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(54) WALL-MOUNTED AIR CONDITIONER INDOOR UNIT AND AIR CONDITIONER

INNENRAUMEINHEIT EINER WANDMONTIERTEN KLIMAANLAGE UND KLIMAANLAGE

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Description

FIELD

[0001] The present invention relates to the field of indoor units of wall-mounted air conditioners, and more particularly to an indoor unit of a wall-mounted air conditioner and an air conditioner.

BACKGROUND

[0002] An indoor unit of a wall-mounted air conditioner usually has a motor assembly that drives an air guiding structure. A large through hole or gap may be defined between the chassis and the face frame after they are assembled, through which rats, insects and cockroaches may enter the installation space of the motor assembly. In severe cases, the wires or other materials and components may be bitten off, eventually causing leakage or fire and seriously threatening the personal safety of users. CN 108 931 046 A discloses an indoor unit with a mouse board that protects against mice which extends sideways in the chassis.

SUMMARY

[0003] An objective of this invention is to provide an indoor unit of a wall-mounted air conditioner, aiming at blocking the entry of rats into the installation space of the motor assembly and improving the safety of the motor assembly and the wiring connecting the motor assembly.

[0004] To achieve the above objective, the present invention provides an indoor unit of a wall-mounted air conditioner including:

a housing, including:

a chassis defining an air duct having an air outlet;
a face frame; and
an installation plate disposed at an end of the air outlet along a length direction of the air outlet;
a motor assembly disposed at a side of the installation plate opposite to the air outlet;
a first extending plate disposed on the chassis, extended along the length direction of the air outlet and disposed above the motor assembly;
where the first extending plate, the installation plate, and the face frame define an accommodating space comprising an opening opposite to the installation plate; and
a rats-proof plate disposed on an inner surface of the face frame and extending rearwardly,
where the rats-proof plate is configured to cover at least a part of the opening, and
where the motor assembly is disposed between the rats-proof plate and the air outlet.

[0005] Optionally, a minimum gap between the motor assembly and the face frame is at most 10 mm.

[0006] Optionally, a gap between the rats-proof plate and the motor assembly is at most 10 mm.

[0007] Optionally, a gap between the first extending plate and the rats-proof plate is at most 10 mm.

[0008] Optionally, the first extending plate extends rearwardly and downwardly.

[0009] Optionally, the indoor unit of the wall-mounted air conditioner further includes:

a second extending plate disposed on the installation plate,
where the second extending plate is extended along the length direction of the air outlet and disposed behind the motor assembly; and
a transition plate disposed on the installation plate,
where the transition plate is connected to the first extending plate and the second extending plate.

[0010] Optionally, the transition plate has a stepped shape protruding towards the motor assembly.

[0011] Optionally, the transition plate includes:

a first step surface extending downwardly and connecting the first extending plate; and
a second step surface extending downwardly and rearwardly and connecting the first step surface and the second extending plate.

[0012] Optionally, a minimum gap between the second extending plate and the face frame is at most 10 mm.

[0013] Optionally, the chassis further includes:

an end plate connecting the installation plate and the first extending plate,
where the end plate is disposed at a side of the installation plate adjacent to the motor assembly and in front of the first extending plate.

[0014] Optionally, a gap between the rats-proof plate and the end plate is at most 10 mm.

[0015] Optionally, a strengthening rib is provided at a connection of the rats-proof plate and the face frame.

[0016] Optionally, the indoor unit of the wall-mounted air conditioner further includes a fresh air module disposed inside the housing and at a side of the first extending plate away from the air duct.

[0017] The present invention further provides an air conditioner including the above-described indoor unit of the wall-mounted air conditioner.

[0018] According to the technical solution of the present invention, the motor assembly is enclosed by the first extending plate, the installation plate and the face frame, and the first extending plate is disposed above the motor assembly, so that the rats may be prevented from entering the accommodating space from the top of the motor assembly. A rats-proof plate is further provided for at least partially covering the opening of the accommodating space, so as to prevent the rats from entering the accommodating space and the installation space of the motor assembly from the opening, thereby facilitating prevention of the rats from damaging the motor assembly, conductors and other air-conditioning components.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] In order to more clearly illustrate the embodiments of the present invention, the drawings to be used in the embodiments will be briefly described below. As those skilled in the art will appreciate, the drawings in the following description are exemplary embodiments of the present invention, and other drawings will be apparent from the structures shown in the drawings.

FIG. 1 is a schematic structural view of an indoor unit of a wall-mounted air conditioner according to an embodiment of the present invention;
FIG. 2 is a partial enlarged view of a portion A of the indoor unit of the wall-mounted air conditioner in FIG. 1;
FIG. 3 is a schematic structural view of a chassis and a motor assembly of the indoor unit of the wall-mounted air conditioner in FIG. 1; and
FIG. 4 is a schematic structural view of a surface frame and the motor assembly of the indoor unit of the wall-mounted air conditioner in FIG. 1.

Description of the reference numerals:

Reference numeral	Name	Reference numeral	Name
100	Chassis	110	First extending plate
120	Second extending plate	130	Transition plate
131	First step surface	132	Second step surface
140	End plate	200	Face frame
210	Rats-proof	300	Motor assembly
400	Accommodating space	410	Opening

[0020] The implementation, functional features and advantages of the present invention will be further described with reference to the accompanying drawings.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0021] The technical solutions in the embodiments of the present invention are clearly and completely described in the following with reference to the drawings in the embodiments of the present invention. It is appreciated that the described embodiments are exemplary embodiments of the present invention, and it will be apparent to those skilled in the art that other alternative embodiments may fall within the scope of the present invention.

[0022] It should be noted that, if there is a directional indicator (such as up, down, left, right, front, rear, ...) in the embodiment of the present invention, it is only used to explain the relative position relationship and movement of the

components in a particular posture (as shown in the attached drawings), and if the specific posture changes, the directional indicator will change accordingly.

[0023] In addition, if there is a description relating to "first", "second", etc. in the embodiments of the present invention, it is used for descriptive purposes only, and cannot be understood to indicate or imply its relative importance or to imply the number of technical features indicated. Thus, features defining "first" or "second" may include at least one of the features, either explicitly or implicitly. In addition, aspects of the technical solutions between the various embodiments may be combined with each other to form additional alternative embodiments that fall within the scope of protection of the present invention.

[0024] The present invention provides an indoor unit of a wall-mounted air conditioner.

[0025] In some embodiments of the present invention, as shown in FIGS. 1 to 4, the indoor unit of the wall-mounted air conditioner includes: a housing, which includes a chassis 100 defining an air duct having an air outlet; a face frame 200; an installation plate disposed at an end of the air outlet along a length direction of the air outlet; a motor assembly 300 disposed at a side of the installation plate opposite to the air outlet; a first extending plate 110 disposed on the chassis 100, extended along the length direction of the air outlet and disposed above the motor assembly 300, where the first extending plate 110, the installation plate, and the face frame 200 are enclosed to define an accommodating space 400 including an opening 410 opposite to the installation plate; and a rats-proof plate 210 disposed on an inner surface of the face frame 200 and extending rearwardly, where the rats-proof plate 210 is configured to cover at least a part of the opening 410, and the motor assembly 300 is disposed between the rats-proof plate 210 and the air outlet. The indoor unit of the wall-mounted air conditioner generally may include an air guiding structure for guiding air outlet in the air duct, and the motor assembly 300 may be connected with the air guiding structure and drive the air guiding structure. In some embodiments not in accordance with the invention, the motor assembly 300 may include a motor and a speed reduction assembly. The motor assembly 300 and the wires connecting the motor assembly 300 are disposed in the accommodating space 400, and the wires are at risk of being bitten by the rats when the rats enters the installation space of the motor assembly 300 through a gap between the face frame 200 and the chassis 100.

[0026] According to the technical solution of the present invention, the accommodating space 400 is defined by enclosing the first extending plate 110, the installation plate and the face frame 200, and the motor assembly 300 is disposed in the accommodating space 400. The first extending plate 110 is disposed above the motor assembly 300 and may prevent the rats from entering the accommodating space 400 from the top of the motor assembly 300. A rats-proof plate 210 is further provided for covering at least a part of the opening 410 of the accommodating space 400, so as to prevent the rats from entering the accommodating space 400 from the opening 410.

[0027] Specifically, in an embodiment that is not in accordance with the invention, the first extending plate 110 is connected with the installation plate such that no gap is left between the first extending plate 110 and the installation plate, and the anti-rat and anti-insect function of the first extending plate 110 may be reinforced.

[0028] The structure of the rats-proof plate is not limited to the above technical solution. In other embodiments not in accordance with the invention, the rats-proof plate may totally cover the opening 410, thereby preventing the rats from entering the accommodating space 400 from the opening 410 and damaging the air conditioning components in the accommodating space 400.

[0029] Further, in some embodiments, as shown in FIG. 2, the minimum gap between the motor assembly 300 and the face frame 200 is at most 10 mm, and the rats cannot get through the gap when the gap is at most 10 mm. The gap between the face frame 200 and the motor assembly 300 is controlled to be at least 0 mm and at most 10 mm, so that the rats may be effectively prevent from getting through the gap between the face frame 200 and the motor assembly 300.

[0030] Further, in some embodiments, as shown in FIG. 2, the gap between the rats-proof plate 210 and the motor assembly is at most 10 mm. The gap between the rats-proof plate 210 and the motor assembly 300 is small, which can effectively prevent the rats from getting through the gap between the rats-proof plate 210 and the motor. The outer housing of the motor and the rats-proof plate 210 may act together to prevent the rats from entering the space between the rats-proof plate 210 and the installation plate from the rear side of the motor and from a side away from the air duct, so that the wires of the motor assembly 300 installed in the space between the rats-proof plate 210 and the mounting plate may be prevented from being bitten by the rats.

[0031] Further, in some embodiments, as shown in FIG. 2, the gap between the first extending plate 110 and the rats-proof plate 210 is at most 10 mm. The gap between the first extending plate 110 and the rats-proof plate 210 is small, which can effectively prevent the rats from getting through the gap between the first extending plate 110 and the rats-proof plate 210. A gap is formed between the rats-proof plate 210 and the first extending plate 110, so that the fit precision between the rats-proof plate 210 and the first extending plate 110 is low, which is favorable for reducing the processing difficulty of the rats-proof plate 210. The embodiment is not limited to the above technical solution. In other embodiments not in accordance with the invention, a sealing strip may be provided at an edge of the rats-proof plate 210 adjacent to the first extending plate 110, and the sealing strip abuts against the rats-proof plate, so that the gap between the rats-proof plate 210 and the first extending plate 110 may be eliminated to enhance the anti-insects effect of the rats-proof plate 210.

[0032] Further, in some embodiments, as shown in FIG. 2, the first extending plate 110 extends rearwardly and downwardly. The first extending plate 110 is disposed above the motor assembly 300. Therefore, the first extending plate 110 extends downwardly to facilitate reducing the minimum gap between the motor assembly 300 and the first extending plate 110, so that the outer housing of the motor assembly 300 may cooperate with the first extending plate 110 to enhance the anti-rats effect.

[0033] Further, in some embodiments, as shown in FIG. 2, the indoor unit of the wall-mounted air conditioner further includes: a second extending plate 120 disposed on the installation plate, where the second extending plate 120 is extended along the length direction of the air outlet and disposed behind the motor assembly 300; and a transition plate 130 disposed on the installation plate, where the transition plate 130 is connected to the first extending plate 110 and the second extending plate 120. The second extending plate 120 is configured to prevent the rats from entering the accommodating space 400 from the rear side of the motor assembly 300, and the transition plate 130 blocks the gap between the first extending plate 110 and the second extending plate 120, thereby enhancing the anti-rats effect. On the other hand, the second extending plate 120 and the transition plate 130 may act together to enhance the mechanical strength of the first extending plate 110.

[0034] Further, in some embodiments, as shown in FIG. 2 and FIG. 3, the transition plate 130 has a stepped shape protruding towards the motor assembly 300, which is advantageous to reduce the gap between the transition plate 130 and the motor assembly 300, so that it is difficult for the rats to pass between the transition plate 130 and the motor assembly 300, so that the transition plate 130 has a stronger anti-rats effect.

[0035] Further, in some embodiment, as shown in FIG. 2 and FIG. 3, the transition plate includes: a first step surface 131 extending downwardly and connecting the first extending plate 110; and a second step surface 132 extending downwardly and rearwardly and connecting the first step surface 131 and the second extending plate 120. The second step surface 132 is inclined downwardly and rearwardly, so that the distance between the connection of the second step surface 132 and the second extending plate 120 and the motor assembly 300 is reduced, which is advantageous for improving the anti-rats effect of the transition plate 130 and the second extending plate 120.

[0036] The first extending plate 110, the second extending plate 120, and the transition plate 130 are not limited to the above technical solutions. In other embodiments not in accordance with the invention, the transition plate 130 may be curved to smoothly transit the first extending plate 110 and the second extending plate 120, which may facilitate reducing the distance between the connection of the first extending plate 110 and the transition plate 130 and the motor assembly 300, and reducing the distance between the connection of the transition plate 130 and the second extending plate 120 and the motor assembly 300, which enhances the anti-rats effect.

[0037] Further, in some embodiments, as shown in FIG. 2, the minimum gap between the second extending plate 120 and the face frame 200 is at most 10 mm, and the face frame 200 and the second extending plate 120 may act together to block the rats. The rats cannot get through the gap between the face frame 20 and the second extending plate 120 because the minimum gap between the second extending plate 120 and the face frame 200 is small after the face frame 200 and the chassis 100 are assembled.

[0038] Further, in some embodiments, as shown in FIG. 2 and FIG. 3, the chassis 100 further includes: an end plate 140 connecting the installation plate and the first extending plate 110, where the end plate 140 is disposed at a side of the installation plate adjacent to the motor assembly 300 and in front of the first extending plate 110. The end plate 140 is connected with the first extending plate 110 to increase the anti-rats range. In some embodiments not in accordance with the invention, the end plate 140, the first extending plate 110, the transition plate 130, the first extending plate 110, and the face frame 200 enclose the motor assembly 300 to define a protection circle which has the advantage of comprehensive anti-rats angle.

[0039] Further, in some embodiments, as shown in FIG. 2, the gap between the rats-proof plate 210 and the end plate 140 is at most 10 mm. The rats-proof plate 210 is disposed below the end plate 140, and the rats-proof plate 210 extends from an inner side of the face frame 200. The gap between the rats-proof plate 210 and the end plate 140 is controlled to be at most 10 mm, so as to prevent the rats from getting through the gap between the rats-proof plate 210 and the end plate 140. In some embodiments, the rats-proof plate 210 is connected to the face frame 200, and the end plate 140 is disposed on the chassis 100, so that a gap is provided between the end plate 140 and the rats-proof plate 210, which is advantageous for decrease the fit precision between the end plate 140 and the rats-proof plate 210, thereby reducing the processing precision of the rats-proof plate 210, and facilitating the assembly of the face frame 200 and the chassis 100. The structure of the rats-proof plate 210 and the end plate 140 may not limited to the above technical solutions. In other embodiments not in accordance with the invention, a sealing strip may be provided at an edge of the rats-proof plate 210 adjacent to the end plate 140, and the sealing strip abuts against the end plate 140, so that the gap between the rats-proof plate 210 and the end plate 140 may be eliminated to enhance the anti-insects effect of the rats-proof plate 210.

[0040] Further, in some embodiments, a strengthening rib may be provided at the connection between the rats-proof plate 210 and the face frame 200, and the strengthening rib has the function of strengthening the mechanical strength of the rats-proof plate 210, which is advantageous for enhancing the resistance against the rats of the rats-proof plate

210, and enhancing the reliability of the rats-proof plate 210.

[0041] Further, in some embodiments, the indoor unit of the wall-mounted air conditioner further includes an electric control box disposed at one side of the air duct, and the motor assembly 300 is disposed at the other end of the air duct. In order to make reasonable use of the installation space of the indoor unit of the wall-mounted air conditioner, the motor assembly 300 configured to drive the air guiding structure and the electric control box are respectively disposed on both sides of the air duct, and the air outlet is disposed closer to the center of the indoor unit of the wall-mounted air conditioner, which is advantageous for making the indoor unit of the wall-mounted air conditioner have a more aesthetically appealing shape.

[0042] Further, in some embodiments, the indoor unit of the wall-mounted air conditioner further includes a fresh air module disposed inside the housing and at a side of the first extending plate 110 away from the air duct. The fresh air module is configured to introduce fresh air into the room, while the rats may be easily get into the motor assembly 300 through the fresh air module, so the rats-proof plate 210 is more important in the indoor unit of the wall-mounted air conditioner with the fresh air module.

[0043] In some embodiments not in accordance with the invention, as shown in FIG. 2 and FIG. 4, the rats-proof plate 210 extends rearwardly to one side of the motor assembly 300, and does not continue to extend to the second extending plate 120. The rats-proof plate 210 and the outer housing of the motor may act together to block the rats. In addition, the length of the rats-proof plate 210 is controlled, which may prevent the rats-proof plate 210 from being too long to reduce the mechanical strength, and reduce materials and manufacturing costs of the rats-proof plate 210.

[0044] The present invention further provides an air conditioner including an indoor unit of a wall-mounted air conditioner. The specific structure of the indoor unit of the wall-mounted air conditioner may refer to the above embodiments. Since the air conditioner adopts all the technical solutions of all the above embodiments, it at least has all the features brought by the technical solutions of the above embodiments, which are not described herein again.

[0045] The above description refers to exemplary embodiments of the appended claims, and thus does not limit the scope of the appended claims, and any transformation of equivalent structure made under the inventive concept of the appended claims by using the contents of this specification and attached drawings, or direct/indirect application in other relevant technical fields, shall be included in the scope of the appended claims.

Claims

1. An indoor unit of a wall-mounted air conditioner, **characterized by** comprising:

a housing, comprising:

a chassis (100) defining an air duct having an air outlet;
a face frame (200); and
an installation plate disposed at one end of the air outlet extending in an up-down direction of the air outlet, wherein the one end of the air outlet is along a length direction of the air outlet;

a motor assembly (300) disposed at a side of the installation plate opposite to the air outlet;
a first extending plate (110) disposed on the chassis (100), extended along the air outlet and disposed above the motor assembly (300),
wherein the first extending plate (110), the installation plate, and the face frame (200) define an accommodating space (400) comprising an opening (410) opposite to the installation plate; and
a rats-proof plate (210) disposed on an inner surface of the face frame (200) and extending rearwardly,

wherein the rats-proof plate (210) is configured to cover at least a part of the opening (410), and
wherein the motor assembly (300) is disposed between the rats-proof plate (210) and the air outlet.

2. The indoor unit of the wall-mounted air conditioner according to claim 1, **characterized in that**, a minimum gap between the motor assembly (300) and the face frame (200) is at most 10 mm.

3. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 2, **characterized in that**, a gap between the rats-proof plate (210) and the motor assembly (300) is at most 10 mm.

4. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 3, **characterized in that**, a gap between the first extending plate (110) and the rats-proof plate (210) is at most 10 mm.

5. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 4, **characterized in that**, the first extending plate (110) is configured to extend rearwardly and downwardly.

6. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 5, **characterized by** further comprising:

a second extending plate (120) disposed on the installation plate,
wherein the second extending plate (120) is extended along the air outlet and disposed behind the motor assembly (300); and
a transition plate (130) disposed on the installation plate,
wherein the transition plate (130) is connected to the first extending plate (110) and the second extending plate (120).

7. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 6, **characterized in that**, the transition plate (130) has a stepped shape protruding towards the motor assembly (300).

8. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 6, **characterized in that**, the transition plate (130) comprises:

a first step surface (131) extending downwardly and connecting the first extending plate (110); and
a second step surface (132) extending downwardly and rearwardly and connecting the first step surface (131) and the second extending plate (120).

9. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 6, **characterized in that**, a minimum gap between the second extending plate (120) and the face frame (200) is at most 10 mm.

10. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 9, **characterized in that**, the chassis (100) further comprises:
an end plate (140) connecting the installation plate and the first extending plate (110),
wherein the end plate (140) is disposed at a side of the installation plate adjacent to the motor assembly (300), and in front of the first extending plate (110).

11. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 10, **characterized in that**, a gap between the rats-proof plate (210) and the end plate (140) is at most 10 mm.

12. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 11, **characterized by** comprising:
a strengthening rib provided at a connection of the rats-proof plate (210) and the face frame (200).

13. The indoor unit of the wall-mounted air conditioner as recited in any one of claims 1 to 12, **characterized by** further comprising:
a fresh air module disposed inside the housing and at a side of the first extending plate (110) away from the air duct.

14. An air conditioner, **characterized by** comprising:
the indoor unit of a wall-mounted air conditioner as recited in any one of claims 1 to 13.

15. An air conditioner, **characterized by** comprising:

the indoor unit of a wall-mounted air conditioner as recited in any one of claims 1 to 13; and
wherein the indoor unit of the wall-mounted air conditioner further comprises:

an electric control box disposed at one side of the air duct,
wherein the motor assembly (300) is disposed at the other side of the air duct.

Patentansprüche

1. Inneneinheit einer wandmontierten Klimaanlage, **dadurch gekennzeichnet, dass** sie Folgendes umfasst:

ein Gehäuse, umfassend:

ein Untergestell (100), das einen Luftkanal definiert, der einen Luftauslass aufweist;
einen Frontrahmen (200); und
eine an einem Ende des Luftauslasses angeordnete Einbauplatte, die sich in einer Auf-Ab-Richtung des Luftauslasses erstreckt, wobei das eine Ende des Luftauslasses an einer Längsrichtung des Luftauslasses entlang ist;

eine Motorbaugruppe (300), die an einer dem Luftauslass entgegengesetzten Seite der Einbauplatte angeordnet ist,
eine erste Verlängerungsplatte (110), die am Untergestell (100) angeordnet ist, sich am Luftauslass entlang erstreckt und über der Motorbaugruppe (300) angeordnet ist,
wobei die erste Verlängerungsplatte (110), die Einbauplatte und der Frontrahmen (200) einen Aufnahmeraum (400) definieren, der eine der Einbauplatte entgegengesetzte Öffnung (410) umfasst; und
eine rattensichere Platte (210), die an einer Innenfläche des Frontrahmens (200) angeordnet ist und sich nach hinten erstreckt,

wobei die rattensichere Platte (210) angeordnet ist, um wenigstens einen Teil der Öffnung (410) zu bedecken, und
wobei die Motorbaugruppe (300) zwischen der rattensicheren Platte (210) und dem Luftauslass angeordnet ist.

2. Inneneinheit der wandmontierten Klimaanlage nach Anspruch 1, **dadurch gekennzeichnet, dass** ein Mindestspalt zwischen der Motorbaugruppe (300) und dem Frontrahmen (200) höchstens 10 mm beträgt.

3. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 2, **dadurch gekennzeichnet, dass** ein Spalt zwischen der rattensicheren Platte (210) und der Motorbaugruppe (300) höchstens 10 mm beträgt.

4. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 3, **dadurch gekennzeichnet, dass** ein Spalt zwischen der ersten Verlängerungsplatte (110) und der rattensicheren Platte (210) höchstens 10 mm beträgt.

5. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** die erste Verlängerungsplatte (110) gestaltet ist, um sich nach hinten und unten zu erstrecken.

6. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet, dass** sie ferner Folgendes umfasst:

eine zweite Verlängerungsplatte (120), die an der Einbauplatte angeordnet ist,
wobei die zweite Verlängerungsplatte (120) an dem Luftauslass entlang verlängert ist und hinter der Motorbaugruppe (300) angeordnet ist; und
eine an der Einbauplatte angeordnete Übergangsplatte (130),
wobei die Übergangsplatte (130) mit der ersten Verlängerungsplatte (110) und der zweiten Verlängerungsplatte (120) verbunden ist.

7. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** die Übergangsplatte (130) eine Stufenform hat, die zur Motorbaugruppe (300) hin vorsteht.

8. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** die Übergangsplatte (130) Folgendes umfasst:

eine erste Stufenfläche (131), die sich nach unten erstreckt und die erste Verlängerungsplatte (110) verbindet; und
eine zweite Stufenfläche (132), die sich nach unten und nach hinten erstreckt und die erste Stufenfläche (131) und die zweite Verlängerungsplatte (120) verbindet.

9. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** ein Mindestspalt zwischen der zweiten Verlängerungsplatte (120) und dem Frontrahmen (200) höchstens 10 mm

beträgt.

10. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 9, **dadurch gekennzeichnet, dass** das Untergestell (100) ferner Folgendes umfasst:
eine Endplatte (140), die die Einbauplatte und die erste Verlängerungsplatte (110) verbindet,
wobei die Endplatte (140) an einer an die Motorbaugruppe (300) angrenzenden Seite der Einbauplatte und vor der ersten Verlängerungsplatte (110) angeordnet ist.

11. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 10, **dadurch gekennzeichnet, dass** ein Spalt zwischen der rattensicheren Platte (210) und der Endplatte (140) höchstens 10 mm beträgt.

12. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 11, **dadurch gekennzeichnet, dass** sie Folgendes umfasst:
eine Verstärkungsrippe, die an einer Verbindung der rattensicheren Platte (210) und dem Frontrahmen (200) bereitgestellt ist.

13. Inneneinheit der wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 12, **dadurch gekennzeichnet, dass** sie ferner Folgendes umfasst:
ein Frischluftmodul, das im Inneren des Gehäuses und an einer vom Luftkanal entfernten Seite der ersten Verlängerungsplatte (110) angeordnet ist.

14. Klimaanlage, **dadurch gekennzeichnet, dass** sie Folgendes umfasst:
die Inneneinheit einer wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 13.

15. Klimaanlage, **dadurch gekennzeichnet, dass** sie Folgendes umfasst:

die Inneneinheit einer wandmontierten Klimaanlage nach einem der Ansprüche 1 bis 13; und
wobei die Inneneinheit der wandmontierten Klimaanlage ferner Folgendes umfasst:

einen elektrischen Schaltkasten, der an einer Seite des Luftkanals angeordnet ist,
wobei die Motorbaugruppe (300) an der anderen Seite des Luftkanals angeordnet ist.

Revendications

1. Unité intérieure d'un climatiseur mural, **caractérisée en ce qu'**elle comporte :

un boîtier, comportant :

un châssis (100) définissant un conduit d'air ayant une sortie d'air ;
un cadre de façade (200) ; et
une plaque d'installation disposée au niveau d'une extrémité de la sortie d'air s'étendant dans une direction allant de haut en bas de la sortie d'air, dans laquelle ladite une extrémité de la sortie d'air se trouve le long de la direction allant dans le sens de la longueur de la sortie d'air ;

un ensemble formant moteur (300) disposé au niveau d'un côté de la plaque d'installation à l'opposé de la sortie d'air ;
une première plaque d'extension (110) disposée sur le châssis (100), étendue le long de la sortie d'air et disposée au-dessus de l'ensemble formant moteur (300),
dans laquelle la première plaque d'extension (110), la plaque d'installation, et le cadre de façade (200) définissent un espace de réception (400) comportant une ouverture (410) opposée à la plaque d'installation ; et
une plaque résistante aux rats (210) disposée sur une surface intérieure du cadre de façade (200) et s'étendant vers l'arrière,

dans laquelle la plaque résistante aux rats (210) est configurée pour recouvrir au moins une partie de l'ouverture (410), et
dans laquelle l'ensemble formant moteur (300) est disposé entre la plaque résistante aux rats (210) et la sortie d'air.

2. Unité intérieure du climatiseur mural selon la revendication 1, **caractérisée en ce que** un espace minimum entre l'ensemble formant moteur (300) et le cadre de façade (200) mesure au plus 10 mm.

3. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 2, **caractérisée en ce que** un espace entre la plaque résistante aux rats (210) et l'ensemble formant moteur (300) mesure au plus 10 mm.

4. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 3, **caractérisée en ce que** un espace entre la première plaque d'extension (110) et la plaque résistante aux rats (210) mesure au plus 10 mm.

5. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 4, **caractérisée en ce que** la première plaque d'extension (110) est configurée pour s'étendre vers l'arrière et vers le bas.

6. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 5, **caractérisée en ce qu'**elle comporte par ailleurs :

une deuxième plaque d'extension (120) disposée sur la plaque d'installation,
dans laquelle la deuxième plaque d'extension (120) est étendue le long de la sortie d'air et disposée derrière l'ensemble formant moteur (300) ; et
une plaque de transition (130) disposée sur la plaque d'installation,
dans laquelle la plaque de transition (130) est raccordée à la première plaque d'extension (110) et à la deuxième plaque d'extension (120).

7. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 6, **caractérisée en ce que** la plaque de transition (130) a une forme étagée faisant saillie vers l'ensemble formant moteur (300).

8. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 6, **caractérisée en ce que** la plaque de transition (130) comporte :

une première surface d'étage (131) s'étendant vers le bas et raccordant la première plaque d'extension (110) ; et
une deuxième surface d'étage (132) s'étendant vers le bas et vers l'arrière et raccordant la première surface d'étage (131) et la deuxième plaque d'extension (120).

9. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 6, **caractérisée en ce que** un espace minimum entre la deuxième plaque d'extension (120) et le cadre de façade (200) mesure au plus 10 mm.

10. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 9, **caractérisée en ce que** le châssis (100) comporte par ailleurs :
une plaque d'extrémité (140) raccordant la plaque d'installation et la première plaque d'extension (110),
dans laquelle la plaque d'extrémité (140) est disposée au niveau d'un côté de la plaque d'installation de manière adjacente par rapport à l'ensemble formant moteur (300), et devant la première plaque d'extension (110).

11. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 10, **caractérisée en ce que** un espace entre la plaque résistante aux rats (210) et la plaque d'extrémité (140) mesure au plus 10 mm.

12. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 11, **caractérisée en ce qu'**elle comporte :
une nervure de renfort mise en œuvre au niveau d'un raccord de la plaque résistante aux rats (210) et du cadre de façade (200).

13. Unité intérieure du climatiseur mural selon l'une quelconque des revendications 1 à 12, **caractérisée en ce qu'**elle comporte par ailleurs :
un module d'air frais disposé à l'intérieur du boîtier et au niveau d'un côté de la première plaque d'extension (110) à distance du conduit d'air.

14. Climatiseur, **caractérisé en ce qu'**il comporte :
l'unité intérieure d'un climatiseur mural selon l'une quelconque des revendications 1 à 13.

15. Climatiseur, **caractérisé en ce qu'**il comporte :

l'unité intérieure d'un climatiseur mural selon l'une quelconque des revendications 1 à 13 ; et
dans lequel l'unité intérieure du climatiseur mural comporte par ailleurs :

un boîtier de commande électrique disposé au niveau d'un côté du conduit d'air,
dans lequel l'ensemble formant moteur (300) est disposé au niveau de l'autre côté du conduit d'air.

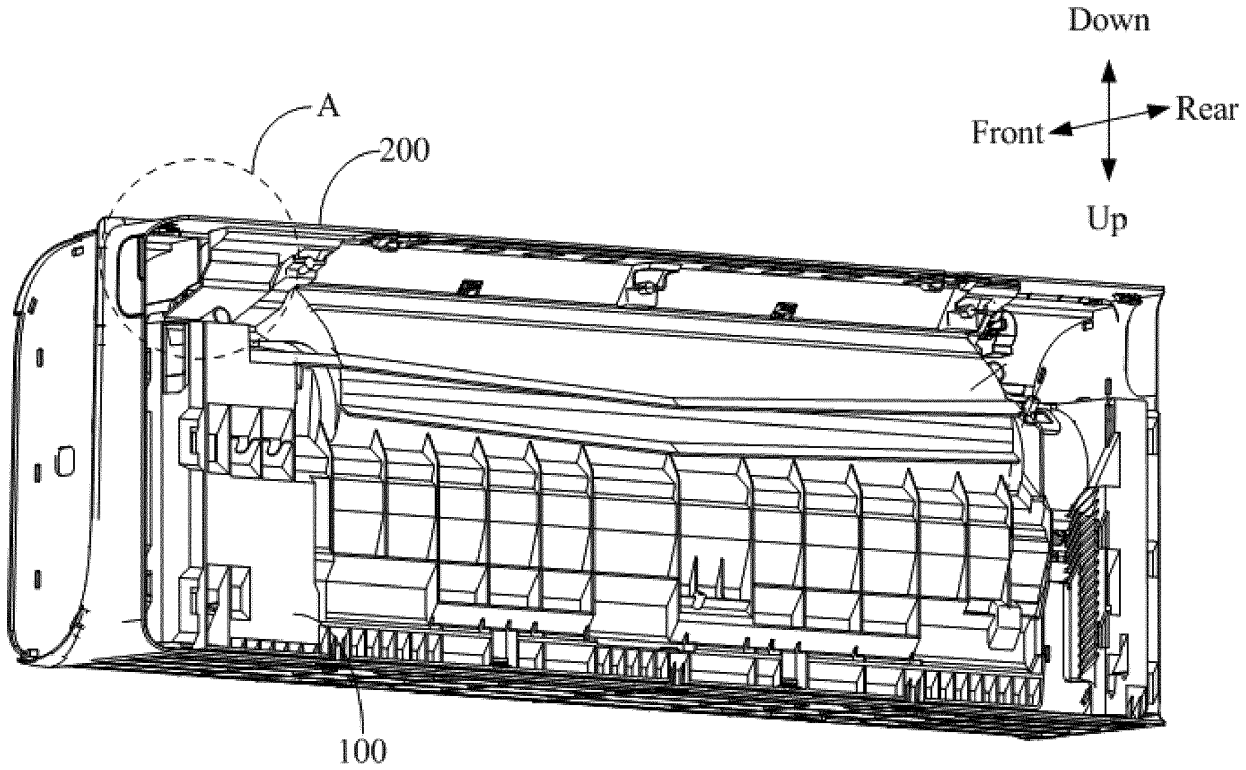

FIG. 1

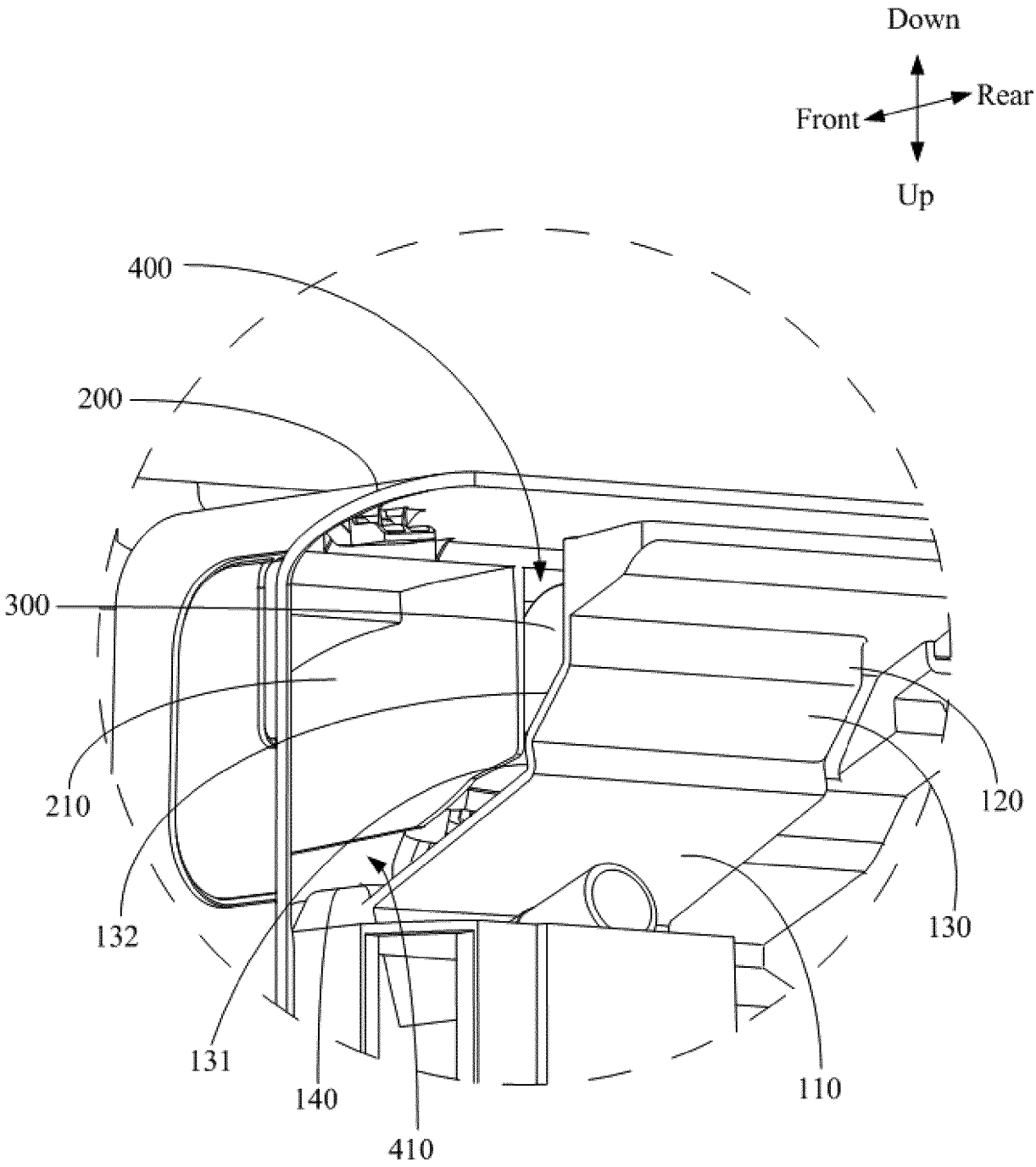

FIG. 2

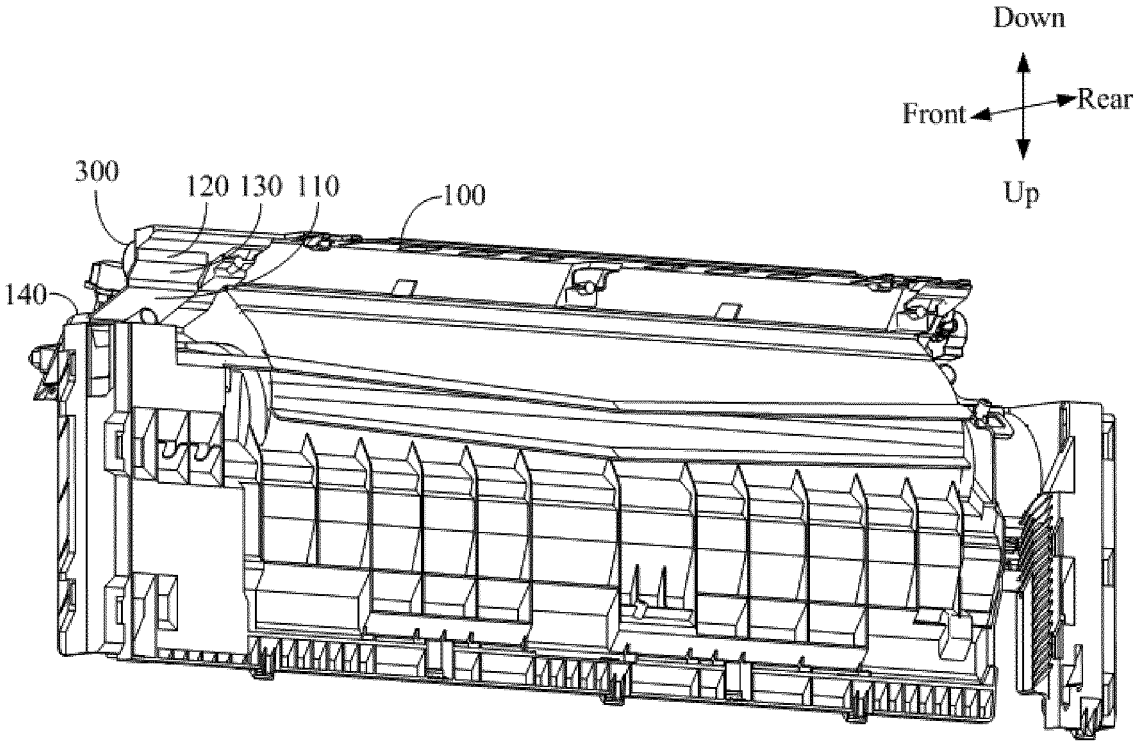
Down
Front
Rear
Up
300
120 130 110
100
140

FIG. 3

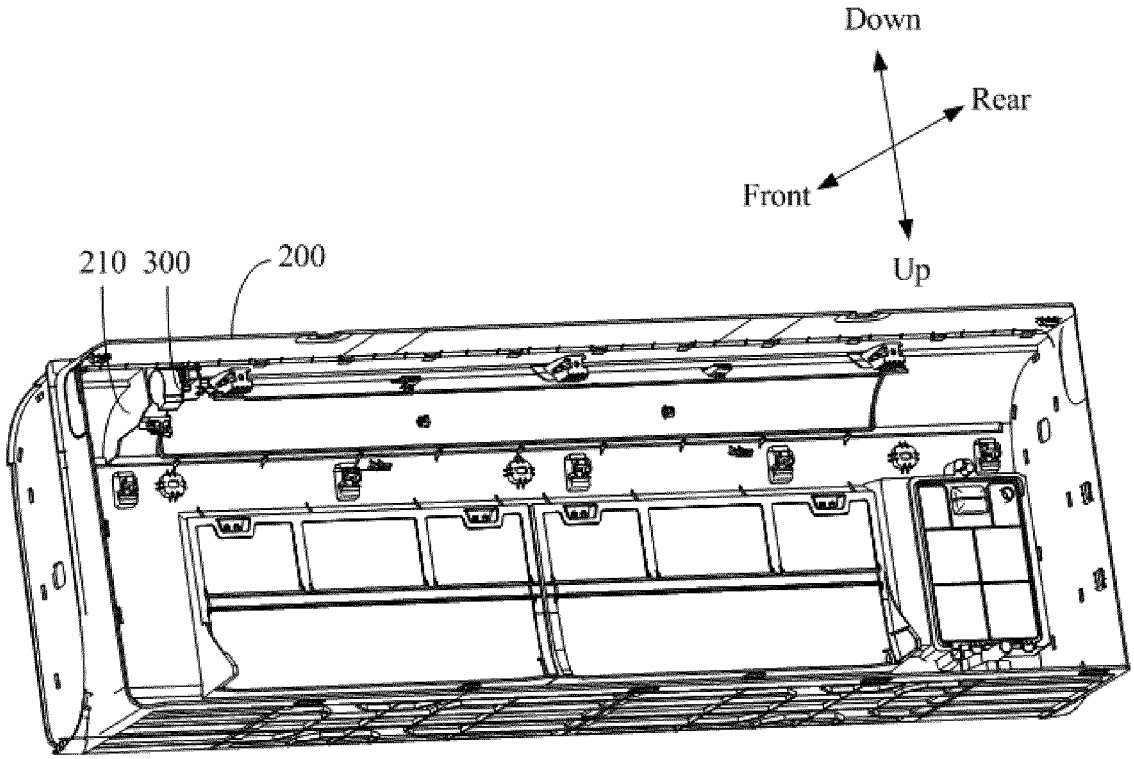
Down
Rear
Front
Up
210 300
200

FIG. 4

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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