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

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Description**TECHNICAL FIELD**

5 **[0001]** The present invention relates to the technical field of air conditioning equipment, in particular to a method for controlling an air conditioner and an air conditioner configured for use in such a method..

BACKGROUND

10 **[0002]** The demand for air conditioner is increasing with continuous improvement of human daily life. Regarding air conditioners in the existing market, the blowing air comes directly to the users with a great discomfort, due to a large long-distance flow area of the air outlet, a large air volume and a long air supply distance. Further, various demands of the users may not be met thanks to the single blowing mode.

15 CN 106642334 A discloses an air conditioner and an indoor unit thereof. The air conditioner indoor unit includes a casing, a first air guide plate and a first driving device. The casing is provided with an air duct, and the casing is provided with an air duct connected to an air outlet; one end of the first wind deflector is rotatably installed in the air duct; the first driving device is connected with the first wind deflector to drive the first wind deflector to rotate,

20 CN 107388370 A discloses an air-conditioning indoor unit and a control method thereof. The air-conditioning indoor unit has a breeze mode, and the air-conditioning indoor unit includes a casing, a first air deflector, a second air deflector, and a third air deflector.

CN 103322661 A discloses an air outlet air guide structure, an air conditioner and a control method of the air conditioner. The air outlet air guiding structure includes a first air guiding plate and a first driving device arranged at the air outlet.

25 CN 107401776 A discloses an air-conditioning indoor unit. The air-conditioning indoor unit includes: a body with an air outlet; an outer air deflector, the outer air deflector is provided at the air outlet for opening and closing the air outlet, the outer air deflector is formed with a plurality of first air dispersing holes penetrating in the thickness direction.

30 WO 2017/024636 A1 discloses an indoor unit of an air conditioner, which is provided with an air outlet, an air guide plate, a first air dissipation plate, a second air dissipation plate, and a controller, wherein the first air dissipation plate and the second air dissipation plate are both provided with a plurality of vent holes, when determining whether the indoor unit of the air conditioner enters a pre-set operation mode, the controller controls the first air dissipation plate and the second air dissipation plate to open the air outlet and controls the air guide plate to rotate by a pre-set angle to partially cover the air outlet, and after the indoor unit of the air conditioner has entered the pre-set operation mode, the controller controls the first air dissipation plate and the second air dissipation plate to be located at different rotation positions according to indoor temperature and environment humidity to cover the air outlet.

SUMMARY

35 **[0003]** The main purpose of the present invention is to provide a method for controlling an air conditioner and an air conditioner configured for use in such a method, aiming at overcoming a single blowing mode regarding the air conditioner in the prior art.

40 **[0004]** In order to achieve the above objective, the present invention provides a method for controlling an air conditioner, which a housing, in which the housing includes an air outlet passage formed in the housing; and an air outlet arranged in an outer peripheral wall of the housing and communicated with the air outlet passage; a first air guiding plate rotatably at the air outlet and connected with the housing by a first rotating shaft on the housing; and a second air guiding plate rotatably arranged in the air outlet passage, and being capable of rotating by a second rotating shaft in the housing, in which the air conditioner includes a breeze mode, in response to the breeze mode, a part of the air outlet is shielded by the first air guiding plate, and the second air guiding plate is extended to a lower side of the air outlet in the air outlet passage and a far end of the first air guiding plate in the air out-blowing direction of the air outlet, a far end of the second air guiding plate in the air out-blowing direction of the air outlet, and the first rotating shaft are located substantially on a same plane. The invention is defined by the features of claim 1.

50 **[0005]** In response to the cooling/heating mode, optionally a distance M is no less than 95mm and no more than 110mm between the first side and the edge of the upper wall of the air outlet.

[0006] In response to the breeze mode, optionally a distance N is no less than 25mm and no more than 45mm between the second side and the edge of the lower side of the air outlet.

55 **[0007]** Optionally, 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; in which the first rotating shaft 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, in which α is an included angle between the first surface and the second surface, and α is no less than 30° and no more than 40°, after the air conditioner is in a breeze mode.

[0008] Optionally, in response to the breeze mode, a distance M is no less than 65 mm and no more than 70 mm between the first side and the edge of the upper wall of the air outlet.

[0009] Optionally, in response to the breeze mode, a distance N is no less than 15mm and no more than 25 mm between the second side and the edge of the lower wall of the air outlet.

[0010] Optionally, the air conditioner further includes a cooling/heating mode, in which in response to the cooling/heating mode, the first air guiding plate is completely open of the air outlet, and the inclined angle α is no less than 65° and no more than 90°.

[0011] Optionally, the first air guiding plate defines an air dispersing hole passing through the first air guiding plate along a thickness direction of the first air guiding plate.

[0012] Optionally, a length of the air dispersing hole in an opening direction is equal to or more than the thickness of the first air guiding plate.

[0013] Optionally, the method for controlling an air conditioner includes a breeze mode and a cooling/heating mode, and the air conditioner is switchable between the breeze mode and the cooling/heating mode.

[0014] In response to the breeze mode, shielding a part of an air outlet by a first air guiding plate, and moving a second air guiding plate to a lower wall of the air outlet in the air outlet passage, wherein the first rotating shaft includes a first surface extending towards a first side; and a second surface extending towards an edge of an upper side of the air outlet; an included angle α between the first surface and the second surface is no less than 30° and no more than 40°;

[0015] In response to the cooling/heating mode, completely opening the air outlet by the first air guiding plate, and the inclined angle α is no less than 65° and no more than 90°.

[0016] According to the present invention, when the air conditioner is in the breeze mode, the first air guiding plate partially shields the air outlet, and the second air guiding plate is extended to the lower side of the air outlet along the air outlet passage, so that air from the air outlet disperses to is the surroundings. Single mode of the air conditioner is overcome, with various modes provided, and users requirement are satisfied.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] In order to explain the embodiment of the present invention or the technical solution of the prior art more clearly, the following will briefly introduce the drawings necessary in the description of the embodiments or the prior art. Obviously, the drawings in the following description are only some embodiments of the present invention. For those ordinary skilled in the art, other drawings can be obtained according to the structure shown in these drawings without any creative effort.

Fig. 1 is a schematic structural diagram of an air conditioner in a breeze mode of the present invention;

Fig. 2 is a schematic structural diagram of an air conditioner in a cooling/heating mode of the present invention.

Description of reference numerals:

[0018]

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

[0019] The implementation, functional features and advantages of the present invention will be further described with reference to the accompanying drawings with the embodiments.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0020] As following, the technical solution in the embodiments of the present invention will be described clearly and completely with reference to the drawings in the embodiment of the present invention. Obviously, the described embodiment is only a part of the embodiment of the present invention, not all of the embodiments. Based on the embodiments

in the present invention, all other embodiments perceived by those ordinary skills in the art without creative effort should be fallen within the protection scope of the present invention.

[0021] It should be noted that if directional indications (such as up, down, left, right, front, back, horizontal, vertical, etc.) are involved in the embodiments of the present invention, the directional indications are only used to explain the relative positional relationship and movement between the components in a certain posture (as shown in the drawings), and if the specific posture changes, the directional indications will change accordingly.

[0022] In addition, if there are descriptions of "first" and "second" in the embodiments of this application, the descriptions of "first" and "second" are used for descriptive purposes only and cannot be understood as indicating or implying their relative importance or implicitly indicating the number of indicated technical features. Thus, features defining "first" and "second" may explicitly or implicitly include at least one such feature. In addition, the technical solutions between the various embodiments may be combined with each other, but must be based on what one of ordinary skill in the art can achieve. When the combination of technical solutions is contradictory or impossible to achieve, it should be considered that the combination of such technical solutions does not exist and is not within the protection scope required by the present invention.

[0023] The present invention proposes an air conditioner and a control method of the air conditioner. The air conditioner can be a split wall-mounted air conditioner, and further can be a single cooling machine or a cooling and heating machine. In the description of the following, an air conditioner with cooling and heating functions is taken as an example for illustration. The air conditioner in the present technical solution includes a breeze mode and a cooling/heating mode.

[0024] Referring to Fig. 1, an air conditioner 100 includes a housing 30, a first air guiding plate 10 and a second air guiding plate 20. The housing 30 is provided with an air outlet passage (now shown in the figures) formed in the housing 30 and an air outlet (now shown in the figures) communicated with the air outlet passage and arranged in an outer peripheral wall of the housing 30. The first air guiding plate 10 is rotatably arranged at the air outlet and is connected with the housing 30 by a first rotating shaft 12 of the housing 30. The second air guiding plate 20 is rotatably arranged in the air outlet passage, and is rotatable by a second rotating shaft 22 of the housing. The air conditioner 100 includes a breeze mode, in response to the breeze mode, a part of the air outlet is shielded by the first air guiding plate 10, and the second air guiding plate 20 is extended to a lower side of the air outlet along the air outlet passage.

[0025] Specifically, components of the air conditioner 100 are installed in the housing 30, and the housing 30 is used to support and protect internal components while beautifying the appearance of the air conditioner. The housing 30 includes a chassis 31, a face frame (not shown in the figures) and a panel 32. The face frame is provided on the chassis 31, the face frame is open at the front, where the panel 32 is provided. And an air outlet is disposed between the lower end of the panel 32 and the face frame. Specifically, the face frame may be rotatably or detachably arranged on the chassis 31, and the panel 32 may be rotatably or detachably provided on the face frame. It can be understood that the air conditioner 100 further includes swinging blades 50, and the swinging blades 50 are rotatably disposed in the air outlet passage, and controls the air blowing direction from left to right, to realize the air supply in the left and right directions. The air conditioner 100 further includes a fan 40 provided in the housing 30.

[0026] According to the present invention, the housing 30 is further provided with an air outlet passage for air circulation. The air outlet passage forms an air outlet in the outer peripheral wall of the housing 30. When the air conditioner 100 is turned on, the air continuously blows to the indoor space through the air outlet, thereby adjusting the indoor temperature. The first air guiding plate 10 rotates around the first rotating shaft 12 to open or close the air outlet. In the present embodiment, the second air guiding plate 20 is provided with a plurality of second air dispersing holes 21 passing through the second air guiding plate 20. The second air dispersing holes 21 are arranged along the thickness direction of the second air guiding plate 20, and the second air guiding plate 20 can rotate in the air outlet passage along the second rotating shaft 22. With respect to the breezing mode, in response to the breeze mode of the air conditioner 100, a part of the air outlet is shielded by the first air guiding plate 10, and the second air guiding plate 20 is extended to a lower side of the air outlet along the air outlet passage. In a preferred embodiment, the first air guiding plate 10 and the second air guiding plate 20 are substantially mutually perpendicular. The far end of the first air guiding plate 10 in the air out-blowing direction of the air outlet, the far end of the second air guiding plate 20 in the air out-blowing direction of the air outlet, and the first rotating shaft 12 are located substantially on a same plane. The blowing air is blocked by the first air guiding plate 10 and diffused to the surroundings through the second air dispersing holes 21 in the second air guiding plate 20, thereby reducing the air volume and speed of the air outlet. Air blown by the air conditioner 100 is prevented from directly blowing onto the human body, so that the air felt by the human body is rather soft. The air conditioner includes various modes rather than a single mode, and the users demand is met.

[0027] Further, when the first air guiding plate 10 closes the air outlet, a side of the first air guiding plate 10 close to an upper side of the air outlet is defined as a first side (not shown in the figures), and a side of the first air guiding plate 10 close to a lower side of the air outlet is defined as a second side (not shown in the figures); the first rotating shaft 12 is extended to the first side to form a first surface, and the first rotating shaft 12 is extended to an edge of the upper side of the air outlet to form a second surface. In which α is an included angle between the first surface and the second surface. That is, the initial position of the first guiding wind corresponds to the initial state when the first air guiding plate

completely closes the air outlet. The rotating angle of the first air guiding plate 10 around the first rotating shaft 12 from the initial position is α , when the air conditioner works in the breeze mode, the range of α is no less than 30° and no more than 40° . As such, the air speed coming out of the air outlet passage is weak, the wind volume is not large, and the air is prevented to blow on user's body through the blockage of the first air guiding plate 10. By diffusing to the surroundings along the first air guiding plate 10, the air becomes softer and brings more comfort to the user.

[0028] Further, when the air conditioner 100 is in the breeze mode and the range of α is no less than 30° and no more than 40° , the distance M is between the first side and the edge of housing at the upper side of the air outlet, and M is no less than 65mm and no more than 70mm. Alternatively, when the air conditioner 100 is operated in the breeze mode, the distance N is between the second side and the edge of the housing on the lower side of the air outlet, and N is no less than 5mm and no more than 25mm. When the air conditioner works in the breeze mode, the air coming out of the air outlet passage is prone to soften under the action of the first air guiding plate 10. As such, the air from the air conditioner 100 diffusing to the surroundings along the first air guiding plate 10, reduces the air speed and volume out coming from the air outlet, and the user feels soft wind.

[0029] Referring to Fig. 2, further, the air conditioner further comprises a cooling/heating mode, and in response to the cooling/heating mode, the first air guiding plate is completely avoided for the air outlet, and the inclined angle α is no less than 65° and no more than 90° . In the embodiments of the present invention, the second working mode is a cooling/heating mode, and the first air guiding plate 10 and the second air guiding plate 20 respectively rotate to a position substantially parallel to the air out-blowing direction of the air outlet passage. As such, the side of the first air guiding plate 10 close to the upper side of the air outlet is the first side, and the side of the first air guiding plate 10 close to the lower side of the air outlet is the second side. The first rotating shaft 12 is extended to the first side to form a first surface, the first rotating shaft 12 is extended to end edge of housing at the upper side of the air outlet to form a second surface, the included angle between the first surface and the second surface is α , that is, taking the initial state that the first air guiding plate completely closes the air outlet is taken as an initial position, α is the rotation angle of the first air guiding plate 10 around the first rotating shaft 12 from the initial position. When the rotation angle α of the first air guiding plate 10 is within the range of α being no less than 65° and no more than 90° , the first air guiding plate 10 and the second air guiding plate 20 have less resistance to the blowing air from the air outlet passage, so that the air speed and volume coming out of the air outlet passage are relatively large. The ambient temperature can be changed quickly.

[0030] Further, when in the cooling/heating mode, a distance M ranges from 95mm to 110 mm between the first side and the edge of the housing at the upper side of the air outlet. Alternatively, a distance N ranges from 25mm to 45mm between the second side and the edge of the housing at the lower side of the air outlet. In the embodiments of the present invention, when the air conditioner 100 is in the cooling/heating mode, and α is no less than 65° and no more than 90° , M ranges from 95mm to 110mm or N ranges from 25mm to 45mm. It is easy to improve the air speed and volume from the air outlet. At present state, the first air guiding plate 10 has little obstruction to the air outlet of the air conditioner 100, so that the air speed blowing from the air outlet passage is high and the air volume is large, and the temperature in the room is quickly adjusted.

[0031] In the embodiments of the present invention, the first air guiding plate 10 is provided with air dispersing holes 11 passing through the first air guiding plate 10 in a thickness direction. The length of the diffuser holes 11 in the opening direction is equal to or greater than the thickness of the first air guiding plate 10. The air dispersing holes 11 gradually increase in diameter in a direction from the inner side of the first air guiding plate 10 to the outer side of the first air guiding plate 10. The structure of the air conditioner is simple, enabling the air in the air outlet passage to diffuse to the surroundings from the air dispersing holes 11 of the first air guiding plate 10.

[0032] The present invention further proposes a control method of the air conditioner 100 which is described above, the air conditioner includes a breeze mode and a cooling/heating mode, in which the air conditioner is switchable between the breeze mode and the cooling/heating mode; the method includes: in response to the breeze mode, shielding a part of an air outlet by a first air guiding plate, and moving the second air guiding plate to a lower side of the air outlet in an air outlet passage, in which the first rotating shaft includes: a first surface extending towards a first side; and a second surface extending towards an edge of an upper side of the air outlet; an included angle α between the first surface and the second surface is no less than 30° and no more than 40° ; in response to the cooling/heating mode, completely opening the air outlet by the first air guiding plate, and the inclined angle α is no less than 65° and no more than 90° . The specific structure of the air conditioner 100 refers to the above-mentioned embodiment and will not be described herein.

[0033] This is only some embodiments of the present invention and is not intended to limit the scope of the present invention. Any equivalent structural change made under the concept of the present disclosure using the contents of the present disclosure specification shall be included in the protection scope of the present invention as specified in the claims.

Claims

1. A method for controlling an air conditioner (100), wherein the air conditioner (100) comprises:

a housing (30), wherein the housing (30) comprises:

an air outlet passage formed in the housing (30); and
 an air outlet arranged in an outer peripheral wall of the housing (30) and
 communicated with the air outlet passage;
 a first air guiding plate (10) rotatably arranged at the air outlet and connected with
 the housing (30) by a first rotating shaft (12) on the housing (30); and
 a second air guiding plate (20) arranged in the air outlet passage, and being capable of rotating around a
 second rotating shaft (22) in the housing (30),

wherein the first air guiding plate (10) is arranged to rotate around the first rotating shaft (12) to open or close
 the air outlet and the second air guiding plate (20) is provided with a plurality of second air dispersing holes
 (21) passing through the second air guiding plate (20), wherein the second air dispersing holes (21) are arranged
 along the thickness direction of the second air guiding plate (20),

wherein the air conditioner (100) comprises a breeze mode, in response to the air conditioner operating in the
 breeze mode, a part of the air outlet is shielded by the first air guiding plate (10), and the second air guiding
 plate (20) is rotated to a lower side of the air outlet in the air outlet passage

characterized in that

in response to the air conditioner operating in the breeze mode, a far end of the first air guiding plate (10) in the
 air out-blowing direction of the air outlet, a far end of the second air guiding plate (20) in the air out-blowing
 direction of the air outlet, and the first rotating shaft (12) are located substantially on a same plane, such that
 the blowing air is blocked by the first air guiding plate (10) and diffused to the surroundings through the second
 air dispersing holes (21) in the second air guiding plate (20), thereby reducing the air volume and speed of the
 air outlet.

2. The method of claim 1, **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 the lower side of the air outlet;
 wherein the first rotating shaft (12) comprises:

a first surface extending towards the first side; and
 a second surface extending towards an edge of an end of the upper side of the air outlet, wherein
 α is an included angle between the first surface and the second surface, and α is no less than 30° and no
 more than 40°, when the air conditioner (100) is in a breeze mode.

3. The method of claim 2, **characterized in that**

in response to the air conditioner operating in the breeze mode, a distance M is no less than 65 mm and no more
 than 70 mm between the first side and the edge of the end of the upper side of the air outlet.

4. The method of any one of claims 2 or 3, **characterized in that**

in response to the air conditioner operating in the breeze mode, a distance N is no less than 15 mm and no more
 than 25 mm between the second side and the edge of the end of the lower side of the air outlet.

5. The method of any one of claim 2 to 4, **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 included angle α is no less than 65° and no more than 90°.

6. The method of any one of claims 1 to 5, **characterized in that**

in response to the air conditioner operating in the cooling/heating mode, a distance M is no less than 95 mm and
 no more than 110 mm between the first side and the edge of the end of the upper side of the air outlet.

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

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

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

10. The method according one of the preceding claims, **characterized in that**
the air conditioner (100) is operable in a breeze mode and a cooling/heating mode, wherein the air conditioner (100) is switchable between the breeze mode and the cooling/heating mode; the method comprises:

in response to the air conditioner operating in the breeze mode, shielding a part of an air outlet by a first air guiding plate (10), rotating a second air guiding plate (20) to a lower side of the air outlet in an air outlet passage, forming a first surface as a first rotating shaft (12) extending towards a first side of the first air guiding plate (10) close to an upper side of the air outlet, and forming a second surface as the first rotating shaft (12) extending towards an edge of an end of the upper side of the air outlet, wherein an included angle α between the first surface and the second surface is no less than 30° and no more than 40° ;
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 included angle α is no less than 65° and no more than 90° .

Patentansprüche

1. Verfahren zum Steuern einer Klimaanlage (100), wobei die Klimaanlage (100) Folgendes umfasst:

ein Gehäuse (30), wobei das Gehäuse (30) Folgendes umfasst:

einen im Gehäuse (30) ausgebildeten Luftauslasskanal; und
einen Luftauslass, der in einer äußeren Umfangswand des Gehäuses (30) angeordnet ist und mit dem Luftauslasskanal in Verbindung steht;
eine erste Luftführungsplatte (10), die drehbar am Luftauslass angeordnet und über eine erste Drehwelle (12) am Gehäuse (30) mit dem Gehäuse (30) verbunden ist; und
eine zweite Luftführungsplatte (20), die im Luftauslasskanal angeordnet ist und sich um eine zweite Drehwelle (22) im Gehäuse (30) drehen kann,

wobei die erste Luftführungsplatte (10) so angeordnet ist, dass sie sich um die erste Drehwelle (12) dreht, um den Luftauslass zu öffnen oder zu schließen, und die zweite Luftführungsplatte (20) mit einer Vielzahl von zweiten Luftverteilungslöchern (21) versehen ist, die durch die zweite Luftführungsplatte (20) verlaufen, wobei die zweiten Luftverteilungslöcher (21) entlang der Dickenrichtung der zweiten Luftführungsplatte (20) angeordnet sind,

wobei die Klimaanlage (100) einen Brise-Modus umfasst, wobei als Reaktion auf den Betrieb der Klimaanlage im Brise-Modus ein Teil des Luftauslasses durch die erste Luftführungsplatte (10) abgeschirmt wird und die zweite Luftführungsplatte (20) zu einer unteren Seite des Luftauslasses im Luftauslasskanal gedreht wird, **dadurch gekennzeichnet, dass**

als Reaktion auf den Betrieb der Klimaanlage im Brise-Modus ein entferntes Ende der ersten Luftführungsplatte (10) in der Luftausblasrichtung des Luftauslasses, ein entferntes Ende der zweiten Luftführungsplatte (20) in der Luftausblasrichtung des Luftauslasses und die erste Drehwelle (12) im Wesentlichen auf einer gleichen Ebene angeordnet sind, so dass die Blasluft durch die erste Luftführungsplatte (10) blockiert wird und durch die zweiten Luftverteilungslöcher (21) in der zweiten Luftführungsplatte (20) in die Umgebung diffundiert, wodurch das Luftvolumen und die Geschwindigkeit des Luftauslasses reduziert werden.

2. Verfahren gemäß Anspruch 1, **dadurch gekennzeichnet, dass**

nachdem der Luftauslass durch die erste Luftführungsplatte (10) verschlossen wurde,
die erste Luftführungsplatte (10) eine erste Seite nahe einer oberen Seite des Luftauslasses umfasst und
eine zweite Seite in der Nähe der unteren Seite des Luftauslasses;
wobei die erste Drehwelle (12) Folgendes umfasst:

eine erste Fläche, die sich zur ersten Seite hin erstreckt; und
eine zweite Fläche, die sich zu einem Rand eines Endes der oberen Seite des Luftauslasses erstreckt, wobei
 α ein eingeschlossener Winkel zwischen der ersten Fläche und der zweiten Fläche ist, und α nicht kleiner
als 30° und nicht größer als 40° ist, wenn sich die Klimaanlage (100) in einem Brise-Modus befindet.

3. Verfahren gemäß Anspruch 2, **dadurch gekennzeichnet, dass** als Reaktion auf den Betrieb der Klimaanlage im
Brise-Modus ein Abstand M zwischen der ersten Seite und dem Rand des Endes der oberen Seite des Luftauslasses
nicht weniger als 65 mm und nicht mehr als 70 mm beträgt.

4. Verfahren gemäß einem der Ansprüche 2 oder 3, **dadurch gekennzeichnet, dass** als Reaktion auf den Betrieb
der Klimaanlage im Brise-Modus ein Abstand N zwischen der zweiten Seite und dem Rand des Endes der unteren
Seite des Luftauslasses nicht weniger als 15 mm und nicht mehr als 25 mm beträgt.

5. Verfahren gemäß einem der Ansprüche 2 bis 4, **dadurch gekennzeichnet, dass** die Klimaanlage (100) ferner
einen Kühl-/Heizmodus umfasst, wobei als Reaktion auf den Betrieb der Klimaanlage im Kühl-/Heizmodus die erste
Luftführungsplatte (10) den Luftauslass vollständig vermeidet und der eingeschlossene Winkel α nicht weniger als
 65° und nicht mehr als 90° beträgt.

6. Verfahren gemäß einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet, dass** als Reaktion auf den Betrieb der
Klimaanlage im Kühl-/Heizmodus ein Abstand M zwischen der ersten Seite und dem Rand des Endes der oberen
Seite des Luftauslasses nicht weniger als 95 mm und nicht mehr als 110 mm beträgt.

7. Verfahren gemäß einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** als Reaktion auf den Betrieb der
Klimaanlage im Kühl-/Heizmodus ein Abstand N zwischen der zweiten Seite und dem Rand des Endes der Unterseite
des Luftauslasses nicht weniger als 25 mm und nicht mehr als 45 mm beträgt.

8. Verfahren gemäß einem der Ansprüche 1 bis 7, **dadurch gekennzeichnet, dass** die erste Luftführungsplatte (10)
mit mindestens einem Luftverteilungsloch (11) versehen ist, das die erste Luftführungsplatte (10) entlang einer
Dickenrichtung der ersten Luftführungsplatte (10) durchdringt.

9. Verfahren gemäß Anspruch 8, **dadurch gekennzeichnet, dass** eine Länge des Luftverteilungslochs (11) in einer
Öffnungsrichtung des Luftverteilungslochs (11) gleich oder größer als die Dicke der ersten Luftführungsplatte (10) ist.

10. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass**
die Klimaanlage (100) in einem Brise-Modus und einem Kühl-/Heiz-Modus betreibbar ist, wobei die Klimaanlage
(100) zwischen dem Brise-Modus und dem Kühl-/Heiz-Modus umschaltbar ist; wobei das Verfahren Folgendes
umfasst:

als Reaktion auf den Betrieb der Klimaanlage im Brise-Modus, Abschirmen eines Teils eines Luftauslasses
durch eine erste Luftführungsplatte (10), Drehen einer zweiten Luftführungsplatte (20) zu einer unteren Seite
des Luftauslasses in einem Luftauslasskanal, Ausbilden einer ersten Fläche als eine erste Drehwelle (12), die
sich zu einer ersten Seite der ersten Luftführungsplatte (10) nahe einer oberen Seite des Luftauslasses erstreckt,
und Ausbilden einer zweiten Fläche als die erste Drehwelle (12), die sich in Richtung eines Randes eines Endes
der oberen Seite des Luftauslasses erstreckt, wobei ein eingeschlossener Winkel α zwischen der ersten Fläche
und der zweiten Fläche nicht weniger als 30° und nicht mehr als 40° beträgt;
als Reaktion auf den Betrieb der Klimaanlage im Kühl-/Heizmodus die erste Luftführungsplatte (10) den Luft-
auslass vollständig vermeidet und der eingeschlossene Winkel α nicht weniger als 65° und nicht mehr als 90°
beträgt.

Revendications

1. Procédé de commande d'un climatiseur (100), dans lequel le climatiseur (100) comprend :

un boîtier (30), dans lequel le boîtier (30) comprend :

un passage de sortie d'air formé dans le boîtier (30) ; et
 une sortie d'air disposée dans une paroi périphérique extérieure du boîtier (30) et communiquant avec le passage de sortie d'air ;
 une première plaque de guidage d'air (10) disposée de manière à pouvoir tourner sur la sortie d'air et reliée au boîtier (30) par un premier arbre de rotation (12) sur le boîtier (30) ; et
 une seconde plaque de guidage d'air (20) disposée dans le passage de sortie d'air et pouvant tourner autour d'un second arbre de rotation (22) dans le boîtier (30),

dans lequel la première plaque de guidage d'air (10) est disposée pour tourner autour du premier arbre de rotation (12) pour ouvrir ou fermer la sortie d'air et la seconde plaque de guidage d'air (20) est pourvue d'une pluralité de seconds trous de dispersion d'air (21) traversant la seconde plaque de guidage d'air (20), dans lequel les seconds trous de dispersion d'air (21) sont disposés le long de la direction d'épaisseur de la seconde plaque de guidage d'air (20),

dans lequel le climatiseur (100) comprend un mode de veille, en réponse au fonctionnement du climatiseur dans le mode de veille, une partie de la sortie d'air est protégée par la première plaque de guidage d'air (10), et la seconde plaque de guidage d'air (20) est tournée vers un côté inférieur de la sortie d'air dans le passage de sortie d'air,

caractérisé en ce que

en réponse au fonctionnement du climatiseur dans le mode de veille, une extrémité éloignée de la première plaque de guidage d'air (10) dans la direction de sortie par soufflage de l'air de la sortie d'air, une extrémité éloignée de la seconde plaque de guidage d'air (20) dans la direction de sortie par soufflage d'air de la sortie d'air, et le premier arbre de rotation (12) sont situés sensiblement sur un même plan de telle sorte que l'air de soufflage est bloqué par la première plaque de guidage d'air (10) et est diffusé dans les environs à travers les seconds trous de dispersion d'air (21) dans la seconde plaque de guidage d'air (20), tout en réduisant ainsi le volume d'air et la vitesse de la sortie d'air.

2. Procédé selon la revendication 1, **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 du côté inférieur de la sortie d'air ;
 dans lequel le premier arbre de rotation (12) comprend :

une première surface s'étendant vers le premier côté ; et
 une deuxième surface s'étendant vers un bord d'une extrémité du côté supérieur de la sortie d'air, dans lequel α est un angle inclus entre la première surface et la seconde surface, et α est au moins de 30° et au plus de 40°, lorsque le climatiseur (100) est dans un mode de veille.

3. Procédé selon la revendication 2, **caractérisé en ce que**

en réponse au fonctionnement du climatiseur dans le mode de veille, une distance M est au moins de 65 mm et au plus de 70 mm entre le premier côté et le bord de l'extrémité du côté supérieur de la sortie d'air.

4. Procédé selon l'une quelconque des revendications 2 ou 3, **caractérisé en ce que**

en réponse au fonctionnement du climatiseur dans le mode de veille, une distance N est au moins de 15 mm et au plus de 25 mm entre le second côté et le bord de l'extrémité du côté inférieur de la sortie d'air.

5. Procédé selon l'une quelconque des revendications 2 à 4, **caractérisé en ce que** le climatiseur (100) comprend

en outre un mode de refroidissement/de chauffage, dans lequel en réponse au fonctionnement du climatiseur dans le mode de refroidissement/de chauffage, la première plaque de guidage d'air (10) évite totalement la sortie d'air, et l'angle inclus α est au moins de 65° et au plus de 90°.

6. Procédé selon l'une quelconque des revendications 1 à 5, **caractérisé en ce que** en réponse au fonctionnement

du climatiseur dans le mode de refroidissement/de chauffage, une distance M est au moins de 95 mm et au plus de 110 mm entre le premier côté et le bord de l'extrémité du côté supérieur de la sortie d'air.

7. Procédé selon l'une quelconque des revendications 1 à 6, **caractérisé en ce que** en réponse au fonctionnement

du climatiseur dans le mode de refroidissement/de chauffage, une distance N est au moins de 25 mm et au plus de 45 mm entre le second côté et le bord de l'extrémité du côté inférieur de la sortie d'air.

8. Procédé selon l'une quelconque des revendications 1 à 7, **caractérisé en ce que** la première plaque de guidage d'air (10) est pourvue d'au moins un trou de dispersion d'air (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).

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

10. Procédé selon l'une quelconque des revendications précédentes, **caractérisé en ce que**

le climatiseur (100) peut fonctionner dans un mode de veille et dans un mode de refroidissement/de chauffage, dans lequel le climatiseur (100) peut être commuté entre le mode de veille et le mode de refroidissement/de chauffage ; le procédé comprend :

en réponse au fonctionnement du climatiseur dans le mode de veille, la protection d'une partie d'une sortie d'air par une première plaque de guidage d'air (10), la rotation d'une seconde plaque de guidage d'air (20) vers un côté inférieur de la sortie d'air dans un passage de sortie d'air, la formation d'une première surface en tant que premier arbre de rotation (12) s'étendant vers un premier côté de la première plaque de guidage d'air (10) à proximité d'un côté supérieur de la sortie d'air, et la formation d'une seconde surface en tant que premier arbre de rotation (12) s'étendant vers un bord d'une extrémité du côté supérieur de la sortie d'air, dans lequel un angle inclus α entre la première surface et la seconde surface est au moins de 30° et au plus de 40° ;

en réponse au fonctionnement du climatiseur dans le mode de refroidissement/chauffage, la première plaque de guidage d'air (10) évite totalement la sortie d'air, et l'angle inclus α est au moins de 65° et au plus de 90°.

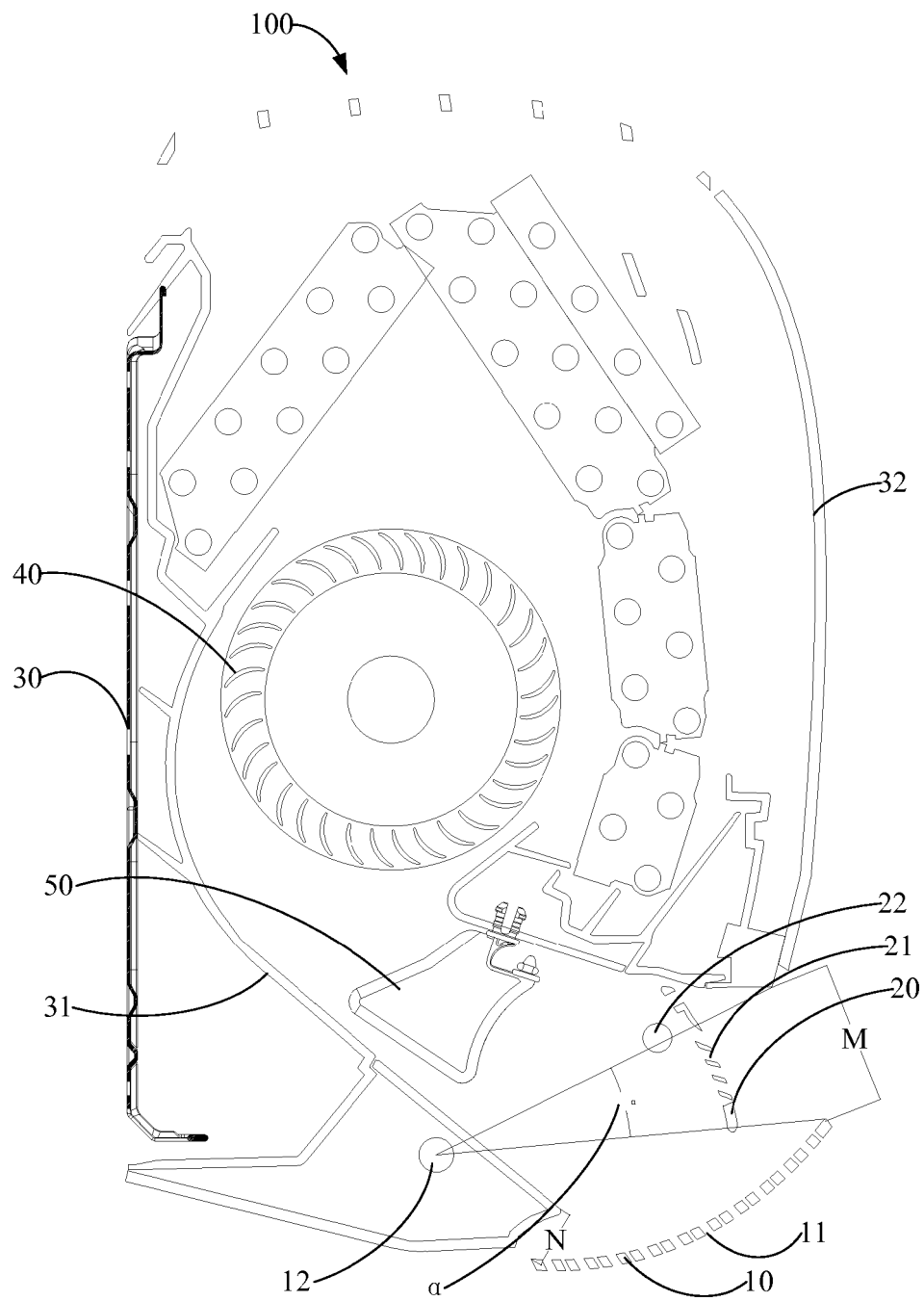


Fig. 1

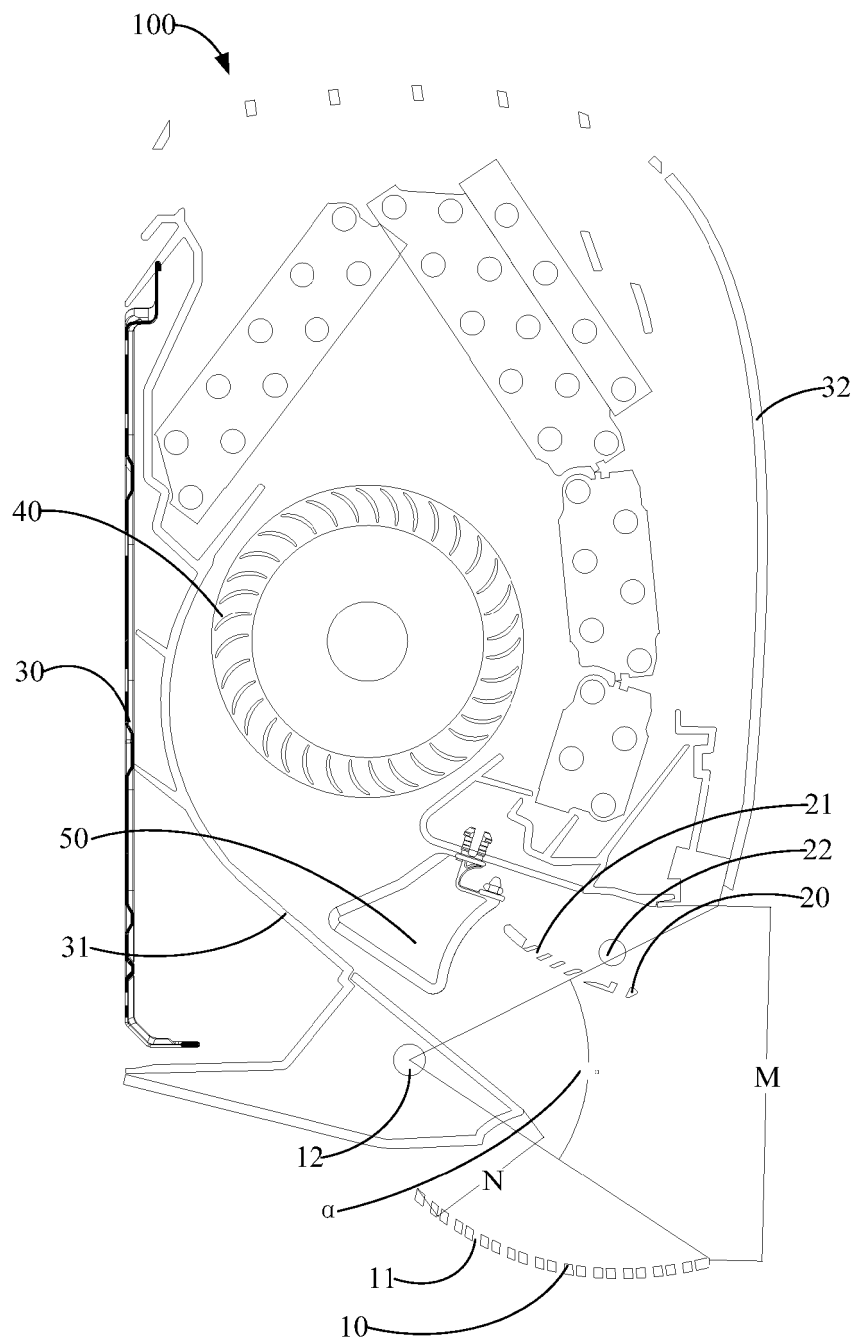


Fig. 2

REFERENCES CITED IN THE DESCRIPTION

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