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(54) AIR CONDITIONER

KLIMAANLAGE

CLIMATISEUR

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Description

Technical Field

[0001] Embodiments described herein relate generally to an air conditioner comprising, for example, a ceiling suspended indoor unit.

Background Art

[0002] A ceiling suspended indoor unit is often used in an air conditioner comprising an indoor unit and an outdoor unit. The ceiling suspended indoor unit does not project from a wall of a room, unlike a so-called wall hung indoor unit, but is hung from a beam, etc., under a roof. Since it is attached almost in close contact with a ceiling board, the unit is unobtrusive in a room.

[0003] This kind of indoor unit is equipped with a partition plate partitioning a heat exchange chamber for arranging a heat exchanger and an air supply chamber for arranging an air supply device in a unit body (housing). An electrical component box is arranged in the air supply chamber. This electrical component box contains electrical components for receiving an instruction signal from a remote control unit and driving and controlling the air supply device, a louver, etc.

JP H04 131628 A discloses an air conditioner according to the preamble of claim 1.

Citation List

[0004]

Patent Literature 1: JP 2012-93044 A
Patent Literature 2: JP H04 131628 A

Disclosure of Invention

[0005] Usually, the electrical component box is arranged in extremely small space between the air supply device in the air supply chamber and a back surface plate of the unit body. To attach the electrical component box, for example, a plurality of holes provided in the electrical component box are hooked onto a plurality of projections provided in a top plate portion of the unit body, and other portions are screwed and fixed to each other. The holes are merely linear slit notches. The projections are rectangular and three sides thereof are cut and raised.

[0006] Since the projections are connected to the top plate portion on only one side, the strength of the projections causes anxiety. The plurality of holes are opened at a plate surface of the electrical component box with a large area. However, a plurality of projections have to be simultaneously engaged, which is troublesome. Also, since the position of the electrical component box is not regulated, the electrical component box is easy to move in small space and hard to screw and fix, even if the projections are engaged with the holes.

[0007] Under such circumstances, an air conditioner in which the strength of an engaging portion of the electrical component box is increased and the rigidity against vibration during transportation is improved and which can be easily attached is desired.

[0008] According to one embodiment, an air conditioner comprises an air conditioner body comprises an electrical component box containing an electrical component; a drawn portion formed in the air conditioner body to be swollen and configured to closely contact the electrical component box; a projection provided in one of the air conditioner body and the electrical component box by a cut-and-raised process, and a hole which is provided in the other one of the air conditioner body and the electrical component box, to which the projection is fitted and which is slid along the drawn portion of the air conditioner body and hooked onto the projection; and an attaching portion for screwing and fixing the electrical component box to the air conditioner body at a position at which the projection is hooked onto the hole.

Brief Description of Drawings

[0009]

FIG. 1 is an appearance perspective view of an indoor unit of an air conditioner according to one embodiment.

FIG. 2 is a longitudinal sectional view of the indoor unit according to the embodiment.

FIG. 3 is a bottom view illustrating an internal structure of the indoor unit according to the embodiment.

FIG. 4 is a perspective view of a front surface of an electrical component box according to the embodiment.

FIG. 5 is a perspective view of a rear surface of the electrical component box according to the embodiment.

FIG. 6 is a perspective view illustrating part of the internal structure of the indoor unit before the electrical component box according to the embodiment is attached.

FIG. 7 is a perspective view illustrating part of the internal structure of the indoor unit in which the electrical component box is attached according to the embodiment.

FIG. 8A is a perspective view illustrating a state in the middle of attaching the electrical component box according to the embodiment.

FIG. 8B is a perspective view illustrating a relationship between a projection and a hole in the middle of attaching the electrical component box according to the embodiment.

FIG. 8C is an elevation view illustrating the relationship between the projection and the hole in the middle of attaching the electrical component box according to the embodiment.

FIG. 9A is a perspective view illustrating a state

where the electrical component box is attached according to the embodiment.

FIG. 9B is a perspective view illustrating the relationship between the projection and the hole in the state where the electrical component box according to the embodiment is attached.

FIG. 9C is an elevation view illustrating the relationship between the projection and the hole in the state where the electrical component box is attached according to the embodiment.

Brief Description of Embodiments

[0010] An air conditioner according to one embodiment will be hereinafter described with reference to the drawings.

[0011] FIG. 1 is an appearance perspective view of an indoor unit of the air conditioner. FIG. 2 is a longitudinal sectional view of the indoor unit. FIG. 3 is a bottom view illustrating an internal structure of the indoor unit.

[0012] In the figures, a unit body 1 (an air conditioner body) is configured to be hooked onto a hanging bolt hung from a beam, etc., under a roof (not shown) exposed to an interior of a room and attached extremely adjacently to a ceiling plane. The unit body 1 is formed such that the width (a horizontal direction) is much greater than the thickness (a vertical direction).

[0013] The unit body 1 comprises a bottom plate portion 1a forming a lower surface, a top plate portion 1b forming an upper surface adjacent to a ceiling in a state where the unit body 1 is hung down, a pair of right and left side plate portions 1c for connecting the bottom plate portion 1a and the top plate portion 1b, and a back surface portion 1d.

[0014] The bottom plate portion 1a has a suction port 2 to which a grille 10 and a filter 11 are detachably fitted along the width direction of the bottom plate portion 1a. The suction port 2 has a substantially half size of the bottom plate portion 1a in the back and forth direction orthogonal to the width direction of the bottom plate portion 1a. A discharge port 3 to which a horizontal louver 12 is openably and closably attached is provided at a front surface of the unit body 1.

[0015] A partition plate 6 is provided inside the unit body 1. The partition plate 6 stands along a side edge of the suction port 2 to which the above-described grille 10 is fitted, and is extended to be in contact with the top plate portion 1b of the unit body 1. Also, the partition plate 6 is extended to be in contact with right and left side plate portions 1c, and partitions the unit body 1 into two chambers A and B.

[0016] That is, an air supply chamber A located on a side of the suction port 2 and a heat exchange chamber B located on a side of the discharge port 3 are formed inside the unit body 1 with the partition plate 6 placed between the air supply chamber A and the heat exchange chamber B. An air supply device S and an electric component box 9 containing electric components for driving and controlling the air supply device S etc. are arranged in the air supply chamber A, as described later. An indoor heat exchanger 5 is arranged in the heat exchange chamber B.

[0017] The air supply device S arranged in the air supply chamber A comprises a two-shaft fan motor 15 whose rotary shafts are projected from both sides, one or two fans fitted to each of right and left rotary shafts of the fan motor 15, and fan casings 17 each containing the fan.

[0018] When the fan motor 15 rotates and drives the fans, the fans draw air from an axial direction and discharge it from a circumferential direction. The fan casing 17 comprises a suction opening around the rotary shafts. A discharge port body 17a, passing through the partition plate 6 and projecting toward the heat exchange chamber B is integrally provided with the fan casing 17.

[0019] On the other hand, the electrical component box 9 arranged in the air supply chamber A is inserted into a small space (gap) formed between the fan casing 17 and the back surface portion 1d which is a wall surface of the unit body 1, and attached, as described later.

[0020] The indoor heat exchanger 5 and a drain receiver 7 are contained in the heat exchange chamber B. The drain receiver 7 is located below the indoor heat exchanger 5. Since the unit body 1 is formed to be shortened in the vertical direction as much as possible, the indoor heat exchanger 5 is obliquely arranged to be extremely inclined.

[0021] The drain receiver 7 is formed of, for example, thick synthetic resin material. The drain receiver 7 is formed in a large area covering almost the entire base of the heat exchange chamber B in order to receive all drain water drops generated by a refrigeration cycle operation and dripped from the inclined indoor heat exchanger 5.

[0022] The drain receiver 7 is connected to a drain hose, and communicates with a drain pump device D arranged at a corner of the air supply chamber A. The drain pump device D pumps up drain water gathering in the drain receiver 7, and pumps it out in a predetermined area.

[0023] An upper heat insulator 30 supporting an upper end of the indoor heat exchanger 5 is provided in an upper portion of the heat exchange chamber B. The upper heat insulator 30 is formed thick, as well as the drain receiver 7, to prevent heat generation (warm heat and cold heat) caused by a refrigeration cycle operation of the indoor heat exchanger 5 from being transferred to a plate material of the unit body 1.

[0024] Next, the electrical component box 9 arranged in the air supply chamber A will be described.

[0025] FIG. 4 is a perspective view of a front surface of the electrical component box 9. FIG. 5 is a perspective view of a rear surface of the electrical component box 9.

[0026] The electrical component box 9 comprises a box body 9A and a lid plate 9B, each of which is formed by sheet metal working. The one whole surface of the box body 9A is opened. A circuit board and electrical

components (not shown) are attached inside the box body 9A from this opening. Also, part of a fixing tool for attaching the circuit board projects toward a back surface of the box body 9A. A swollen portion 20 for keeping rigidity is provided on the lid plate 9B. The lid plate 9B is fitted to the opening of the box body 9A and covers the inside of the box body 9A.

[0027] A pair of right and left attaching tongue portions 21 and 22 are provided in an upper end of the box body 9A and the lid plate 9B in the figure. The attaching tongue portion 22 of the lid plate 9B is screwed and fixed to the attaching tongue portion 21 of the box body 9A by an attaching screw 23. An attaching screw 24 for fixing the attaching tongue portion 21 to an attaching portion provided in the unit body 1 and described later is attached to the attaching tongue portion 21 of the box body 9A.

[0028] As shown in only FIG. 5, a pair of right and left holes 25 are provided in a lower end of the electrical component box 9 in the figure. Each hole 25 comprises a rectangular hole 25a which is rectangular and a fitting notch 25b. The fitting notch 25b extends only one side of the rectangular hole 25a which is along a longitudinal direction of the electrical component box 9. The fitting notch 25b extends the side in the longitudinal direction of the electrical component box 9a.

[0029] In reality, the figure is turned upside down to contain and arrange the electrical component box 9 in the air supply chamber A of the unit body 1. That is, an end in which the hole 25 is provided is on the side of a top plate portion 9b, and an end in which the attaching tongue portions 21 and 22 are provided is on the side of a bottom plate portion 9a. The lid plate 9B on which the swollen portion 20 shown in FIG. 4 is provided is directed toward the air supply device S.

[0030] FIG. 6 is a perspective view illustrating part of the internal structure of the unit body 1 before the electrical component box 9 is attached. The direction of the unit body 1 is made different from the actual direction to easily illustrate the structure.

[0031] A lower end of the unit body 1 in FIG. 6 indicates the back surface portion 1d. A drawn portion 28 formed to be swollen inside the unit body 1 is provided in part of the back surface portion 1d. The drawn portion 28 comprises a long relief hole a. The bottom plate portion 1a forming a lower surface is attached to a front opening of the unit body 1 in FIG. 6 later. A pair of right and left attaching portions 29, each of which comprises a screw hole, are provided in an area in which the bottom plate portion 1a intersects the back surface portion 1d. The pair of attaching portions 29 are located apart from each other at a predetermined interval.

[0032] In addition, a back surface of the unit body 1 in FIG. 6 is the top plate portion 1b, and a pair of right and left projections 31 (only one of them shown) are provided in an intermediate portion between the fan casing 17 which is a component of the air supply device S and the back surface portion 1d. The pair of projections 31 are provided apart from each other at a predetermined interval. Each projection 31 is formed as described later, and located nearly in face of an extension of the attaching portion 29.

[0033] FIG. 7 is a perspective view illustrating the internal structure of the unit body 1 in which the electrical component box 9 is attached. Likewise, the direction of the unit body 1 is consistent with that in FIG. 6 to easily illustrate the structure.

[0034] In the figure, the electrical component box 9 is on the back surface portion 1d of the unit body 1. Specifically, the electrical component box 9 is on the drawn portion 28 provided in the back surface portion 1d. The fixing tool projecting from the box body 9A of the electrical component box 9 is inserted into the long relief hole a provided in the drawn portion 28.

[0035] The attaching tongue portion 21 provided in the box body 9A of the electrical component box 9 is overlaid on the attaching portion 29 provided in the unit body 1, and attached by an attaching screw after positioning. The hole 25 provided in the electrical component box 9 is fitted to the projection (not shown) of the unit body 1 and attached as described later.

[0036] As shown above, the electrical component box 9 is attached to small space between the air supply device S and the back surface portion 1d of the unit body 1 in the air supply chamber A. To be specific, the hole 25 is engaged with the projection 31 of the top plate portion 1b of the unit body 1, and the electrical component box 9 is screwed and fixed to an end of the back surface portion 1d.

[0037] FIG. 8A illustrates a first process for attaching the electrical component box 9 to the unit body 1. In FIG. 8A, the lid plate 9B is detached and only the box body 9A is shown for ease of understanding. A lower plate surface in the figure is the back surface portion 1d of the unit body 1. The electrical component box 9 is on the drawn portion 28 provided in the back surface portion 1d.

[0038] The attaching portion 29 is formed to be swollen in the end of the back surface portion 1d for attaching a grille 10. The attaching portion 29 is displaced from the attaching tongue portion 21 provided in the electrical component box 9.

[0039] A back plate surface of the unit body 1 in the figure is the top plate portion 1b. The projection 31 provided in the top plate portion 1b is inserted into and loosely fitted to the hole 25 provided in the electrical component box 9. Thus, the projection 31 can be extremely easily fitted to the hole 25.

[0040] FIGS. 8B and 8C are an enlarged perspective view and an enlarged elevation view illustrating a relationship between the projection 31 provided in the unit body 1 by a cut-and-raised process and the hole 25 provided in the electrical component box 9.

[0041] The projection 31 is cut and raised to be rectangular. The continuous two sides formed by an upper side 31a and a left side 31b of the projection 31 especially indicated by hatching in FIG. 8C are connecting sides connecting the unit body 1. On the other hand, the con-

tinuous two sides formed by a lower side 31c and a right side 31d of the projection 31 not indicated by hatching are separated sides separated from the unit body 1.

[0042] The cut-and-raised height of the projection 31 cut and raised from the unit body 1 needs to be at least greater to some extent than the thickness of the plate of the box body 9A which is a component of the electrical component box 9.

[0043] On the other hand, the hole 25 comprises the rectangular hole 25a and the fitting notch 25b. The rectangular hole 25a is formed to be greater to some extent than the rectangular projection 31 in vertical and horizontal directions. The fitting notch 25b is cut especially from an upper portion of the rectangular hole 25a in a horizontal direction in the figure.

[0044] It should be noted that the fitting notch 25b is formed along an extension of the upper side 31a of the projection 31, the upper side 31a being connected to the unit body 1. The length L of the fitting notch 25b is substantially identical to that of the upper side 31a of the projection 31, or smaller than that of the upper side 31a. The vertical width h of the fitting notch 25b is slightly greater than the thickness of the plate of the unit body 1.

[0045] As described above, a back surface portion 9d which is the box body 9A of the electrical component box 9 is put on the drawn portion 28 provided in the back surface portion 1d of the unit body 1, and the rectangular holes 25a forming part of the holes 25 of the electrical component box 9 is loosely fitted to the projections 31 of the unit body 1, then the electrical component box 9 is slid and urged to the left in the figure.

[0046] In this state, the upper side 31a which is the connecting side of the projection 31 enters the fitting notch 25b which is cut in the horizontal direction at the upper portion of the rectangular hole 25a. The rectangular hole 25a forming part of the hole 25 is displaced from a cut-and-raised hole after the projection 31 is cut and raised.

[0047] FIG. 9A is a perspective view illustrating a state where the electrical component box 9 is slid and urged to a predetermined position of the unit body 1. FIG. 9B is a perspective view illustrating a state of the hole 25 and the projection 31 at that time. FIG. 9C is an elevation view of the hole 25 and the projection 31.

[0048] As stated above, the cut-and-raised height of the projection 31 is set to be greater than the thickness of the plate of the box body 9A which is the component of the electrical component box 9. Thus, when the electrical component box 9 is slid and urged in a predetermined direction, the upper side 31a forming part of the projection 31 of the unit body 1 is fitted to the fitting notch 25b forming part of the hole 25 of the electrical component box 9, and the rectangular hole 25a gradually faces the projection 31 and the cut-and-raised hole.

[0049] Finally, a distal portion of the fitting notch 25b is hooked onto that of the upper side 31a of the projection 31, and further sliding and urging are restricted. The upper side 31a is fitted to almost entire part of the fitting notch 25b based on the setting of the lengths of the fitting notch 25b and the upper side 31a. Furthermore, since the pair of right and left projections 31 and the pair of right and left holes 25 are provided, the electrical component box 9 is kept parallel at any position without being inclined, and a correct posture is kept.

[0050] An attaching hole provided in the attaching tongue portion 21 of the electrical component box 9 at this moment correctly faces the screw hole provided in the attaching portion 29 formed to be swollen in the unit body 1. Then, the attaching screw 24 is screwed to the screw hole through the attaching hole. On the other hand, the back surface portion 9d of the electrical component box 9 is in contact with the drawn portion 28 provided in the back surface portion 1d of the unit body 1 and slid on the drawn portion 28.

[0051] Eventually, as shown in FIGS. 1, 3 and 5, the electrical component box 9 is contained and arranged in small space between the fan casing 17 forming part of the air supply device S in the air supply chamber A and the back surface portion 1d of the unit body 1. The back surface portion 9d of the electrical component box 9 closely contacts the drawn portion 28 of the back surface portion 1d of the unit body 1, and the upper side 31a of the projection 31 is fitted to the fitting notch 25b forming part of the hole 25.

[0052] Consequently, even if an interval between the back surface portion 1d of the unit body 1 and the fan casing 17 of the air supply device S is extremely short, a position of the electrical component box 9 can be surely regulated and the electrical component box 9 can be arranged without contacting the fan casing 17. Since the attaching screw 24 is screwed to the attaching hole provided in the attaching tongue portion 21 of the electrical component box 9 and the screw hole provided in the attaching portion 29 of the unit body 1, the electrical component box 9 can be surely attached.

[0053] In particular, positioning of the electrical component box 9 with respect to the unit body 1 and the air supply device S can be easily made merely by inserting the projection 31 of the unit body 1 into the hole 25 of the electrical component box 9, and sliding the electrical component box 9 in a predetermined direction. The attachment is made using minimum number of attaching screws 24 (two attaching screws 24), and improvement of workability and reduction of working hours can be achieved.

[0054] Even if the attaching screws 24 are detached at the time of maintenance, the electrical component box 9 remains hooked onto the unit body 1 and is not dropped. As a result, safety can be secured.

[0055] The projection 31 is cut and raised to be rectangular. Two continuous sides 31c and 31d are separated sides separated from the unit body 1, and the other two continuous sides 31a and 31b are the connecting sides connecting the unit body 1. Thus, the rigidity of the projection 31 can be increased, and the projection 31 can fully bear an impact load, for example, during trans-

portation.

[0056] The projection 31 and the hole 25 are provided in the top plate portions 1b and 9b of each of the unit body 1 and the electrical component box 9. The drawn portion 28 is provided in the back surface portion 1d of the unit body 1. The attaching portion 29 and the attaching tongue portion 21 are provided in the bottom plate portions 1a and 9a of each of the unit body 1 and the electrical component box 9. Thus, the electrical component box 9 can be easily positioned, and the rigidity of the unit body 1 can be improved.

[0057] It should be noted that although the projection 31 is provided in the unit body 1 and the hole 25 is provided in the electrical component box 9, the embodiment is not limited to this case. Conversely, even if the hole 25 is provided in the unit body 1 and the projection 31 is provided in the electrical component box 9, the above structure can be achieved.

[0058] Moreover, although a ceiling suspended air conditioner has been described as an embodiment, the embodiment is not limited to this type. Obviously, it can be applied to a ceiling-mounted air conditioner which is arranged on a back side of a ceiling board and whose duct is connected to a suction port and a discharge port.

Claims

1. An air conditioner comprising:

an air conditioner body (1) comprising an electrical component box (9) containing an electrical component;
a drawn portion (28) formed in the air conditioner body (1) to be swollen and configured to closely contact the electrical component box (9);
a projection (31) provided in one of the air conditioner body (1) and the electrical component box (9) by a cut-and-raised process;
a hole (25) which is provided in the other one of the air conditioner body (1) and the electrical component box (9), to which the projection (31) is fitted and which is slid along the drawn portion (28) of the air conditioner body (1) and hooked onto the projection (31); and
an attaching portion (29) for screwing and fixing the electrical component box (9) to the air conditioner body (1) at a position at which the projection (31) is hooked onto the hole (25),
characterized in that the projection (31) is in the shape of a rectangle and includes two connecting sides (31a, 31b) which are orthogonally continuous with each other and are connected to one of the air conditioner body (1) and the electrical component box (9), and two separated sides (31c, 31d) which are orthogonally continuous with each other and are separated from one of the air conditioner body (1) and the electrical component box (9), and
the hole (25) includes a rectangular hole (25a) which opens to be fitted to the projection (31), and a fitting notch (25b) which is cut from a part of the rectangular hole (25a), and the fitting notch (25b), to which one of the connecting sides (31a) of the projection (31) is fitted when the electrical component box (9) is slid, is hooked onto the connecting side (31a).

2. The air conditioner of Claim 1, in that:

the projection (31) is provided in a top plate portion (1b) of the air conditioner body (1);
the hole (25) is provided in a top plate portion (9b) of the electrical component box (9);
the drawn portion (28) is provided in a back surface portion (1d) of the air conditioner body (1); and
the attaching portion (29) is provided in a bottom plate portion (1a, 9a) of each of the air conditioner body (1) and the electrical component box (9).

3. The air conditioner of Claim 1, **characterized in that** each of the projection (31) and the hole (25) is provided in a plurality of positions separated from each other along a sliding direction of the electrical component box (9).

Patentansprüche

1. Klimaanlage bestehend aus:

einem Klimaanlagenkörper (1), der ein Gehäuse (9) für elektrische Komponenten aufweist, das eine elektrische Komponente enthält;
einen gezogenen Abschnitt (28), der in dem Klimaanlagenkörper (1) so ausgebildet ist, dass er geschwollen ist und so konfiguriert ist, dass er in engem Kontakt mit dem Gehäuse (9) der elektrischen Komponente steht;
einen Vorsprung (31), der entweder im Klimaanlagenkörper (1) oder im Gehäuse (9) für elektrische Komponenten durch ein Schneid- und Aufrichtverfahren vorgesehen wurde;
ein Loch (25), das in dem anderen von dem Klimaanlagenkörper (1) oder dem Gehäuse (9) für elektrische Komponenten vorgesehen ist, an dem der Vorsprung (31) befestigt ist, und das entlang des gezogenen Abschnitts (28) des Klimaanlagenkörpers (1) geschoben und an dem Vorsprung (31) eingehakt wird; und
ein Befestigungsteil (29) zum Verschrauben und Befestigen des Gehäuses (9) für elektrische Komponenten an dem Körper (1) der Klimaanlage an einer Stelle, an der der Vorsprung (31)

in das Loch (25) eingehakt wird,
dadurch gekennzeichnet, dass der Vorsprung (31) die Form eines Rechtecks aufweist und zwei Verbindungsseiten (31a, 31b) umfasst, die orthogonal durchgehend zueinander sind und entweder mit dem Klimaanlagenkörper (1) oder dem Gehäuse (9) für elektrische Komponenten verbunden sind, sowie zwei getrennte Seiten (31c, 31d), die orthogonal durchgehend zueinander sind und entweder von dem Klimaanlagenkörper (1) oder dem Gehäuse (9) für elektrische Komponenten getrennt sind, und
das Loch (25) ein rechteckiges Loch (25a) umfasst, das sich öffnet, um in den Vorsprung (31) eingepasst zu werden, und eine Passnut (25b), die aus einem Teil des rechteckigen Lochs (25a) ausgeschnitten wird, und die Passnut (25b), in die eine der Verbindungsseiten (31a) des Vorsprungs (31) eingepasst wird, wenn das Gehäuse (9) der elektrische Komponenten geschoben wird, an der Verbindungsseite (31a) eingehakt wird.

2. Klimaanlage nach Anspruch 1, darin:

der Vorsprung (31) in einem oberen Plattenteil (1b) des Klimaanlagenkörpers (1) vorgesehen ist;
das Loch (25) in einem oberen Plattenabschnitt (9b) des Gehäuses (9) für elektrische Komponenten vorgesehen ist;
der gezogene Abschnitt (28) in einem Rückflächenabschnitt (1d) des Klimaanlagenkörpers (1) vorgesehen ist; und
der Befestigungsabschnitt (29) in einem Bodenplattenabschnitt (1a, 9a) des Klimagerätekörpers (1) und des Gehäuses (9) für elektrische Komponenten vorgesehen ist.

3. Klimaanlage nach Anspruch 1, **dadurch gekennzeichnet, dass** sowohl der Vorsprung (31) als auch das Loch (25) in einer Vielzahl von Positionen vorgesehen ist, die voneinander entlang einer Gleitrichtung des Gehäuses (9) für elektrische Komponenten getrennt sind.

Revendications

1. Climatiseur comprenant :

un corps de climatiseur (1) comprenant un boîtier de composant électrique (9) contenant un composant électrique ;
une partie étirée (28) formée dans le corps de climatiseur (1) à gonfler et configurée pour être en contact immédiat avec le boîtier de composant électrique (9) ;
une saillie (31) prévue dans l'un parmi le corps de climatiseur (1) et le boîtier de composant électrique (9) par un processus découpé et surélevé ;
un trou (25) qui est prévu dans l'autre parmi le corps de climatiseur (1) et le boîtier de composant électrique (9), sur lequel la saillie (31) est montée et qui coulisse le long de la partie étirée (28) du corps de climatiseur (1) et accroché sur la saillie (31) ; et
une partie de fixation (29) pour visser et fixer le boîtier de composant électrique (9) sur le corps de climatiseur (1) dans une position dans laquelle la saillie (31) est accrochée sur le trou (25),
caractérisé en ce que la saillie (31) se présente sous la forme d'un rectangle et comprend deux côtés de raccordement (31a, 31b) qui sont orthogonalement continus l'un par rapport à l'autre et sont raccordés à l'un parmi le corps de climatiseur (1) et le boîtier de composant électrique (9), et deux côtés séparés (31c, 31d) qui sont orthogonalement continus l'un par rapport à l'autre et sont séparés de l'un parmi le corps de climatiseur (1) et le boîtier de composant électrique (9), et
le trou (25) comprend un trou rectangulaire (25a) qui s'ouvre pour être monté sur la saillie (31), et une encoche de montage (25b) qui est découpée dans une partie du trou rectangulaire (25a), et l'encoche de montage (25b), sur laquelle l'un des côtés de raccordement (31a) de la saillie (31) est monté, lorsque le boîtier de composant électrique (9) coulisse, est accrochée sur le côté de raccordement (31a).

2. Climatiseur selon la revendication 1, dans lequel :

la saillie (31) est prévue dans une partie de plaque supérieure (1b) du corps de climatiseur (1) ;
le trou (25) est prévu dans une partie de plaque supérieure (9b) du boîtier de composant électrique (9) ;
la partie étirée (28) est prévue dans une partie de surface arrière (1d) du corps de climatiseur (1) ; et
la partie de fixation (29) est prévue dans une partie de plaque inférieure (1a, 9a) de chacun parmi le corps de climatiseur (1) et le boîtier de composant électrique (9).

3. Climatiseur selon la revendication 1, **caractérisé en ce que** chacun parmi la saillie (31) et le trou (25) est prévu dans une pluralité de positions séparées les unes des autres le long d'une direction de coulissement du boîtier de composant électrique (9).

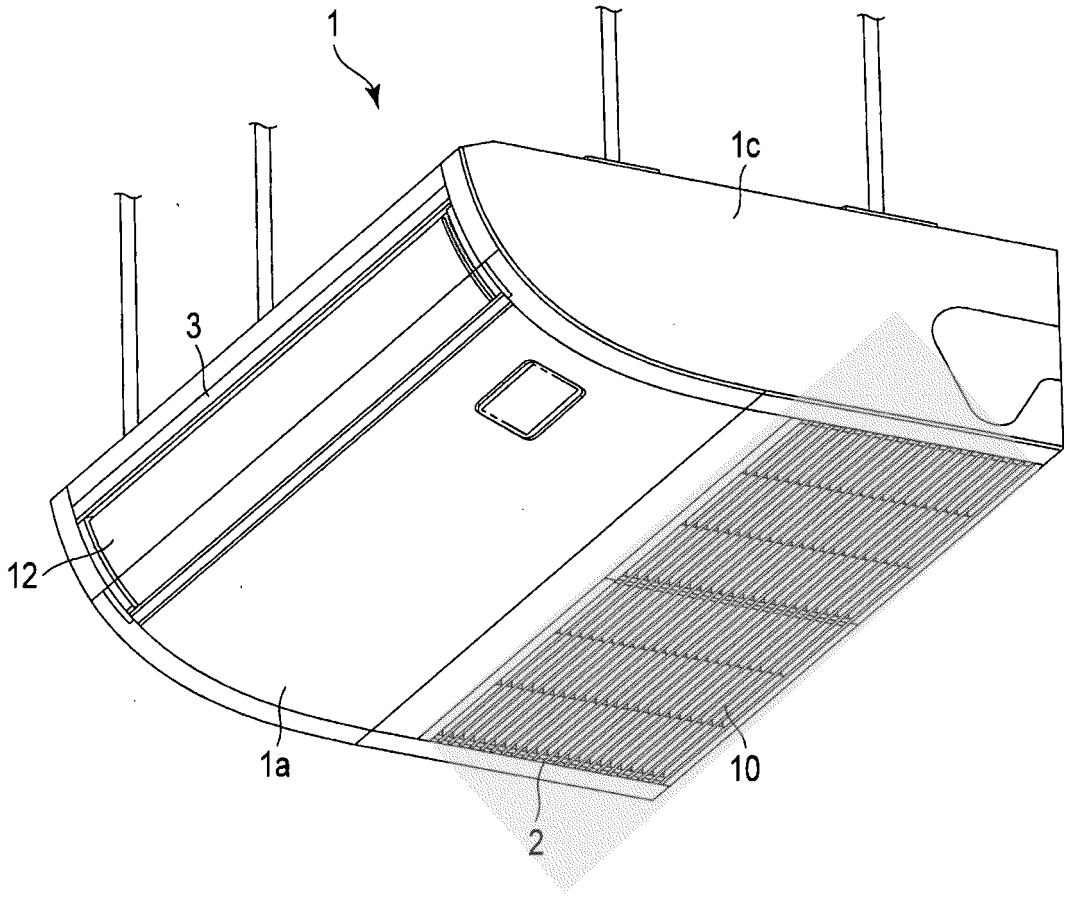

FIG. 1

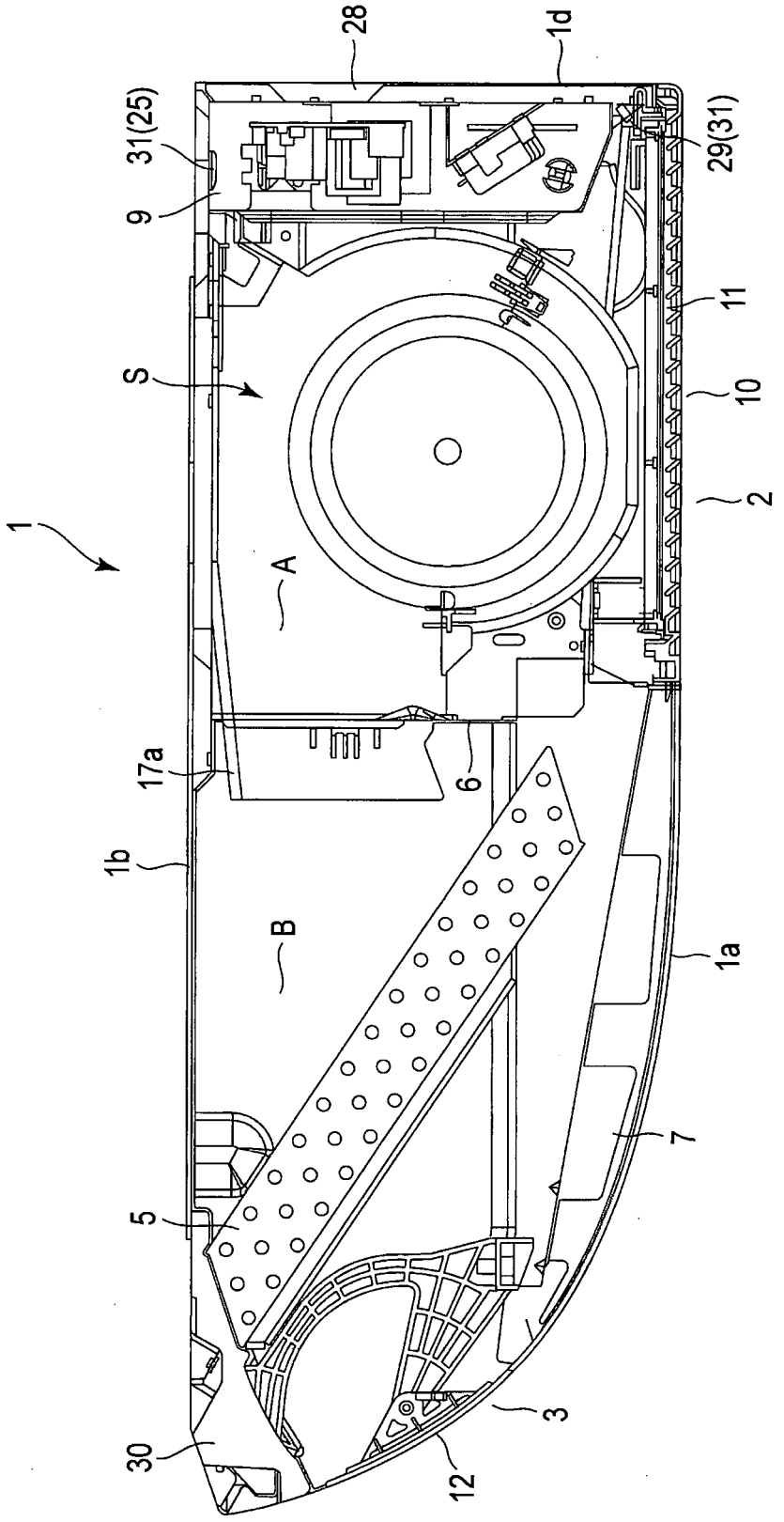

FIG. 2

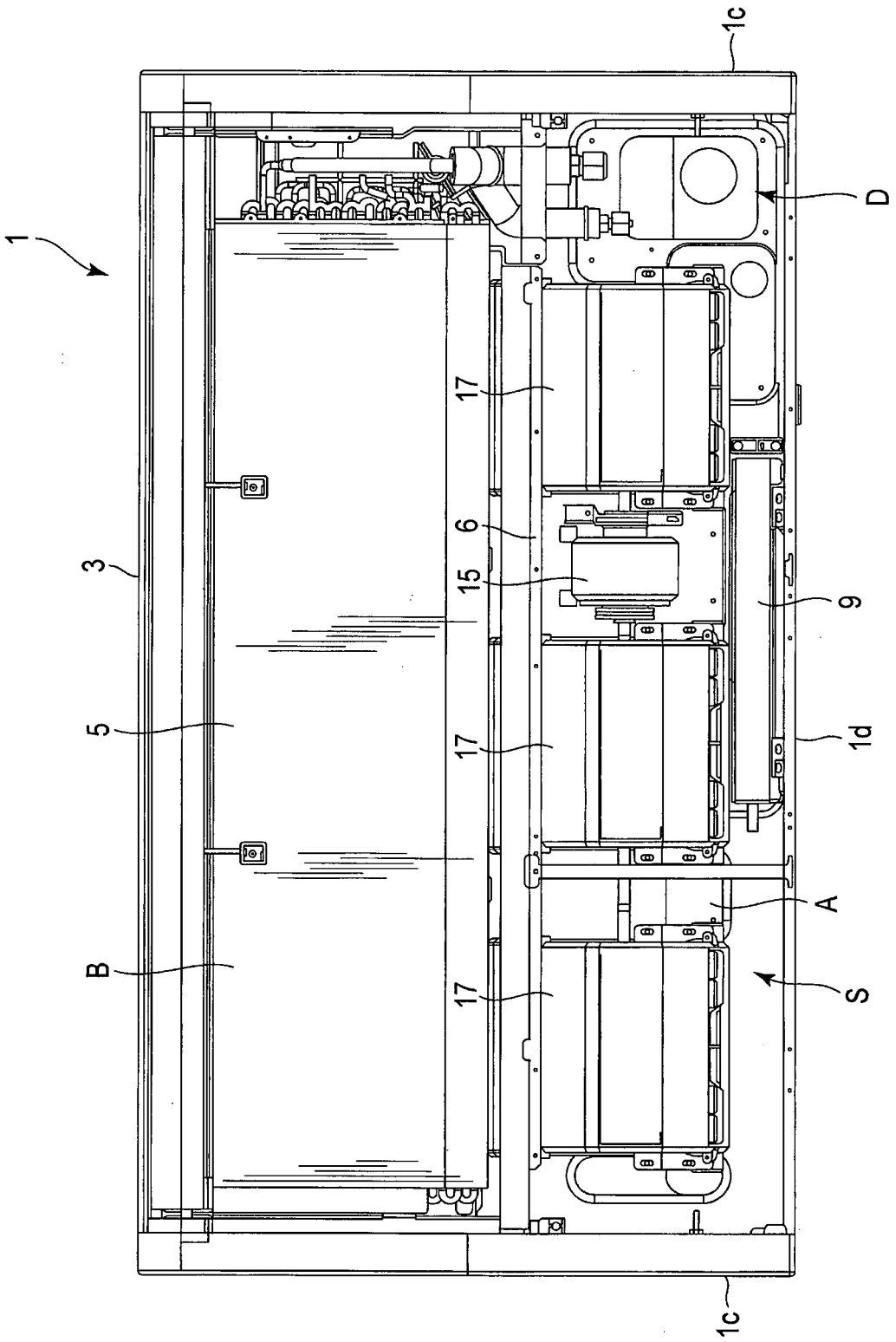

FIG. 3

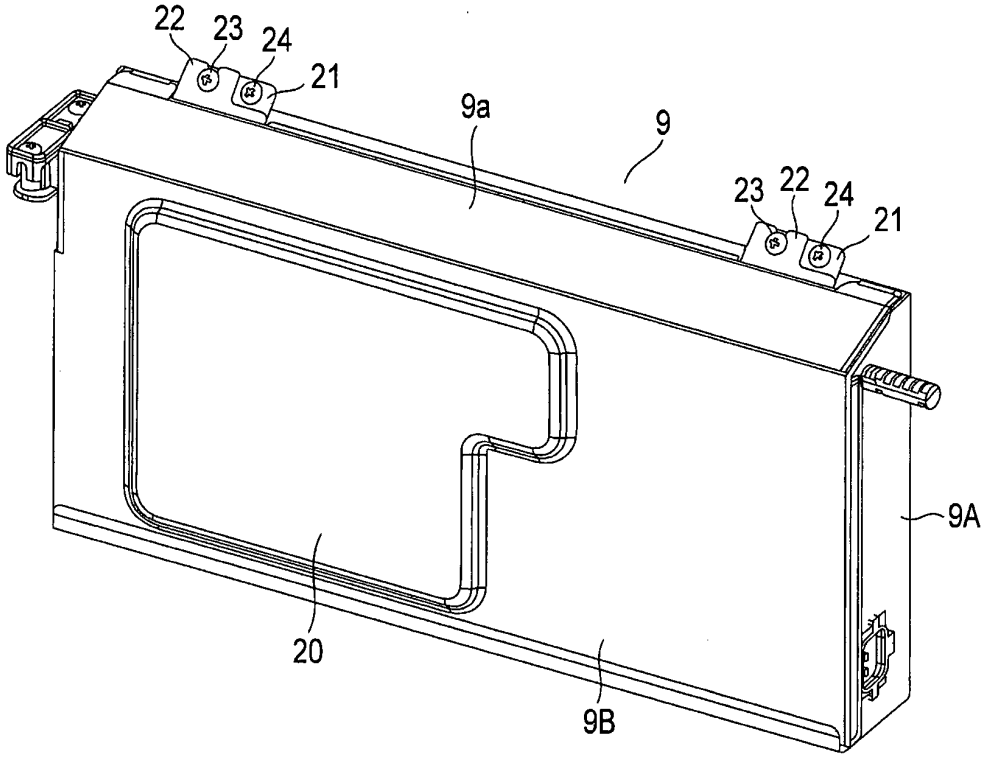
22
23
24
21
9a
9
23
22
24
21
9A
20
9B

FIG. 4

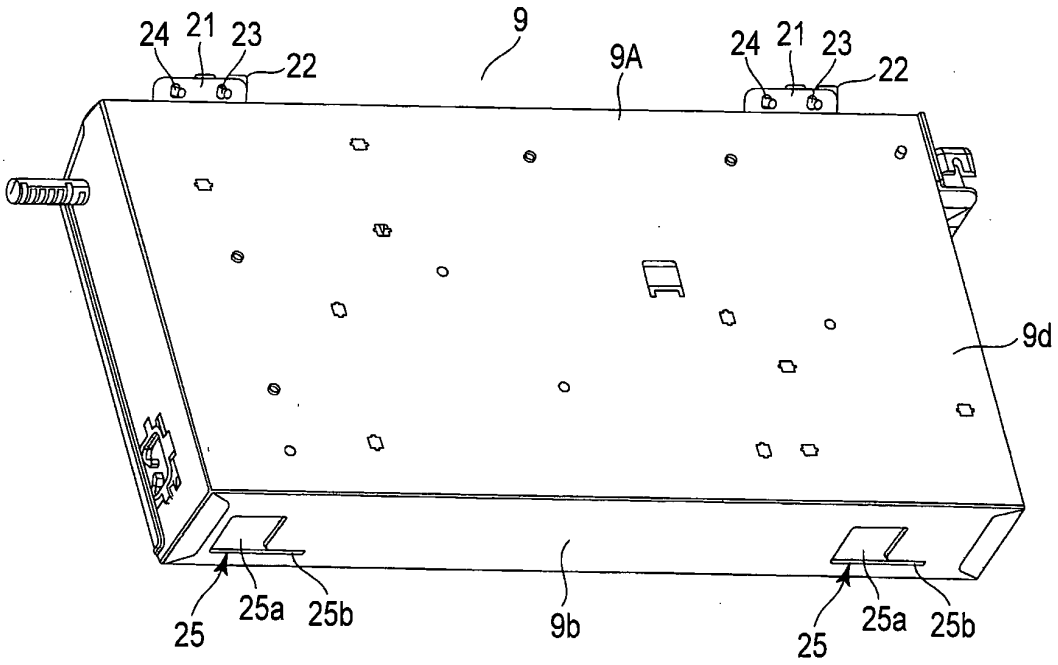
24
21
23
22
9
9A
24
21
23
22
9d
25
25a
25b
9b
25
25a
25b

FIG. 5

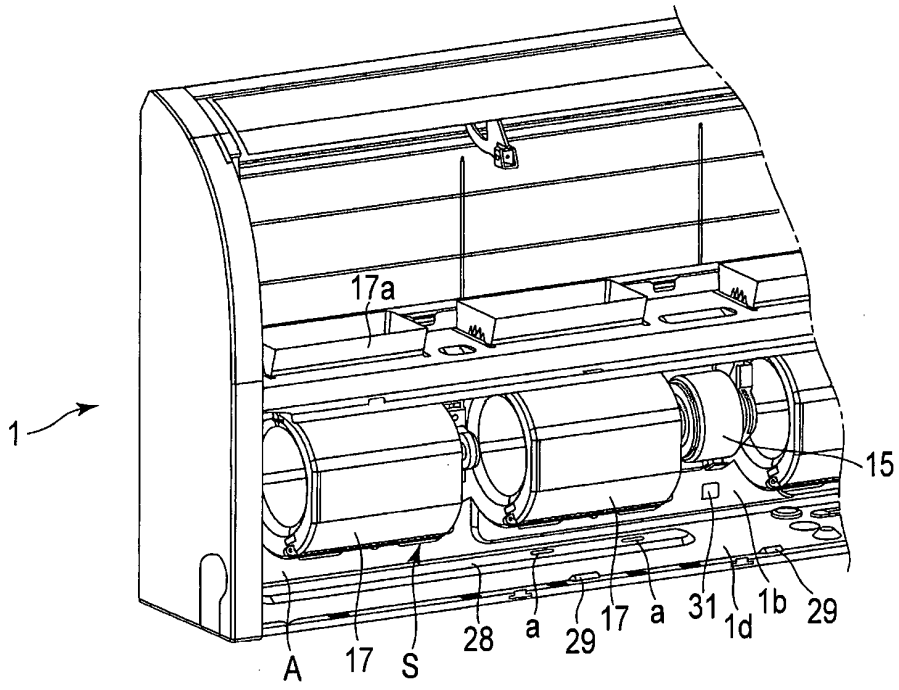

FIG. 6

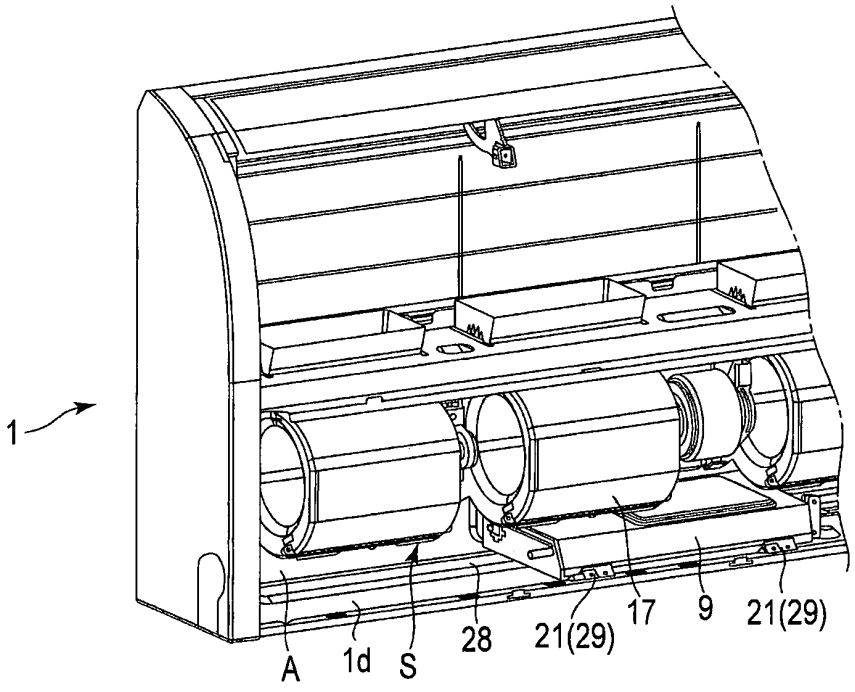

FIG. 7

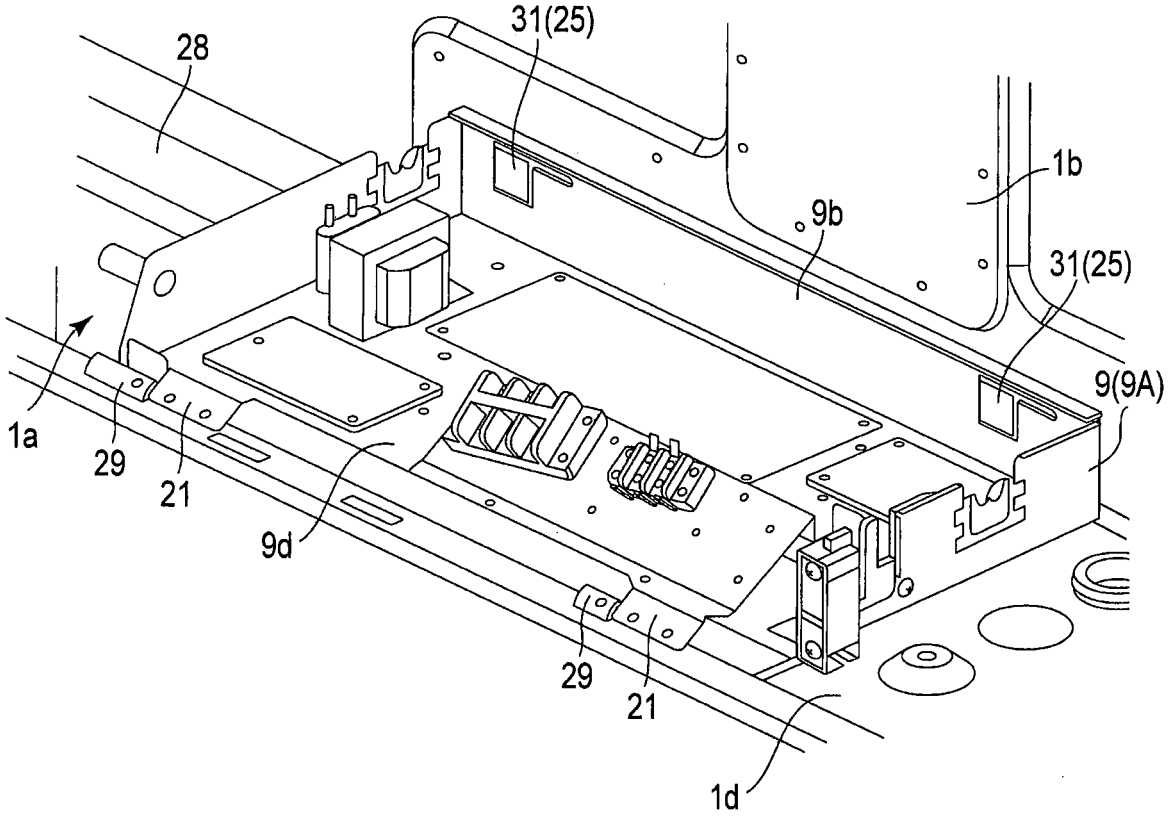

FIG. 8A

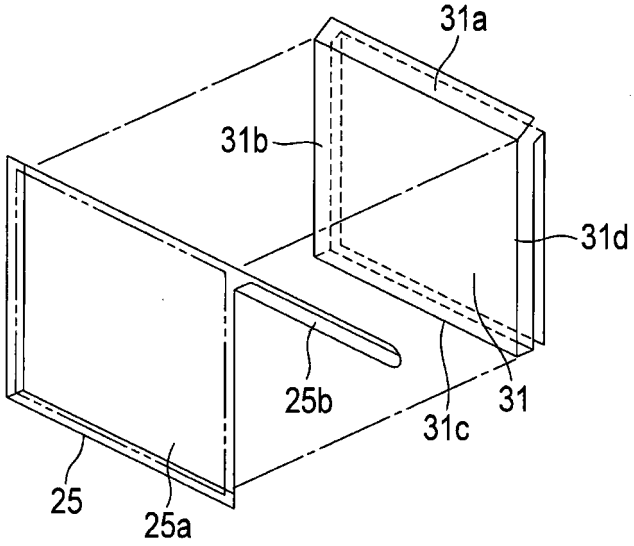

FIG. 8B

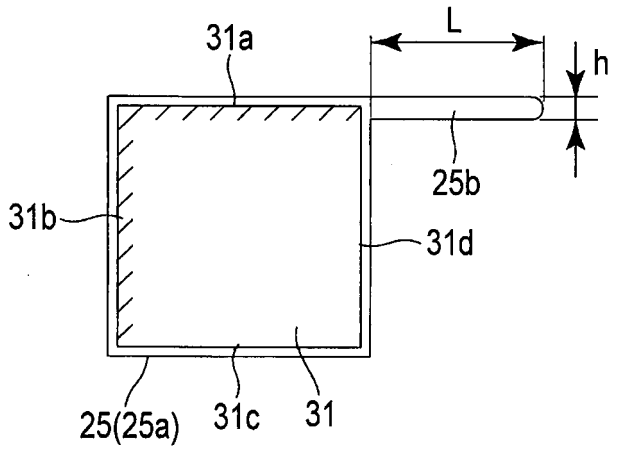

FIG. 8C

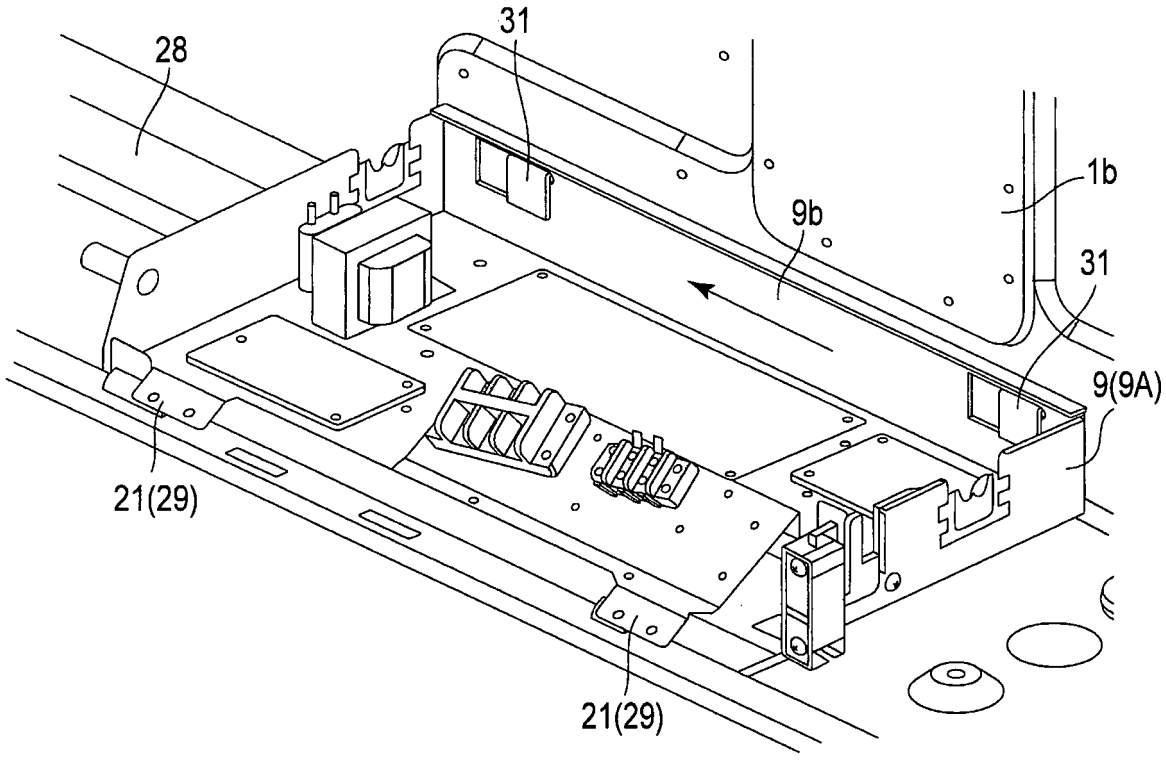

FIG. 9A

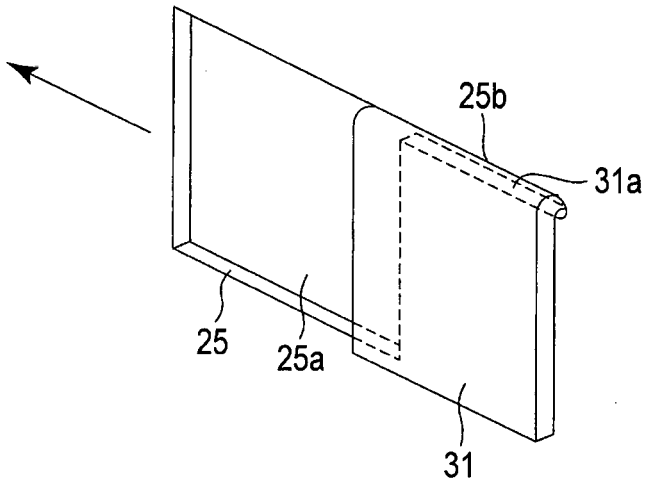

FIG. 9B

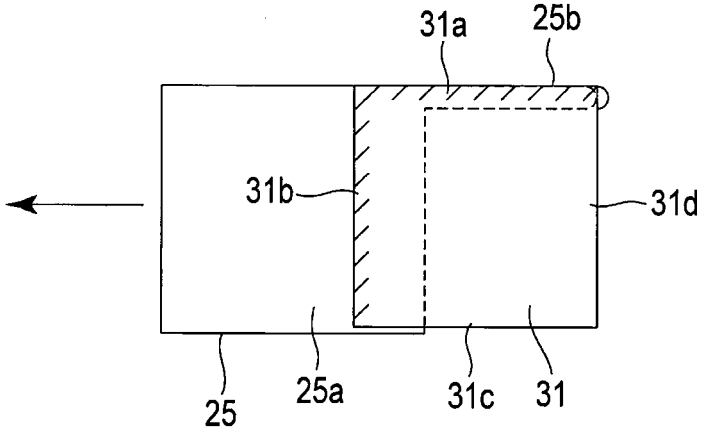

FIG. 9C

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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- JP 2012093044 A **[0004]**