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(54) **AIR CONDITIONER AND CONTROL METHOD THEREFOR**

KLIMAANLAGE UND STEUERUNGSVERFAHREN DAFÜR

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EP 3 604 941 B1

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Description**TECHNICAL FIELD**

5 **[0001]** The present application relates to the field of air conditioners, and in particular, to an air conditioner and a method for controlling an air conditioner.

BACKGROUND

10 **[0002]** With the continuous improvement of people's living standards, the demand for air conditioners is getting higher. Regarding the air conditioners on the existing market, the flow area and the air volume of the air outlet are large, and the air delivery distance is far. The air from the air conditioner blows directly on the human body to cause great discomfort, and the blowing feeling is simple, which can not meet the different needs of different people for the blowing feeling.

15 **[0003]** CN 107 401 776 A shows an air conditioner indoor unit includes a body, an outer air guide plate and an inner air guide plate. All the components of the air conditioner indoor unit are mounted in a body. The outer air deflector is used to open and close the air outlet. Further state of the art is known from CN 204 786 798 U, WO 2017/024635 A1, CN 204 555 023 U, WO 2017/024637 A1 and CN 107 449 038 A. Document CN17 401 776 A discloses all features of the preamble of claim 1 and 9.

SUMMARY

20 **[0004]** The main purpose of the present application is to provide an air conditioner and a method for controlling an air conditioner, aiming at solving the problem of simple blowing feeling of an air conditioner in the prior art and enabling an optimized closure of the air outlet by the first air guiding plate.

25 **[0005]** To achieve the above purpose, an air conditioner of the present application includes a housing, which includes an air outlet passage formed in the housing, and an air outlet formed in an edge of the housing and communicated with the air outlet passage; a first air guiding plate disposed adjacent to the air outlet, and rotatably connected with the housing through a first rotating shaft on the housing; and a second air guiding plate rotatably disposed in the air outlet passage, and is capable of rotating through a second rotating shaft on the housing, wherein the air conditioner is operable a breezeless mode, in response to the air conditioner operating in the breezeless mode, at least a part of the air outlet is shielded by the first air guiding plate.

30 **[0006]** After the air outlet is closed by the first air guiding plate, the first air guiding plate includes a first side close to an upper wall of the air outlet, and a second side close to a lower wall of the air outlet; wherein the first rotating shaft includes: a first surface extending from the first rotating shaft towards the first side; and a second surface extending from the first rotating shaft towards an edge of the upper wall of the air outlet, where α is an angle between the first surface and the second surface, and α is no less than 0° and no more than 5° , after the air conditioner is operating in a breezeless mode.

35 **[0007]** Optionally, in response to the breezeless mode, a distance M between the first side and the edge of the upper wall of the air outlet is no less than 0 mm and no more than 20 mm.

40 **[0008]** Optionally, in response to the breezeless mode, a distance N between the second side and an edge of the lower wall of the air outlet is no less than 30 mm and no more than 55 mm.

45 **[0009]** Optionally, the air conditioner further includes a cooling/heating mode, in response to the cooling/heating mode, the first air guiding plate is completely open of the air outlet, and the angle α is no less than 65° and no more than 90° .

50 **[0010]** Optionally, in response to the cooling/heating mode, a distance M between the first side and the edge of the upper wall of the air outlet is no less than 95mm and no more than 110 mm.

55 **[0011]** Optionally, in response to the cooling/heating mode, a distance N between the second side and the edge of the lower wall of the air outlet is no less than 25mm and no more than 45 mm.

60 **[0012]** Optionally, the first air guiding plate is provided with a vent hole passing through the first air guiding plate along a thickness direction of the first air guiding plate.

65 **[0013]** Optionally, a length of the vent hole in an opening direction of the vent hole is equal to or larger than a thickness of the first air guiding plate.

70 **[0014]** The present application further provides a method for controlling an air conditioner, the air conditioner includes a breezeless mode and a cooling/heating mode, and the air conditioner is switchable between the breezeless mode and the cooling/heating mode;

75 where a first rotating shaft includes:

 a first surface extending towards a first side; and

 a second surface extending towards an edge of an upper wall of the air outlet, where α is an angle between the first

surface and the second surface, the first side is a side of the first air guiding plate close to the upper wall of the air outlet;

the method includes:

in response to the breezeless mode, shielding a part of an air outlet by a first air guiding plate, and the angle α is no less than 0° and no more than 5° ; and
in response to the cooling/heating mode, completely opening the air outlet by the first air guiding plate (10), and the angle α is no less than 65° and no more than 90° .

[0015] In the present application, in response to the breezeless mode, at least a part of the air outlet is shielded by the first air guiding plate, so that the air coming out from the air outlet diffuses into the surrounding air, thereby air speed and air volume are reduced, and the blowing feeling is softer, which provides various modes, avoids simple blowing feeling, and satisfies customer requirements.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

[0016] In order to more clearly illustrate the embodiments of the present application or the technical solutions in the prior art, the drawings to be used in the embodiments or description of the prior art will be briefly described below. Obviously, the drawings in the following description are only certain embodiments of the present application, and other drawings may be obtained according to the structures shown in the drawings without any creative work for a person having ordinary skill in the art.

FIG. 1 is a schematic structural view of an air conditioner of the present application in a breezeless mode;

FIG. 2 is a schematic structural view of the air conditioner of the present application in a cooling/heating mode.

Description of the reference numerals:

[0017]

Reference numeral	Name	Reference numeral	Name
100	Air conditioner	10	First air guiding plate
11	Vent hole	12	First rotating shaft
20	Second air guiding plate	21	Second vent hole
22	Second rotating shaft	30	Housing
31	Chassis	32	Panel
40	Fan	50	Swinging blade

[0018] The implementation, functional features and advantages of the present application will be further described with reference to the accompanying drawings.

DETAILED DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

[0019] The technical solutions in the embodiments of the present application are clearly and completely described in the following with reference to the drawings in the embodiments of the present application. It is obvious that the described embodiments are only a part of the embodiments of the present application, and not all of the embodiments. Based on the embodiments in this application, all other embodiments obtained by a person having ordinary skill in the art without making any creative work fall within the scope of this application.

[0020] It should be noted that all directional indications (such as up, down, left, right, front, rear, ...) in the embodiments of the present application are only used to explain the relative position relationship, the movement, etc. between the components in a specific posture (as shown in the attached drawings). If the specific posture is changed, the directional indication will be changed accordingly.

[0021] In addition, the descriptions of "first", "second", etc. in this application are used for descriptive purposes only, and are not to be construed as indicating or implying their relative importance or implicitly indicating 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 the description of the present application, the meaning of "a plurality" is at least two, such as two, three, etc., unless specifically defined otherwise.

[0022] In the present application, the terms "connected", "fixed", etc. should be understood broadly, unless otherwise explicitly stated and defined. For example, "fixed" may be a fixed connection, or may be a detachable connection, or may be integrated; it may be a mechanical connection or an electrical connection; it may be directly connected or indirectly connected through an intermediate medium, and may be an internal connection of two elements or an interaction relationship of two elements unless explicitly defined otherwise. For a person having ordinary skill in the art, the specific meanings of the above terms in the present application may be understood on a case-by-case basis.

[0023] In addition, the technical solutions between the various embodiments of the present application may be combined with each other, but must be based on the realization of a person having ordinary skill in the art, when the combination of technical solutions is contradictory or unrealizable, it shall be deemed that such combination of technical solutions does not exist and is not within the scope of this application.

[0024] The present application provides an air conditioner and a method for controlling an air conditioner. The air conditioner may be a split wall type air conditioner, and the air conditioner may be a single refrigerating machine or a refrigerating and heating machine. In the description of the present application, the refrigerating and heating machine is taken as an example for illustration. The working mode of the air conditioner in this solution includes a breezeless mode and a cooling/heating mode.

[0025] Referring to FIGS. 1 to 2, an air conditioner 100 includes a housing 30, which includes an air outlet passage (not labeled) formed in the housing 30, and an air outlet (not labeled) formed in an edge of the housing 30 and communicated with the air outlet passage; a first air guiding plate 10 disposed adjacent to the air outlet, and rotatably connected with the housing through a first rotating shaft on the housing; and a second air guiding plate 20 rotatably disposed in the air outlet passage, and is capable of rotating through a second rotating shaft 22 on the housing 30; where the air conditioner 100 has a breezeless mode, in response to the breezeless mode, at least a part of the air outlet is shielded by the first air guiding plate 10.

[0026] Specifically, components of the air conditioner 100 are mounted inside the housing 30, and the housing 30 is further used to beautify the appearance while supporting and protecting the internal components. The housing 30 includes a chassis 31, a face frame (not labeled), and a panel 32. The face frame is disposed on the chassis 31, and a front side of the face frame is open. The panel 32 is disposed on a front side of the face frame. An air outlet is defined between a lower end of the panel 32 and the face frame.

[0027] Specifically, the face frame may be rotatably or detachably disposed on the chassis 31, and the panel 32 may be rotatably or detachably disposed on the face frame. It can be understood that the air conditioner 100 further includes a swinging blade 50. The swinging blade 50 is rotatably disposed in the air outlet passage, and controls the air swing in the direction of the left and right sides to realize air supply in the left and right direction. The air conditioner 100 further includes a fan 40 disposed inside the housing 30.

[0028] In the embodiment of the present application, an air outlet passage configured for air circulation is further provided inside the housing 30, and an air outlet is formed by the air outlet passage on an edge of the housing 30. The air is blown into an indoor space through the air outlet to adjust the indoor temperature when the air conditioner 100 is turned on. The first air guiding plate 10 is rotated around the first rotating shaft 12 to realize opening or closing of the air outlet. In this embodiment, a plurality of second vent holes 21 passing through the second air guiding plate 20 are provided on the second air guiding plate 20, and the second vent holes 21 are arranged along a thickness direction of the second deflector 20, and the second air guiding plate 20 may rotate in the air outlet passage around the second rotating shaft 22. In response to the breezeless mode, the first air guiding plate 10 is rotated by an angle for shielding at least a part of the air outlet. The air blown by the air conditioner 100 is blocked by the first air guiding plate 10, so that the air volume and the air speed at the air outlet are reduced. The air blown by the air conditioner 100 is prevented from being directly blown on the human body, so that the blowing feeling is softer, which provides various modes, avoids simple blowing feeling, and satisfies customer requirements.

[0029] Further, when the first air guiding plate 10 closes the air outlet, the first air guiding plate 10 includes a first side (not labeled) close to an upper wall of the air outlet, and a second side (not labeled) close to a lower wall of the air outlet; where the first rotating shaft 12 includes: a first surface (not labeled) extending towards the first side; and a second surface (not labeled) extending towards an edge of the upper wall of the air outlet, where α is an angle between the first surface and the second surface, and the angle α is no less than 0° and no more than 5° , after the air conditioner 100 is in a breezeless mode. In this state, the air speed of the air coming out from the air outlet passage is lower and the air volume is smaller, the air is blocked by the first air guiding plate 10, and spreads along the first air guiding plate 10 to the surroundings, thereby the air blown by the air conditioner 100 is prevented from being directly blown on the human body, so that the blowing feeling is softer, which is easy for the user to accept and gives the user a comfortable feeling.

[0030] Further, in response to the breezeless mode, and the angle α is no less than 0° and no more than 5° , a distance M between the first side and the edge on the upper wall of the air outlet is no less than 0mm and no more than 20mm; or, in response to the breezeless mode, a distance N between the second side and an edge of the lower wall of the air

outlet is no less than 30 mm and no more than 55 mm. In response to the breezeless mode, the air coming out from the air outlet passage is softened by the action of the first air guiding plate 10. At this time, when the air blown from the air conditioner 100 is diffused to the surroundings along the first air guiding plate 10, the air speed and the air volume coming out from the air outlet are reduced, so that the user does not feel the cold/hot air blown directly from the air outlet of the air conditioner 100.

[0031] Referring to FIG. 2, further, the air conditioner 100 further include a cooling/heating mode, in response to the cooling/heating mode, the first air guiding plate 10 is completely open of the air outlet, and the angle α is no less than 65° and no more than 90° . In the embodiment of the present application, the second working mode is a cooling/heating mode, and the first air guiding plate 10 and the second air guiding plate 20 are rotated to be roughly parallel to an air outlet direction of the air outlet passage. At this time, the first air guiding plate 10 includes a first side close to an upper wall of the air outlet, and a second side close to a lower wall of the air outlet; where the first rotating shaft 12 includes a first surface extending towards the first side; and a second surface extending towards an edge of the upper wall of the air outlet. α is an angle between the first surface and the second surface, namely, the first air guiding plate 10 is at an initial position when the first air guiding plate 10 completely closes the air outlet, and the first air guiding plate 10 is rotated around the first rotating shaft 12 at an angle of α from the initial position. When the rotating angle α of the first air guiding plate 10 no less than 65° and no more than 90° , the first air guiding plate 10 and the second air guiding plate 20 have little resistance to the air in the air outlet passage, so that the air speed and the air volume coming out of the air outlet passage are large, which is convenient to change the ambient temperature quickly.

[0032] Further, in response to the cooling/heating mode, a distance M between the first side and the edge of the upper wall of the air outlet is no less than 95mm and no more than 110mm. Or, in response to the cooling/heating mode, a range of a distance N between the second side and the edge of the lower wall of the air outlet is no less than 25 mm and no more than 45 mm. In the embodiment of the present application, in response to the cooling/heating mode and the angle α is no less than 65° and no more than 90° , M is no less than 95mm and no more than 110mm, or N is no less than 25mm and no more than 45mm, so that it is easy to increase the air speed and the air volume at the air outlet. At this time, the first air guiding plate 10 has little obstruction to the air coming out of the air conditioner 100, so that the air blown from the air outlet passage has a high air speed and a large air volume, thereby temperature inside the room may be quickly adjusted.

[0033] Further, in the embodiment of the present application, the first air guiding plate 10 is provided with a vent hole 11 passing through the first air guiding plate 10 along a thickness direction of the first air guiding plate 10.

[0034] Further, a length of the vent hole 11 in an opening direction of the vent hole 11 is equal to or larger than a thickness of the first air guiding plate 10. The vent hole 11 gradually increases in diameter along a direction from an inner side of the first air guiding plate 10 to an outer side of the first air guiding plate 10. The structure is simple and convenient for the air of the air outlet passage to diffuse from the vent hole 11 of the first air guiding plate 10 to the surroundings.

[0035] The present application further provides a method for controlling the air conditioner 100, which is described above. The air conditioner 100 includes a breezeless mode and a cooling/heating mode, and the air conditioner 100 is switchable between the breezeless mode and the cooling/heating mode; the method includes: in response to the breezeless mode, a part of an air outlet is shielded by a first air guiding plate 10, and a first rotating shaft 12 includes: a first surface extending towards a first side; and a second surface extending towards an edge of an upper wall of the air outlet; the first side is a side of the first air guiding plate 10 close to the upper wall of the air outlet; and α is an angle between the first surface and the second surface, and the angle α is no less than 0° and no more than 5° ; in response to the cooling/heating mode, the air outlet is completely opened by the first air guiding plate 10, and the range of the angle α is no less than 65° and no more than 90° . The specific structure of the air conditioner 100 is referred to the above embodiments, and will not be further described herein.

Claims

1. An air conditioner (100), the air conditioner (100) comprises:

a housing (30) comprising:

an air outlet passage formed in the housing (30); and

an air outlet formed in an edge of an end of the housing (30) and communicated with the air outlet passage;

a first air guiding plate (10) disposed adjacent to the air outlet, and rotatably connected with the housing (30) through a first rotating shaft (12) on the housing (30); and

a second air guiding plate (20) rotatably disposed in the air outlet passage, and being capable of rotating around

a second rotating shaft (22) on the housing (30),
 wherein the air conditioner (100) is operable in a breezeless mode, in response to the air conditioner operating
 in the breezeless mode, at least a part of the air outlet is shielded by the first air guiding plate (10), **characterized**
in that,

after the air outlet is closed by the first air guiding plate (10),
 the first air guiding plate (10) comprises:

a first side close to an upper side of the air outlet, and
 a second side close to a lower side of the air outlet;

wherein the first rotating shaft (12) comprises:

a first surface extending from the first rotating shaft (12) towards the first side; and
 a second surface extending from the first rotating shaft (12) towards an edge of an end of the upper side
 of the air outlet,
 wherein α is an angle between the first surface and the second surface, and α is no less than 0° and no
 more than 5° , when the air conditioner (100) is operating in a breezeless mode.

2. The air conditioner (100) according to claim 1, **characterized in that,**
 in response to the air conditioner operating in the breezeless mode, a distance M between the first side and the
 edge of the end of the upper side of the air outlet is no less than 0 mm and no more than 20 mm.

3. The air conditioner (100) according to any one of claims 1 to 2, **characterized in that,**
 in response to the air conditioner operating in the breezeless mode, a distance N between the second side and an
 edge of an end of the lower side of the air outlet is no less than 30 mm and no more than 55 mm.

4. The air conditioner (100) according to any one of claims 1 to 3, **characterized in that,**
 the air conditioner (100) further comprises a cooling/heating mode,
 wherein in response to the air conditioner operating in the cooling/heating mode, the first air guiding plate (10)
 completely avoid the air outlet, and the angle α is at least 65° and at most 90° .

5. The air conditioner (100) according to any one of claims 1 to 4, **characterized in that,**
 in response to the air conditioner operating in the cooling/heating mode, the distance M between the first side and
 the edge of the end of the upper side of the air outlet is no less than 95 mm and no more than 110 mm.

6. The air conditioner (100) according to any one of claims 1 to 5, **characterized in that,**
 in response to the air conditioner operating in the cooling/heating mode, the distance N between the second side
 and the edge of the end of the lower side of the air outlet is no less than 25 mm and no more than 45 mm.

7. The air conditioner (100) according to any one of claims 1 to 6, **characterized in that,**
 the first air guiding plate (10) is provided with at least one vent hole (11) penetrating through the first air guiding
 plate (10) along a thickness direction of the first air guiding plate (10).

8. The air conditioner (100) according to claim 7, **characterized in that,**
 a length of the vent hole (11) in an direction of an opening of the vent hole (11) is equal to or larger than a thickness
 of the first air guiding plate (10).

9. A method for controlling an air conditioner (100), **characterized in that,**
 the air conditioner (100) is operable in a breezeless mode and a cooling/heating mode, and the air conditioner (100)
 is switchable between the breezeless mode and the cooling/heating mode;
 wherein the method comprises:

in response to the air conditioner operating in the breezeless mode, shielding a part of an air outlet by a first
 air guiding plate (10), forming a first surface as a first rotating shaft (12) extending from the first rotating shaft
 (12) towards a first side of the first air guiding plate (10) close to an upper side of an air outlet, and forming a
 second surface as the first rotating shaft (12) extending from the first rotating shaft (12) towards an edge of an
 end of the upper side of the air outlet, wherein an angle α between the first surface and the second surface is
 no less than 0° and no more than 5° ; and

in response to the air conditioner operating in the cooling/heating mode, the first air guiding plate (10) completely avoiding the air outlet, and the angle α is no less than 65° and no more than 90°.

5 Patentansprüche

1. Klimaanlage (100), wobei die Klimaanlage(100) ein Gehäuse (30) umfasst, das Folgendes umfasst:

einen Luftauslasskanal, der in dem Gehäuse (30) ausgebildet ist; und
 einen Luftauslass, der an einer Kante eines Endes des Gehäuses (30) ausgebildet ist und mit dem Luftauslasskanal verbunden ist;
 eine erste Luftführungsplatte (10), die angrenzend an den Luftauslass angeordnet ist und durch eine erste rotierende Welle (12) am Gehäuse (30) drehbar mit dem Gehäuse (30) verbunden ist; und
 eine zweite Luftführungsplatte (20), die drehbar im Luftauslasskanal angeordnet ist und sich um eine zweite rotierende Welle (22) am Gehäuse (30) drehen kann;
 wobei die Klimaanlage (100) in einem Lüfterlosen Modus betrieben werden kann, wobei in Reaktion auf die im Lüfterlosen Modus betriebene Klimaanlage mindestens ein Teil des Luftauslasses durch die erste Luftführungsplatte (10) abgeschirmt wird, **dadurch gekennzeichnet, dass**
 nach dem Verschließen des Luftauslasses durch die erste Luftführungsplatte (10) die erste Luftführungsplatte (10) Folgendes umfasst:

eine erste Seite nahe einer Oberseite des Luftauslasses und
 eine zweite Seite nahe einer Unterseite des Luftauslasses;
 wobei die erste rotierende Welle (12) Folgendes umfasst:

eine erste Oberfläche, die sich von der ersten rotierenden Welle (12) zur ersten Seite erstreckt; und
 eine zweite Oberfläche, die sich von der ersten rotierenden Welle (12) zu einer Kante eines Endes der Oberseite des Luftauslasses erstreckt,
 wobei α ein Winkel zwischen der ersten Oberfläche und der zweiten Oberfläche ist und α nicht weniger als 0° und nicht mehr als 5° beträgt, wenn die Klimaanlage (100) in einem Lüfterlosen Modus betrieben wird.

2. Klimaanlage (100) gemäß Anspruch 1, **dadurch gekennzeichnet, dass** in Reaktion auf die im Lüfterlosen Modus betriebene Klimaanlage ein Abstand M zwischen der ersten Seite und der Kante des Endes der Oberseite des Luftauslasses nicht weniger als 0 mm und nicht mehr als 20 mm beträgt.

3. Klimaanlage (100) gemäß einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** in Reaktion auf die im Lüfterlosen Modus betriebene Klimaanlage ein Abstand N zwischen der zweiten Seite und einer Kante eines Endes der Unterseite des Luftauslasses nicht weniger als 30 mm und nicht mehr als 55 mm beträgt.

4. Klimaanlage (100) gemäß einem der Ansprüche 1 bis 3, **dadurch gekennzeichnet, dass** die Klimaanlage (100) ferner einen Kühl-/Heizmodus umfasst,
 wobei in Reaktion auf die im Kühl-/Heizmodus betriebene Klimaanlage die erste Luftführungsplatte (10) den Luftauslass vollständig vermeidet und der Winkel α mindestens 65° und höchstens 90° beträgt.

5. Klimaanlage (100) gemäß einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** in Reaktion auf die im Kühl-/Heizmodus betriebene Klimaanlage der Abstand M zwischen der ersten Seite und der Kante des Endes der Oberseite des Luftauslasses nicht weniger als 95 mm und nicht mehr als 110 mm beträgt.

6. Klimaanlage (100) gemäß einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet, dass** in Reaktion auf die im Kühl-/Heizmodus betriebene Klimaanlage der Abstand N zwischen der zweiten Seite und der Kante des Endes der Unterseite des Luftauslasses nicht weniger als 25 mm und nicht mehr als 45 mm beträgt.

7. Klimaanlage (100) gemäß einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** die erste Luftführungsplatte (10) mit mindestens einem Entlüftungsloch (11) versehen ist, das durch die erste Luftführungsplatte (10) entlang einer Dickenrichtung der ersten Luftführungsplatte (10) hindurchdringt.

8. Klimaanlage (100) gemäß Anspruch 7, **dadurch gekennzeichnet, dass** eine Länge des Entlüftungslochs (11) in

einer Richtung einer Öffnung des Entlüftungslochs (11) gleich oder größer als eine Dicke der ersten Luftführungsplatte (10) ist.

9. Verfahren zum Steuern einer Klimaanlage (100), **dadurch gekennzeichnet, dass** die Klimaanlage (100) in einem Lüfterlosen Modus und in einem Kühl-/Heizmodus betrieben werden kann, und dass die Klimaanlage (100) zwischen dem Lüfterlosen Modus und dem Kühl-/Heizmodus umschaltbar ist, wobei das Verfahren Folgendes umfasst:

in Reaktion auf die im Lüfterlosen Modus betriebene Klimaanlage, Abschirmen eines Teils eines Luftauslasses durch eine erste Luftführungsplatte (10), Formen einer ersten Oberfläche als eine erste rotierende Welle (12), die sich von der ersten rotierenden Welle (12) zu einer ersten Seite der ersten Luftführungsplatte (10) nahe einer Oberseite eines Luftauslasses erstreckt, und Formen einer zweiten Oberfläche als die erste rotierende Welle (12), die sich von der ersten rotierenden Welle (12) zu einer Kante eines Endes der Oberseite des Luftauslasses erstreckt, wobei ein Winkel α zwischen der ersten Oberfläche und der zweiten Oberfläche nicht weniger als 0° und nicht mehr als 5° beträgt; und

in Reaktion auf die im Kühl-/Heizmodus betriebene Klimaanlage, vollständiges Vermeiden des Luftaustritts durch die erste Luftführungsplatte (10), und der Winkel α beträgt nicht weniger als 65° und nicht mehr als 90° .

Revendications

1. Climatiseur (100), le climatiseur (100) comprenant :
un boîtier (30) comprenant :

un passage de sortie d'air formé dans le boîtier (30) ; et
une sortie d'air formée dans un bord d'une extrémité du boîtier (30) et communiquant avec le passage de sortie d'air;

une première plaque de guidage d'air (10) disposée adjacente à la sortie d'air, et reliée de façon rotative au boîtier (30) par le biais d'un premier arbre rotatif (12) sur le boîtier (30) ; et

une deuxième plaque de guidage d'air (20) disposée de façon rotative dans le passage de sortie d'air, et capable de tourner autour d'un deuxième arbre rotatif (22) sur le boîtier (30),

dans lequel le climatiseur (100) peut fonctionner dans un mode non soufflant, et en réponse au fonctionnement du climatiseur dans le mode non soufflant, une partie au moins de la sortie d'air est masquée par la première plaque de guidage d'air (10), **caractérisé en ce que**

après la fermeture de la sortie d'air par la première plaque de guidage d'air (10),
la première plaque de guidage d'air (10) comprend :

un premier côté proche d'un côté supérieur de la sortie d'air, et

un deuxième côté proche d'un côté inférieur de la sortie d'air ;

dans lequel le premier arbre rotatif (12) comprend :

une première surface s'étendant à partir du premier arbre rotatif (12) vers le premier côté; et

une deuxième surface s'étendant à partir du premier arbre rotatif (12) vers un bord d'une extrémité du côté supérieur de la sortie d'air,

dans lequel α est un angle entre la première surface et la deuxième surface, et α n'est pas inférieur à 0° et pas supérieur à 5° , lorsque le climatiseur (100) fonctionne dans un mode non soufflant.

2. Climatiseur (100) selon la revendication 1, **caractérisé en ce que**
en réponse au fonctionnement du climatiseur dans le mode non soufflant, une distance M entre le premier côté et le bord de l'extrémité du côté supérieur de la sortie d'air n'est pas inférieure à 0 mm et pas supérieure à 20 mm.

3. Climatiseur (100) selon l'une quelconque des revendications 1 à 2, **caractérisé en ce que**
en réponse au fonctionnement du climatiseur dans le mode non soufflant, une distance N entre le deuxième côté et un bord d'une extrémité du côté inférieur de la sortie d'air n'est pas inférieure à 30 mm et pas supérieure à 55 mm.

4. Climatiseur (100) selon l'une quelconque des revendications 1 à 3, **caractérisé en ce que**
le climatiseur (100) comprend en outre un mode refroidissement/chauffage,
dans lequel, en réponse au fonctionnement du climatiseur en mode refroidissement/chauffage, la première plaque

de guidage d'air (10) évite complètement la sortie d'air, et l'angle α mesure au minimum 65° et au maximum 90°.

5 5. Climatiseur (100) selon l'une quelconque des revendications 1 à 4, **caractérisé en ce que**
en réponse au fonctionnement du climatiseur en mode refroidissement/chauffage, la distance M entre le premier
côté et le bord de l'extrémité du côté supérieur de la sortie d'air n'est pas inférieure à 95 mm et pas supérieure à
110 mm.

10 6. Climatiseur (100) selon l'une quelconque des revendications 1 à 5, **caractérisé en ce que**
en réponse au fonctionnement du climatiseur en mode refroidissement/chauffage, la distance N entre le deuxième
côté et le bord de l'extrémité du côté inférieur de la sortie d'air n'est pas inférieure à 25 mm et pas supérieure à 45 mm.

15 7. Climatiseur (100) selon l'une quelconque des revendications 1 à 6, **caractérisé en ce que**
la première plaque de guidage d'air (10) est dotée d'au moins un trou d'aération (11) pénétrant à travers la première
plaque de guidage d'air (10) le long d'une direction d'épaisseur de la première plaque de guidage d'air (10).

8. Climatiseur (100) selon la revendication 7, **caractérisé en ce que**
une longueur du trou d'aération (11) dans une direction d'une ouverture du trou d'aération (11) est égale ou supérieure
à une épaisseur de la première plaque de guidage d'air (10).

20 9. Procédé de commande d'un climatiseur (100), **caractérisé en ce que**
le climatiseur (100) peut être actionné dans un mode non soufflant et dans un mode refroidissement/chauffage, et
le climatiseur (100) peut être commuté entre le mode non soufflant et le mode refroidissement/chauffage;
dans lequel le procédé comprend :

25 en réponse au fonctionnement du climatiseur en mode non soufflant, le blindage d'une partie d'une sortie d'air
à l'aide d'une première plaque de guidage d'air (10), la formation d'une première surface comme premier arbre
rotatif (12) s'étendant du premier arbre rotatif (12) vers un premier côté de la première plaque de guidage d'air
(10) près d'un côté supérieur d'une sortie d'air, et la formation d'une deuxième surface comme premier arbre
rotatif (12) s'étendant du premier arbre rotatif (12) vers un bord d'une extrémité du côté supérieur de la sortie
30 d'air, où un angle α entre la première surface et la deuxième surface n'est pas inférieur à 0° et pas supérieur
à 5° ; et

en réponse au fonctionnement du climatiseur en mode refroidissement/chauffage, la première plaque de guidage
d'air (10) évite complètement la sortie d'air, et l'angle α n'est pas inférieur à 65° et pas supérieur à 90°.

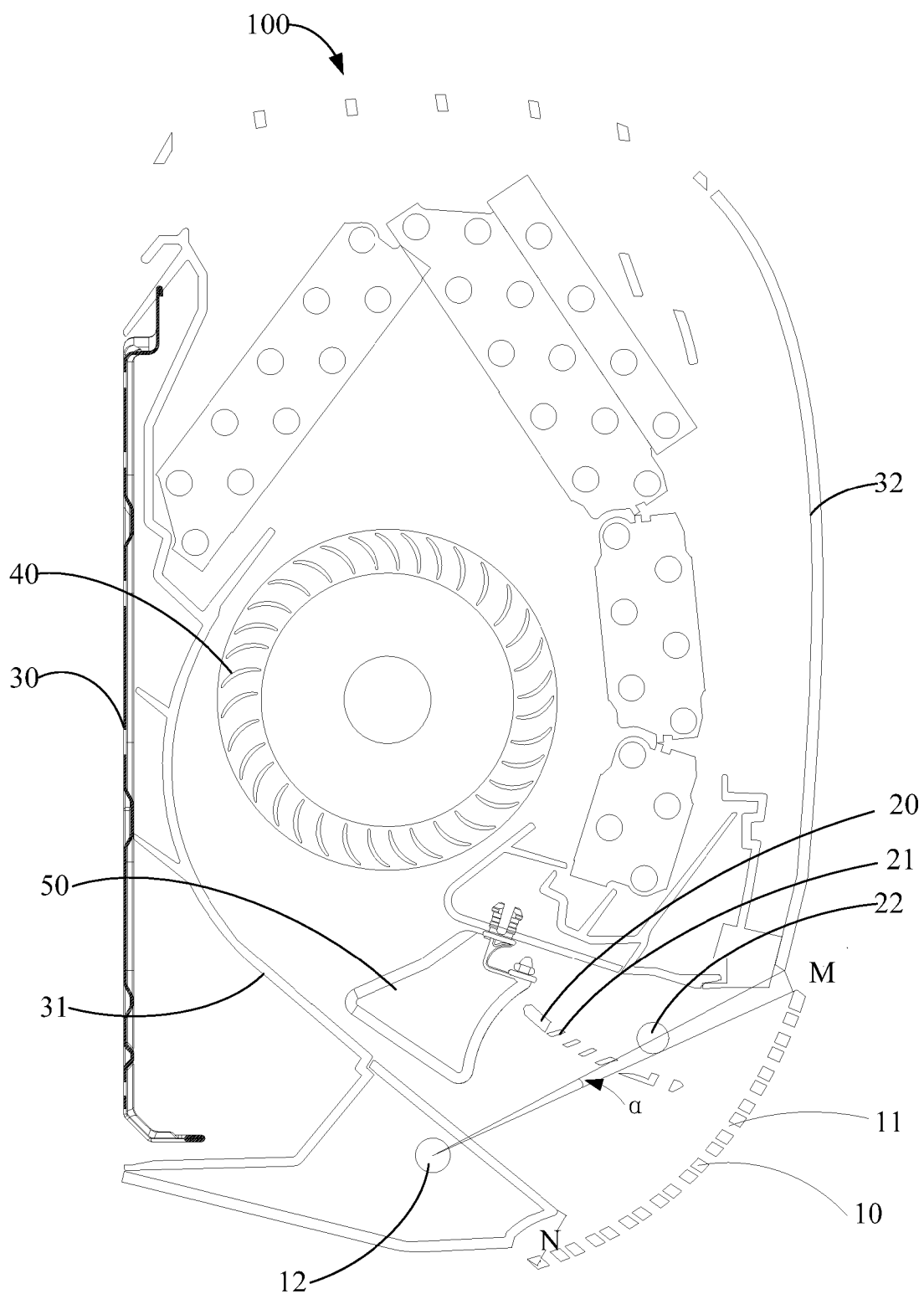


FIG. 1

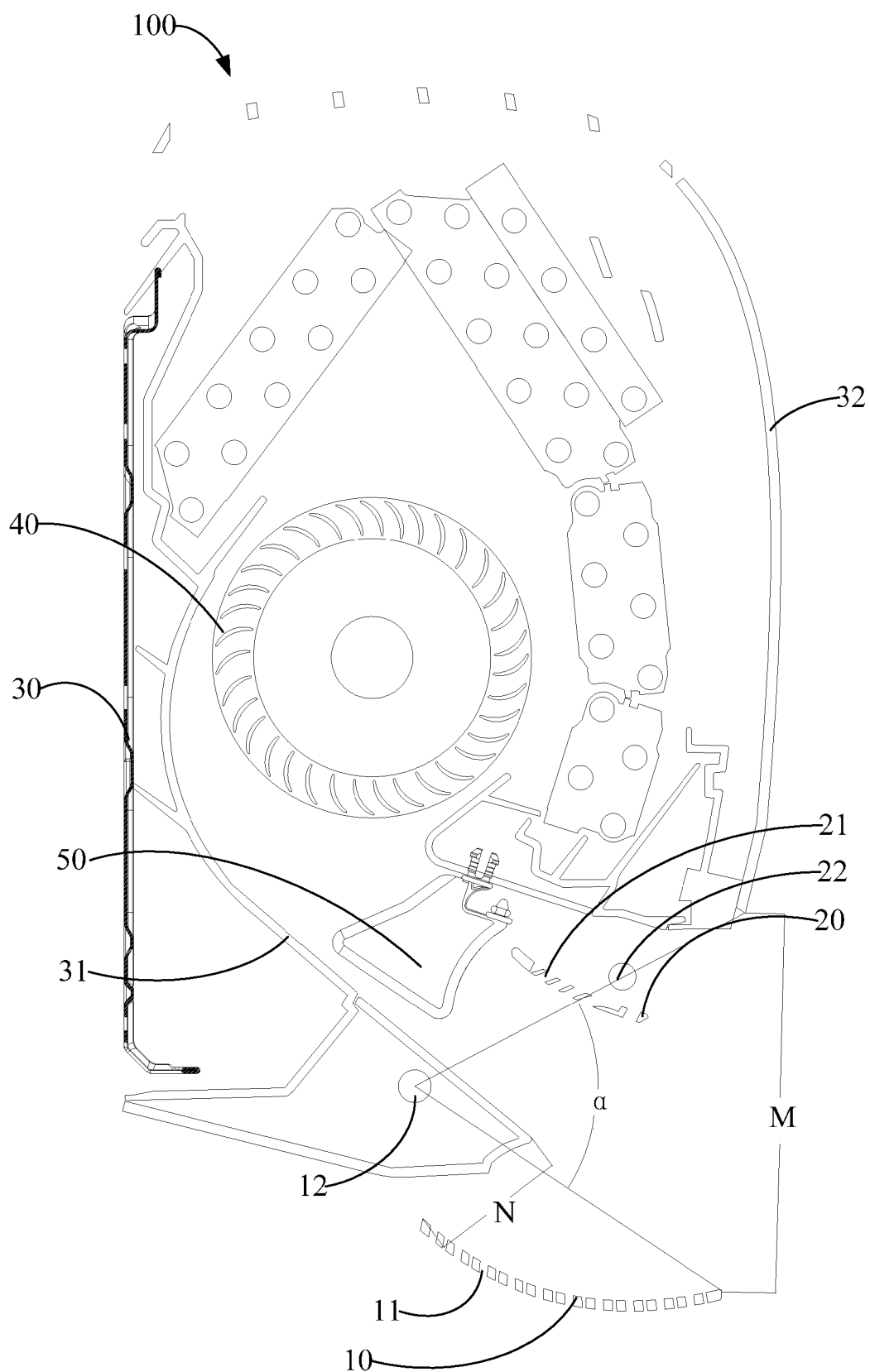


FIG. 2

REFERENCES CITED IN THE DESCRIPTION

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