **45**, by the power transmission mechanism **46**, the lid **47**, and a wall portion **42***a* of the support base **42** that surrounds the drive motor **45**. Thereby, the first accommodating chamber **21***a* that accommodates the drive motor **45** is isolated from the second accommodating chamber **21***b* that communicates with the second blowout flow passage **25**. That is, the first accommodating chamber **21***a* is isolated from the blowout flow passage **5**. At the support base **42**, a sealant **42***b* is provided at part of the support base **42** where airtightness needs to be ensured, such as space between the wall portion **42***a* of the support base **42** and an inner peripheral wall of the accommodating chamber **21**. Also, at the lid **47**, a sealant **47***a* is provided at part of the lid **47** where airtightness needs to be ensured, such as the vicinity of an opening portion of the accommodating chamber **21** and the lid **47**. It should be noted that with respect to the wall portion **42***a*, FIG. **7** should also be referred to.

[0050] In this case, the lid **47** covers a lower opening of the accommodating chamber **21** such that only part of the lower opening that corresponds to the flow passage **22** is still open; that is, the part is not covered. The sealant **92** is provided between a lower surface portion of the lateral airflow casement **20** and an upper surface portion of the decorative panel **30** in such a manner as to surround an outer periphery of the second blowout flow passage **25**, as indicated as a location range **92***a* by a two-dot chain line in FIG. **3**. Thus, the flow passage **22** is not covered with the sealant **92**. Thus, the first accommodating chamber **21***a* that accommodates the drive motor **45** communicates with the suction flow passage **4**. To be more specific, the lateral airflow casement **20** that is part of the casing **1** includes the first accommodating chamber **21***a* isolated from the blowout flow passage **5** and communicating with the suction flow passage **4**. The drive motor **45** is accommodated in the first accommodating chamber **21***a*.

[0051] The first accommodating chamber **21***a* corresponds to the accommodating chamber of the present disclosure.

[0052] The flow passage that causes the first accommodating chamber **21***a* and the suction flow passage **4** to communicate with each other is not limited to the flow passage **22**. For example, a through hole or a groove that causes the first accommodating chamber **21***a* and the suction flow passage **4** to communicate with each other may be formed in at least one of the lateral airflow casement **20** and the decorative panel **30** to serve as a flow passage that causes the first accommodating chamber **21***a* and the suction flow passage **4** to communicate with each other.

[0053] In order to form the lateral airflow adjusting unit **40** having the above configuration, first, the lateral airflow adjusting plates **41**, the support base **42**, the coupling member **43**, and the drive device **44** are assembled into a single component. Then, the support base **42** is removably attached to the lateral airflow casement **20**, for example, by screwing. To be more specific, the lateral airflow adjusting unit **40** of Embodiment 1 is removable as the assembled single component from the lateral airflow casement **20**. For example, if the inside of the blowout flow passage **5** is soiled with, for example, dust, there is a case where the lateral airflow adjusting unit **40** must be removed to clean the inside of the blowout flow passage **5**. In this case, in the indoor unit **100** according to Embodiment 1, the lateral airflow adjusting unit **40** can be removed as the assembled single component from the lateral airflow casement **20**. It is therefore possible to improve the cleanability. Also, in the indoor unit **100** according to Embodiment 1, for example, if the lateral airflow adjusting plate **41** is damaged, the lateral airflow adjusting unit **40** can be removed as the assembled single component from the lateral airflow casement **20** in order that the lateral airflow adjusting plate **41** be replaced by a new one. In such a manner, in the indoor unit **100** according to Embodiment 1, the lateral airflow adjusting unit **40** can be attached to and removed as the assembled single body from the lateral airflow casement **20**, thereby improving the maintainability.

[0054] Next, the operation of the indoor unit **100** according to Embodiment 1 will be described.

[0055] As the suction air **101** and the blowout air **102** indicated by arrows in FIG. **2**, when the fan **6** is rotated, air in the air-conditioned space is sucked from the air inlet **2** into the casing **1** and flows into the heat exchanger **7** through the suction flow passage **4**. Then, when passing through the heat exchanger **7**, the air in the air-conditioned space that has flowed into the heat exchanger **7** exchanges heat with the refrigerant that flows through the refrigerant flow passage in the heat exchanger **7** and is thus conditioned. The conditioned air passes through the blowout flow passage **5**, and is blown into the air-conditioned space from the air outlets **3**.

[0056] In this case, the angle of the conditioned air that is blown from the air outlet **3** can be adjusted in the vertical direction by adjusting the inclination angle of the vertical airflow adjusting plate **51**. Also, the angle of the conditioned air that is blown from the air outlet **3** can be adjusted in the lateral direction by adjusting the inclination angle of the lateral airflow adjusting plate **41**. That is, by adjusting the inclination angles of the vertical airflow adjusting plate **51** and the lateral airflow adjusting plate **41**, it is possible to adjust the angle of the conditioned air that is blown from the air outlet **3**, in the vertical and lateral directions, to set the angle to an arbitrary angle.

[0057] The inclination angles of the vertical airflow adjusting plate **51** and the lateral airflow adjusting plate **41** may be fixed to fix the angle of the conditioned air that is blown from the air outlet **3**. The vertical airflow adjusting plate **51** and the lateral airflow adjusting plate **41** may be continuously moved to continuously change the inclination angles of the vertical airflow adjusting plate **51** and the lateral airflow adjusting plates **41**. Furthermore, as a whole, the vertical airflow adjusting plates **51** provided in the respective blowout flow passages **5** may be operated independently of each other, or operated in coordination with each other. Also, the lateral airflow adjusting plates **41** provided in the respective blowout flow passages **5** may be also operated independently of each other, or operated in interlock with each other.

[0058] As described above, in the indoor unit **100** according to Embodiment 1, the drive motor **45** of the lateral airflow adjusting unit **40** is provided in the first accommodating chamber **21***a* that is isolated from the blowout flow passage **5** and communicates with the suction flow passage **4**. Thus, during the cooling operation, the drive motor **45** is not directly exposed to air cooled at the heat exchanger **7**. Therefore, in the indoor unit **100** according to Embodiment 1, condensation water can be prevented from being generated at the drive motor **7** because of the difference in temperature between the air cooled by the heat exchanger **7** and the drive motor **45** heated. Also, during the heating operation, the drive motor **45** is not directly exposed to the air heated by the heat exchanger **7**. Also, during the heating operation, the drive motor **45** is cooled by the air sucked into

the suction flow passage **4**. Thus, in the indoor unit **100** according to Embodiment 1, the temperature of the drive motor **45** can be prevented from being raised by the air heated by the heat exchanger **7**.

[0059] In such a manner, in the indoor unit **100** according to Embodiment 1, it is possible to prevent the drive motor **45** from being affected by the temperature of the air subjected to heat exchange at the heat exchanger **7**. Thus, the indoor unit **100** according to Embodiment 1 can ensure the durability of the drive motor **45**. This advantage is not an advantage obtained only in the case where the indoor unit body **10**, the lateral airflow casement **20**, and the decorative panel **30** form the casing **1**. For example, the advantage can also be obtained in the case where the indoor unit body **10** and the lateral airflow casement **20** are formed integrally with each other to form the casing **1**. That is, it suffices that in the casing **1**, the first accommodating chamber **21***a* is provided in such a manner as to be isolated from the blowout flow passage **5** and communicate with the suction flow passage **4**. In this first accommodating chamber **21***a*, the drive motor **45** is provided. Because of this configuration, the above advantage can be obtained.

[0060] As described above, the indoor unit **100** according to Embodiment 1 includes the casing **1** having the air inlet **2** and the air outlets **3** that are provided as openings formed in the lower surface portion of the casing **1**. The indoor unit **100** according to Embodiment 1 includes the fan **6**, the heat exchanger **7**, and the lateral airflow adjusting units **40**. The fan **6** is provided in the casing **1** to suck air in the air-conditioned space from the air inlet **2** into the casing **1**, and blow air from the air outlets **3**. The heat exchanger **7** is provided in the casing **1** to cause heat exchange to be performed between the refrigerant that flows in the heat exchanger **7** and the air sucked into the casing **1**. The lateral airflow adjusting units **40** adjust the angle of the air that is blown from the air outlets **3**, in the lateral direction. To be more specific, the casing **1** includes the suction flow passage **4** that causes the air inlet **2** and the heat exchanger **7** to communicate with each other, and the blowout flow passages **5** that causes the heat exchanger **7** and the air outlets **3** to communicate with each other. The lateral airflow adjusting units **40** each includes the plurality of lateral airflow adjusting plates **41** that are arranged in an associated one of the blowout flow passages **5** at defined intervals in the lateral direction, and the drive device **44** that includes the drive motor **45** and swings the plurality of lateral airflow adjusting plates **41** with power generated by the drive motor **45**. The casing **1** includes the first accommodating chambers **21***a* that are isolated from the respective blowout flow passages **5** and communicate with the suction flow passage **4**. The drive motor **45** is accommodated in the first accommodating chamber **21***a*.

[0061] In the indoor unit **100** having the above configuration, the drive motor **45** can be prevented from being affected by the temperature of the air subjected to heat exchange at the heat exchanger **7**. Thus, the indoor unit **100** according to Embodiment 1 can ensure the durability of the drive motor **45**.

[0062] Furthermore, in the indoor unit **100** according to Embodiment 1, the first accommodating chambers **21***a* are provided at the respective corners of the casing **1** as the casing **1** is viewed from the lower surface portion side. The corners of the casing **1** are portions where it is hard to provide components of the indoor unit **100**. Therefore, in Embodiment 1, since the first accommodating chambers **21***a* are provided at the respective corners of the casing **1** and accommodate the respective drive motors **45**, the corners of the casing **1** can be effectively used.

[0063] As illustrated in, for example, FIG. **8**, the lateral airflow adjusting unit **40** may include a heat insulating material **93** between a component located in a region that communicates with the blowout flow passage **5** and a component located in a region that communicates with the suction flow passage **4**.

[0064] FIG. **8** is an enlarged view of a related portion of another example of the indoor unit of the air-conditioning apparatus according to Embodiment 1 of the present disclosure. FIG. **8** illustrates a section taken at the same position as in FIG. **5**.

[0065] In the indoor unit **100** as illustrated in FIG. **8**, the lateral airflow adjusting unit **40** includes the heat insulating material **93** between the power transmission mechanism **46** and the drive motor **45**. The heat insulating material **93** is formed of, for example, urethane foam.

[0066] As described above, the second accommodating chamber **21***b* communicates with the second blowout flow passage **25** that forms part of the blowout flow passage **5**. The power transmission mechanism **46** of the lateral airflow adjusting unit **40** is accommodated in the second accommodating chamber **21***b*. Thus, the power transmission mechanism **46** is cooled by air cooled at the heat exchanger **7** during the cooling operation. The power transmission mechanism **46** is heated by air heated at the heat exchanger **7** during the heating operation. In the lateral airflow adjusting unit **40** as illustrated in FIG. **5**, the power transmission mechanism **46** and the drive motor **45** are directly connected to each other. Thus, because of heat exchange between the power transmission mechanism **46** and the drive motor **45**, the drive motor **45** is slightly affected by the temperature of air subjected to heat exchange at the heat exchanger **7**. By contrast, in the lateral airflow adjusting unit **40** as illustrated in FIG. **8**, the heat insulating material **93** can prevent heat exchange between the power transmission mechanism **46** and the drive motor **45**. Thus, the lateral airflow adjusting unit **40** is configured as illustrated in FIG. **8**, thereby further reliably preventing the drive motor **45** from being affected by the temperature of the air subjected to heat exchange at the heat exchanger **7**. Thus, the configuration of the lateral airflow adjusting unit **40** as illustrated in FIG. **8** can further reliably ensure the durability of the drive motor **45**.

Embodiment 2

[0067] The position of the accommodating chamber **21** that accommodates the drive motor **45** of the lateral airflow adjusting unit **40** is not limited to the position as described regarding Embodiment 1. For example, the accommodating chamber **21** may be provided at a position as described below regarding Embodiment 2. It should be noted that in Embodiment 2, matters not described regarding Embodiment 2 and described regarding Embodiment 1 are the same as those described in Embodiment 1, and in the descriptions regarding Embodiment 2, functions and components that are the same as in Embodiment 1 will be denoted by the same reference signs.

[0068] FIG. **9** is a bottom view illustrating an indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with a decorative panel removed. FIG. **10** is an exploded perspective view illustrating the

indoor unit of an air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below. FIG. **11** is a perspective view illustrating the indoor unit of the air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and illustrates the vicinity of a drive motor of a lateral airflow adjusting unit. FIG. **12** is an exploded perspective view illustrating the indoor unit of the air-conditioning apparatus according to Embodiment 2 of the present disclosure, with the decorative panel removed, as viewed from obliquely below, and illustrates the vicinity of the drive motor of the lateral airflow adjusting unit. FIG. **13** is a sectional view taken along line B-B in FIG. **9**. FIG. **10** illustrates a state where two of four lateral airflow adjusting units **40** are attached, but the other two of the four lateral airflow are not attached.

[0069] In an indoor unit **100** according to Embodiment 2, each of the accommodating chambers **21** is provided between an associated second blowout flow passage **25** and the second suction flow passage **24** as the lateral airflow casement **20** is viewed from below. In other words, each accommodating chamber **21** is provided between an associated blowout flow passage **5** and the suction flow passage **4** as the casing **1** is viewed from a lower surface portion side thereof. When a drive device **44** is not provided in an associated accommodating chamber **21**, an outer peripheral side portion of the accommodating chamber **21** communicates with an inner peripheral side portion of the second blowout flow passage **25**. An inner peripheral side surface of the accommodating chamber **21** communicates with the second suction flow passage **24**. It should be noted that in Embodiment 2, plate members **28** are provided to face the inner peripheral side surfaces of the accommodating chambers **21**. The plate members **28** prevents, for example, an operator from touching the drive motors **45** accommodated in the respective accommodating chambers **21**, and do not close spaces between the accommodating chambers **21** and the second suction flow passage **24**. Thus, as illustrated in FIGS. **11** and **13**, flow passages **22** that cause the accommodating chambers **21** and the second suction flow passage **24** to communicate with each other are ensured.

[0070] In each of the lateral airflow adjusting units **40** according to Embodiment 2, the drive motor **45** and the power transmission mechanism **46** that forms the drive device **44** are located closer to an inner peripheral side of the lateral airflow casement **20** than part of the support base **42** that supports the lateral airflow adjusting plate **41**.

[0071] The support base **42** has a wall **42***c* that protrudes toward the second suction flow passage **24**. An outer peripheral surface of the wall **42***c* is shaped in accordance with the shape of an inner peripheral surface **21***c* of an opening portion of the accommodating chamber **21** that is located closer to the second blowout flow passage **25**. The power transmission mechanism **46** has a wall **46***a* that protrudes toward the second blowout flow passage **25**. An outer peripheral surface of the wall **42***c*, as well as the wall **42***c*, is shaped in accordance with the shape of the inner peripheral surface **21***c* of the opening port of the accommodating chamber **21** that is located closer to the second blowout flow passage **25**. A distal end of the wall **42***c* of the accommodating chamber **21** is in contact with a distal end of the wall **46***a* of the power transmission mechanism **46**. With the drive device **44** accommodated in the accommodating chamber **21**, the wall **42***c* of the support base **42** and the wall **46***a* of the power transmission mechanism **46** are in contact with the inner peripheral surface **21***c* of the opening portion of the accommodating chamber **21** that is closer to the second blowout flow passage **25**. Thereby, the second blowout flow passage **25** is isolated from the accommodating chamber **21**. That is, the accommodating chamber **21** is isolated from the blowout flow passage **5**. Thus, the drive motor **45** of the drive device **44** is isolated from the second blowout flow passage **25**, that is, the blowout flow passage **5**, and is accommodated in the accommodating chamber **21** that communicates with the suction flow passage **4**.

[0072] In Embodiment 2, the accommodating chamber **21** corresponds to the accommodating chamber of the present disclosure.

[0073] In Embodiment 2, in order to improve the airtightness between the wall **42***c* of the support base **42** and the wall **46***a* of the power transmission mechanism **46** and the inner peripheral surface **21***c* of the accommodating chamber **21**, a sealant **48** is provided between the wall portions **42***c* and **46***a* and inner peripheral surface **21***c*. Furthermore, in Embodiment 2, a sealant **42***d* is provided between the inner peripheral surface of the second blowout flow passage **25** and the support base **42** to improve the airtightness between the inner peripheral surface and the support base **42**.

[0074] As described above, in the indoor unit **100** according to Embodiment 2, the drive motor **45** is accommodated in the accommodating chamber **21** that is isolated from the second blowout flow passage **25**, that is, the blowout flow passage **5**, and communicates with the suction flow passage **4**. Thus, as in Embodiment 1, in the indoor unit **100** according to Embodiment 2 also, it is possible to prevent can also prevent the drive motor **45** from being affected by the temperature of air subjected to heat exchange at the heat exchanger **7**. Thus, the indoor unit **100** according to Embodiment 2 can also ensure the durability of the drive motor **45** as in Embodiment 1.

[0075] In the indoor unit **100** according to Embodiment 2, the accommodating chamber **21** is provided closer to the suction flow passage **4** than in Embodiment 1. Thus, air in the accommodating chamber **21** of the indoor unit **100** according to Embodiment 2 is easily sucked by a fan **6** when the fan **6** is rotated, as compared with the first accommodating chamber **21***a* of Embodiment 1. Thus, the accommodating chamber **21** of the indoor unit **100** according to Embodiment 2 is located such that heat generated by the drive motor **45** cannot easily stay in the accommodating chamber **21** of the indoor unit **100**, as compared with the first accommodating chamber **21***a* of Embodiment 1, thereby restricting an increase in the temperature of the drive motor **45**. Therefore, the indoor unit **100** according to Embodiment 2 can also further improve efficiency of the drive motor **45** than the indoor unit **100** in Embodiment 1.

[0076] Also, as illustrated in FIG. **12**, as in Embodiment 1, the lateral airflow adjusting unit **40** of Embodiment 2 includes a heat insulating material **93** between a component located in a region that communicates with the blowout flow passage **5** and a component located in a region that communicates with the suction flow passage **4**.

[0077] Specifically, in the indoor unit **100** according to Embodiment 2, the support base **42** of the lateral airflow adjusting unit **40** isolates the accommodating chamber **21** and the blowout flow passage **5** from each other. That is, the support base **42** is the component located in the region that

communicates with the blowout flow passage **5**. In the lateral airflow adjusting unit **40** according to Embodiment 2, the drive motor **45** and the power transmission mechanism **46** are accommodated in the accommodating chamber **21**. That is, the drive motor **45** and the power transmission mechanism **46** are the components located in the region that communicates with the suction flow passage **4**. The heat insulating material **93** is provided between the support base **42** and the power transmission mechanism **46**. To be more specific, as illustrated in FIG. **13**, the heat insulating material **93** is provided in space surrounded by the wall **42***c* of the support base **42** and the wall **46***a* of the power transmission mechanism **46**. Thus, as in Embodiment 1, the indoor unit **100** according to Embodiment 2 can further reliably prevent the drive device **45** from being affected by the temperature of the air subjected to heat exchange at the heat exchanger **7**. Thus, the indoor unit **100** according to Embodiment 2 can further reliably ensure the durability of the drive motor **45** as in Embodiment 1.

Reference Signs List

1 casing,	2 air inlet,	2a suction grille,	3 air outlet,
4 suction flow passage,	5 blowout flow passage,	6 fan,	7 heat exchanger,
8 bell mouth,	9 filter,	10 indoor unit body,	11 fittings,
14 first suction flow passage,	15 first blowout flow passage,	20 lateral airflow casement,	21 accommodating chamber,
21a first accommodating chamber,	21b second accommodating chamber,	21c inner peripheral surface,	22 flow passage,
24 second suction flow passage,	25 second blowout flow passage,	28 plate member,	30 decorative panel,
34 third suction flow passage,	35 third blowout flow passage,	40 lateral airflow adjusting unit,	41 lateral airflow adjusting plate,
42 support base,	42a wall portion,	42b sealant,	42c wall,
42d sealant,	43 coupling member,	43a first coupling member,	43b second coupling member,
44 drive device,	45 drive motor,	46 power transmission mechanism,	46a wall,
47 lid,	47a sealant,	48 sealant,	51 vertical airflow adjusting plate,
52 drive device,	91 sealant,	92 sealant,	92a location range,
93 heat insulating material,	100 indoor unit,	101 suction air,	102 blowout air

1. An indoor unit of an air-conditioning apparatus, comprising:

a casing having an air inlet and an air outlet that are provided as openings formed in a lower surface portion of the casing;

a fan housed in the casing and configured to suck air in an air-conditioned space from the air inlet into the casing and blow the air from the air outlet;

a heat exchanger housed in the casing and configured to cause heat exchange to be performed between refrigerant that flows in the heat exchanger and the air sucked into the casing; and

a lateral airflow adjusting unit configured to adjust in a lateral direction, an angle of the air that is blown from the air outlet,

wherein in the casing, a suction flow passage and a blowout flow passage are provided, the suction flow passage causing the air inlet and the heat exchanger to communicate with each other, the blowout flow passage causing the heat exchanger and the air outlet to communicate with each other,

the lateral airflow adjusting unit includes

a plurality of lateral airflow adjusting plates arranged in the blowout flow passage at defined intervals in the lateral direction, and

a drive device including a drive motor and configured to swing the plurality of lateral airflow adjusting plates with power generated by the drive motor,

the casing includes an accommodating chamber that is isolated from the blowout flow passage and communicates with the suction flow passage, and

the drive motor is accommodated in the accommodating chamber.

2. The indoor unit of an air-conditioning apparatus of claim **1**, wherein the accommodating chamber is located between the blowout flow passage and the suction flow passage as the casing is viewed from the lower surface portion.

3. The indoor unit of an air-conditioning apparatus of claim **1**, wherein the accommodating chamber is provided at a corner of the casing as the casing is viewed from the lower surface portion.

4. The indoor unit of an air-conditioning apparatus of claim **1**, wherein the lateral airflow adjusting unit includes a heat insulating material between a component located in a region that communicates with the blowout flow passage and a component located in a region that communicates with the suction flow passage.

5. The indoor unit of an air-conditioning apparatus of claim **1**, wherein the lateral airflow adjusting unit includes a support base configured to support the plurality of lateral airflow adjusting plates in such a manner as to enable the plurality of lateral airflow adjusting plates to be swung, and

a coupling member configured to couple the plurality of lateral airflow adjusting plates to the drive device,

the drive device is attached to the support base, and

the lateral airflow adjusting unit is configured such that the support base is removably attached to the casing and thus the plurality of lateral airflow adjusting plates, the support base, the coupling member, and the drive device are removable from the casing, with the plurality of lateral airflow adjusting plates, the support base, the coupling member, and the drive device assembled as a single body.

6. The indoor unit of an air-conditioning apparatus of claim **1**, wherein the casing includes

an indoor unit body including a first suction flow passage that forms part of the suction flow passage and a first blowout flow passage that forms part of the blowout flow passage, the indoor unit body housing the fan and the heat exchanger,

a lateral airflow casement attached to a lower portion of the indoor unit body, and including a second suction flow passage and a second blowout flow passage, the second suction flow passage forming part of the suction flow passage and communicating with the first suction flow passage, the second blowout flow passage forming part of the blowout flow passage and communicating with the first blowout flow passage, and

a decorative panel attached to a lower portion of the lateral airflow casement, and including the air inlet, a third suction flow passage, a third blowout flow passage, and the air outlet, the third suction flow passage forming part of the suction flow passage and communicating with the second suction flow passage and the air inlet, the third blowout flow passage forming part of the blowout flow passage and communicating with the second blowout flow passage and the air outlet,

the accommodating chamber is provided in the lateral airflow casement, and

the plurality of lateral airflow adjusting plates of the lateral airflow adjusting unit are arranged in the second blowout flow passage of the lateral airflow casement.

7. The indoor unit of an air-conditioning apparatus of claim **6**, further comprising a vertical airflow adjusting plate provided in the third blowout flow passage in such a manner as to be swingable and configured to adjust in a vertical direction, an angle of the air that is blown from the air outlet.

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