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(54) **REFRIGERATION DEVICE**

(57) A refrigeration device (100) is provided, including: a machine compartment (2), where a compressor (3), a condenser (4), and a fan (5) are disposed in the machine compartment (2); and the machine compartment (2) includes a bottom wall (6), a rear wall (7), and a first side wall (8) and a second side wall (9) disposed opposite to each other, where in the first side wall (8) and the second side wall (9), the condenser (4) is closer to the first side wall (8) than the compressor (3), and the compressor (3) is closer to the second side wall (9) than the condenser (4); and a first weather strip (10) connected to the bottom wall (6), where the first weather strip (10) extends in a front-rear direction, and the bottom wall (6) includes a first bottom wall portion (61) located be-

tween the first side wall (8) and the first weather strip (10) and a second bottom wall portion (62) located between the second side wall (9) and the first weather strip (10); the rear wall (7) includes a first rear wall portion (71) corresponding to the first bottom wall portion (61) and a second rear wall portion (72) corresponding to the second bottom wall portion (62); and at least one of the first side wall (8) and the first rear wall portion (71) is provided with an air inlet (11) used for guiding external air into the machine compartment (2), and the second bottom wall portion (62) is provided with an air outlet (12) used for discharging the air of the machine compartment (2). With the above layout, a better heat dissipation effect and higher operating efficiency are provided for the compressor.

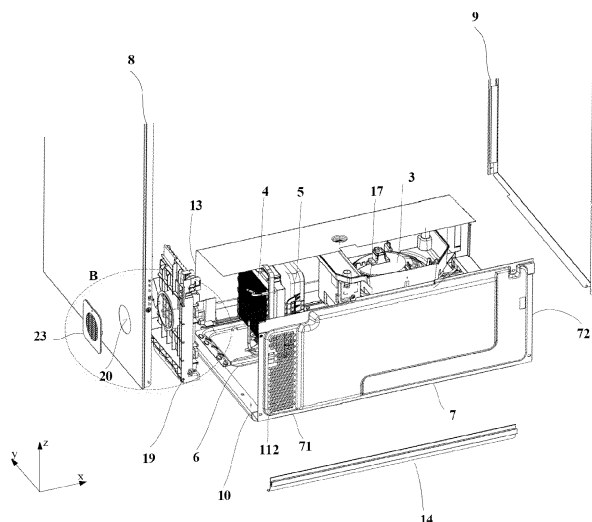


FIG. 3

Description

TECHNICAL FIELD

[0001] The present invention relates to the field of household appliance technologies, and in particular, to a refrigeration device.

BACKGROUND

[0002] Some existing refrigeration devices include a refrigeration system including a compressor. The compressors may generate heat during operation, and the heat affects the efficiency of the compressors to some extent. To reduce the impact of the heat on the operating efficiency of the compressors, there is a solution of cooling the compressors through flowing air in the prior art, but the cooling effect is poor due to an unreasonable airflow path.

SUMMARY

[0003] An aspect of the present invention aims to provide an improved refrigeration device. Compared with the prior art, the refrigeration device provides a better cooling effect and higher operating efficiency for a compressor.

[0004] A refrigeration device is provided, including: a main body, where a machine compartment is disposed below the main body, and a compressor, a condenser, and a fan are disposed in the machine compartment; and the machine compartment includes a bottom wall, a rear wall, and a first side wall and a second side wall disposed opposite to each other, where in the first side wall and the second side wall, the condenser is closer to the first side wall than the compressor, and the compressor is closer to the second side wall than the condenser; and a first weather strip connected to the bottom wall, where the first weather strip extends in a front-rear direction, and the bottom wall includes a first bottom wall portion located between the first side wall and the first weather strip and a second bottom wall portion located between the second side wall and the first weather strip; the rear wall includes a first rear wall portion corresponding to the first bottom wall portion and a second rear wall portion corresponding to the second bottom wall portion; and at least one of the first side wall and the first rear wall portion is provided with an air inlet used for guiding external air into the machine compartment, and the second bottom wall portion is provided with an air outlet used for discharging the air of the machine compartment. With the above layout, the distance between the air inlet and the air outlet is longer, and cold air can come into full contact with components in the machine compartment, to take more heat away. In addition, hot air that flows out of the air outlet can flow less to the air inlet, and a temperature of air that flows into the machine compartment is lower, thereby providing a better cooling effect for the compres-

sor; and the first weather strip also blocks the hot air that flows out of the air outlet from flowing to the air inlet to some extent, and the temperature of the air that flows into the machine compartment is lower.

[0005] In a possible implementation, the air inlet includes a first air inlet located on the first side wall, and the first air inlet faces the condenser.

[0006] In a possible implementation, the air inlet includes a second air inlet located on the first rear wall portion.

[0007] In a possible implementation, in a left-right direction, a part of the air outlet is located between the first weather strip and the condenser, and/or a part of the air outlet is located between the second side wall and the compressor.

[0008] In a possible implementation, the machine compartment further includes a front wall disposed opposite to the rear wall, and the air outlet is located between the front wall and the bottom wall.

[0009] In a possible implementation, the refrigeration device further includes a second weather strip, where the second weather strip extends in a left-right direction; and

the second weather strip is connected to a lower end of the rear wall and extends from the first rear wall portion to the second rear wall portion, or the second weather strip is connected to a rear end of the bottom wall and extends from the first bottom wall portion to the second bottom wall portion.

[0010] In a possible implementation, the air inlet is provided with a conical air duct, and the air duct has an exterior size less than an interior size.

[0011] In a possible implementation, the machine compartment includes a first zone between the first side wall and the condenser, and a second zone between the second side wall and the condenser; and the compressor and the fan are located in the second zone, and/or the machine compartment further includes a water collection box located in the second zone, and/or the fan is located between the condenser and the compressor.

[0012] In a possible implementation, the refrigeration device further includes an air intake structure, where the air inlet is formed on the air intake structure; and the air intake structure includes an air duct support located in the machine compartment and a through hole located on the first side wall and/or the rear wall, and the air duct support is provided with an air duct for air to pass through and for forming the air inlet; and

[0013] In a possible implementation, the refrigeration device further includes a first clamping structure, where the first clamping structure is adapted to clamp the air duct support to the first side wall and/or the rear wall.

[0014] In a possible implementation, the refrigeration device further includes a cover plate and a second clamping structure, where the cover plate is located outside the machine compartment, and the second clamping structure is adapted to clamp the cover plate to the air duct support.

[0015] In a possible implementation, the first side wall or the rear wall is provided with a flange folded toward the interior of the machine compartment; and the first clamping structure includes a clamping hole located on the flange and a first clamping buckle located on the air duct support, and the first clamping buckle is at least partially located in the clamping hole to connect a cover plate of the air duct to the first side wall or the rear wall.

[0016] In a possible implementation, the second clamping structure includes a clamping claw located on the cover plate and a second clamping buckle located on the air duct support; and the clamping claw is adapted to pass through the through hole and be clamped to the second clamping buckle.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] The accompanying drawings included are used for providing further understanding of the present invention, and are incorporated in this application and constitute a part of this application. The accompanying drawings illustrate embodiments of the present invention, and serve to explain the principle of the present invention together with the specification.

FIG. 1 shows a partial elevation view of a refrigerator; FIG. 2 shows a partial elevation view of a machine compartment of a refrigerator, where a rear wall is hidden in the figure;

FIG. 3 and FIG. 4 show partial exploded views of a refrigerator from different perspectives, in which a structure of a machine compartment is illustrated; FIG. 5 shows a rear view of a machine compartment of a refrigerator, in which a rear wall and some cables and pipes in the machine compartment are hidden; FIG. 6 illustrates an air flow path in a machine compartment of a refrigerator, positions of a condenser, a fan, and a compressor, and positions of an air inlet and an air outlet from a top view;

FIG. 7 shows a partial enlarged view of a cross-section at a position A in FIG. 1; and

FIG. 8 and FIG. 9 respectively show partial enlarged views at a position B in FIG. 3 from different perspectives.

DETAILED DESCRIPTION

[0018] The technical solutions of this application are clearly and completely described below with reference to specific embodiments. Apparently, the described embodiments are merely some rather than all of the embodiments of this application. All other embodiments obtained by a person of ordinary skill in the art based on the embodiments of this application without creative efforts shall fall within the protection scope of this application.

[0019] An embodiment of the present invention provides a refrigeration device 100.

[0020] The refrigeration device 100 provided by this embodiment of the present invention may be a refrigerator, a freezer, or a wine cooler.

[0021] This embodiment of the present invention exemplarily illustrates some possible implementations by using a household refrigerator as an example, but these implementations are not limited to being applicable to only the household refrigerator. It can be expected that the following implementations can also be used in the freezer or the wine cooler, to achieve the same technical effect.

[0022] Referring to FIG. 1 to FIG. 6, FIG. 1 shows a partial elevation view of a refrigerator; FIG. 3 and FIG. 4 show partial exploded views of a refrigerator from different perspectives, in which a structure of a machine compartment 2 is illustrated; FIG. 5 shows a rear view of a machine compartment 2, in which a rear wall 7 and some cables and pipes in the machine compartment 2 are hidden; and FIG. 6 illustrates an air flow path in a machine compartment 2, positions of a condenser 4, a fan 5, and a compressor 3, and positions of an air inlet 11 and an air outlet 12 from a top view;

[0023] The refrigeration device 100 includes a main body 1, and the machine compartment 2 of the refrigeration device 100 is disposed below the main body 1. The machine compartment 2 is used for accommodating components, for example, the compressor 3, the condenser 4, and the fan 5 of the refrigeration device 100.

[0024] The machine compartment 2 is a relatively closed space, and may be formed by enclosing a front wall 13, a bottom wall 6, the rear wall 7, and a first side wall 8 and a second side wall 9 of the refrigeration device 100 that are disposed opposite to each other.

[0025] Both the condenser 4 and the compressor 3 are located between the first side wall 8 and the second side wall 9, the condenser 4 is closer to the first side wall 8 than the compressor 3, and the compressor 3 is closer to the second side wall 9 than the condenser 4.

[0026] The refrigeration device 100 is further provided with a first weather strip 10, and the first weather strip 10 is connected to the bottom wall 6 and extends in a front-rear direction.

[0027] The bottom wall 6 is divided into two zones by the first weather strip 10 in a left-right direction. One zone is a first bottom wall portion 61 between the first side wall 8 and the first weather strip 10, and the other zone is a second bottom wall portion 62 between the second side wall 9 and the first weather strip 10.

[0028] The rear wall 7 may also be divided into a first rear wall portion 71 and a second rear wall portion 72 respectively corresponding to the first bottom wall portion 61 and the second bottom wall portion 62.

[0029] Air inlets 11 are disposed on the first side wall 8 and the first rear wall portion 71, and external air may enter the machine compartment 2 from the air inlets 11.

[0030] The second bottom wall portion 62 is provided with an air outlet 12, and the air in the machine compartment 2 may flow out of the machine compartment 2 from

the air outlet 12.

[0031] After the fan 5 runs, a negative pressure zone is formed in the machine compartment 2. Due to action of a pressure difference, the external air flows into the machine compartment 2 from the air inlets 11, successively flows through the condenser 4 and the compressor 3, and then flows out from the air outlet 12, to take part of heat in the machine compartment 2 away.

[0032] With the above layout, the distances between the air inlets 11 and the air outlet 12 are longer, and cold air can come into full contact with components in the machine compartment 2, to take more heat away. In addition, hot air that flows out of the air outlet 12 can flow less to the air inlets 11, and a temperature of air that flows into the machine compartment 2 is lower, thereby providing a better cooling effect for the compressor 3; and the first weather strip 10 also blocks the hot air that flows out of the air outlet 12 from flowing to the air inlets 11 to some extent, and the temperature of the air that flows into the machine compartment 2 is lower.

[0033] As a variant example, a first air inlet 111 may be disposed on only the first side wall 8.

[0034] As a variant example, a second air inlet 112 may be disposed on only the first rear wall portion 71.

[0035] As an embodiment, the first air inlet 111 may be disposed on the first side wall 8, and the second air inlet 112 may be disposed on the first rear wall portion 71. A larger quantity or a larger area of the air inlets 11 indicates a larger amount of air entering the machine compartment 2 and a better cooling effect provided for the compressor 3.

[0036] In a possible implementation, the air inlets 11 face the condenser 4. The air entering the machine compartment 2 directly flows to the condenser 4, a path thereof is straight and short, and a loss of pressure is small, thereby accelerating air circulation, and facilitating cooling of the compressor 3.

[0037] In a possible implementation, the air outlet 12 is an elongated air outlet 12. In the left-right direction, one end of the air outlet extends to a position between the first weather strip 10 and the condenser 4, and the other end of the air outlet extends to a position between the compressor 3 and the second side wall 9. Such a configuration ensures to a relatively large extent that the air outlet 12 has a wider distribution range, pressure distribution of the air in the machine compartment 2 is more uniform, and cold air and hot air are easier to mix uniformly and take heat away.

[0038] As a variant example, there may be a plurality of air outlets 12. The air outlet 12 has a part located between the first weather strip 10 and the condenser 4 and a part located between the compressor 3 and the second side wall 9.

[0039] As a variant example, the air outlet 12 may alternatively be located only between the first weather strip 10 and the condenser 4, or between the compressor 3 and the second side wall 9.

[0040] In a possible implementation, the air outlet 12

is located between the front wall 13 and the bottom wall 6. In this way, the air inlets 11 are located on the first side wall 8 and/or the first rear wall portion 71, while the air outlet 12 is located in the front of the second bottom wall portion 62, so that the distances between the air inlets 11 and the air outlet 12 are longer, and a better cooling effect is provided for the compressor 3. Cold air has a tortuous flow path between the condenser 4 and the air outlet 12, and therefore can come into better contact with the components in the machine compartment 2, to take more heat away.

[0041] Exemplarily, the air inlets 11 may be obtained by spacing the bottom wall 6 and the front wall 13, and a gap may be used as the air outlet 12.

[0042] In a possible implementation, the refrigeration device further includes a second weather strip 14. The second weather strip 14 extends in the left-right direction, and is located behind the air outlet 12. The second weather strip 14 may block the hot air that flows out of the air outlet 12 from flowing backward and flowing into the machine compartment 2 from the second air inlet 112, or from flowing out of the first side wall 8 and flowing into the machine compartment 2 from the first air inlet 111. That is to say, the second weather strip 14 may also improve the cooling efficiency of the compressor 3.

[0043] As shown in the accompanying drawings, the second weather strip 14 is connected to a lower edge of the rear wall 7 and protrudes downward.

[0044] As a variant example, the second weather strip 14 may also be connected to the bottom wall 6.

[0045] To reduce that the hot air re-flows into the machine compartment 2 from the rear or side as much as possible, the second weather strip 14 may extend from the first rear wall portion 71 to the second rear wall portion 72; or extend from the first bottom wall portion 61 to the second bottom wall portion 62.

[0046] In a possible implementation, the air inlet 11 is provided with a conical air duct 21, and the air duct 21 has an exterior size greater than an interior size. With such a configuration, after entering the machine compartment 2, external cold air may diffuse rapidly and mix uniformly with the hot air in the machine compartment 2, to take more heat away.

[0047] In a possible implementation, the machine compartment 2 is divided into two relatively independent zones by the condenser 4, that is, a first zone 15 between the first side wall 8 and the condenser 4, and a second zone 16 between the condenser 4 and the second side wall 9. Further, the compressor 3 and the fan 5 are located in the second zone 16. The compressor 3 and the fan 5 are larger in volume and occupy larger spaces in the machine compartment 2. By disposing the compressor 3 and the fan 5 in the second zone 16, the external air can flow into the first zone 15 smoothly, and then flow into the second zone 16, thereby facilitating air circulation.

[0048] Still further, the machine compartment 2 is further provided with a water collection box 17 used for col-

lecting condensed water or defrosting water, and the water collection box 17 is also located in the second zone 16. The water collection box 17 is such disposed that the external air can flow into the first zone 15 smoothly, and then flow into the second zone 16, thereby facilitating air circulation.

[0049] Still further, the water collection box 17 is disposed on a top portion of the compressor 3, so that cooled air can come into contact with an outer surface of the compressor 3 more smoothly, to take more heat away.

[0050] Still further, the fan 5 is located between the condenser 4 and the compressor 3. With such a configuration, when the fan runs, a negative pressure zone is formed in the first zone 15. Especially, when large-volume components are located in the second zone 16, the external cold air can flow into the machine compartment 2 more smoothly, so that the compressor 3 has a better heat dissipation effect.

[0051] Referring to FIG. 7 to FIG. 9 below, FIG. 7 shows a partial enlarged view of a cross-section at a position A in FIG. 1; and FIG. 8 and FIG. 9 respectively show partial enlarged views at a position B in FIG. 3 from different perspectives.

[0052] In a possible embodiment, the refrigeration device 100 further includes an air intake structure 18, the air intake structure 18 includes an air duct support 19, and the first air inlet 111 is formed on the air duct support 19. Preferably, the air duct support 19 is integrally formed, a hole-shaped air duct 21 penetrating through the air duct support is disposed on the air duct support 19, and the air duct 21 may be used as one part of the first air inlet 111. Compared with the conventional ventilation implemented by digging holes on the first side wall 8, the air duct support 19 can improve plasticity of shapes of the air inlets 11, and the air inlets 11 may be designed and processed into a shape more conducive to air circulation.

[0053] Further, the air duct 21 is conical, and has an exterior size less than an interior size.

[0054] The first side wall 8 is further provided with a through hole 20, and a position of the through hole 20 corresponds to a position of the air duct 21, so that air passages inside and outside the machine compartment 2 communicate with each other.

[0055] The refrigeration device 100 further includes a first clamping structure 22, and the first clamping structure 22 is used for clamping the air duct support 19 to the first side wall 8. In this way, the air intake structure 18 is easy to be mounted onto the first side wall 8, so that the air duct 21 and the first side wall 8 fit better.

[0056] Those skilled in the art can understand that the previous embodiment is exemplary description made by using the first air inlet 111 as an example.

[0057] As a variant embodiment, the air intake structure 18 may alternatively be located on the rear wall 7 to cooperate with the rear wall 7, to form the second air inlet 112. The implementation process of this variant embodiment is the same as that of the previous embodiment, and achieves a technical effect equivalent to that of the

previous embodiment, so the details will not be repeated herein. The first air inlet 111 will be described as an example below, and the description of the first air inlet 111 also applies to the solution of the second air inlet 112.

[0058] In a possible implementation, a bottom portion of the first side wall 8 is provided with a flange facing the interior of the machine compartment 2, and the flange is provided with a clamping hole 221. A slot facing the first side wall 8 is formed on the air duct support 19, and a first clamping buckle 222 is disposed in the slot. After the flange is inserted into the slot, at least one part of the first clamping buckle 222 is clamped in the clamping hole 221, thereby restricting movement of the air duct support 19 relative to the first side wall 8, to complete clamping of the air duct support 19 and the first side wall 8. That is to say, the first clamping structure 22 includes the above clamping hole 221 and first clamping buckle 222.

[0059] In a possible implementation, the refrigeration device further includes a cover plate 23, and the cover plate 23 is located outside the first air inlet 111, to prevent insects, mice, or other sundries from entering the machine compartment 2 from the air inlets 11.

[0060] Further, the refrigeration device further includes a second clamping structure 24, and the second clamping structure 24 is used for clamping the cover plate 23 to the air duct support 19. Compared with the solution of connecting the cover plate 23 to the first side wall 8 in the prior art, this embodiment is easier to be implemented. In the prior art, the first side wall 8 is mostly a sheet metal part, which, limited by the shape and material, is difficult to form a good clamping structure. In this embodiment, the clamping structure on the air duct support 19 can be provided with a larger degree of freedom and is easier to form, and the cover plate 23 can be easily mounted on and firmly clamped to the air duct support.

[0061] Further, a clamping claw 241 is disposed on the cover plate 23, a second clamping buckle 242 that can cooperate with the clamping claw 241 is disposed on the air duct support 19, and the second clamping structure 24 includes the clamping claw 241 and the second clamping buckle 242. When the cover plate 23 is close to the first side wall 8, the clamping claw 241 penetrates through the through hole 20 to cooperate with the second clamping buckle 242 to clamp the cover plate 23 to the air duct support 19. With such a configuration, the cover plate 23 is mounted conveniently and firmly.

[0062] It should be noted that, the above embodiments are described with reference to a state of the refrigeration device 100 during normal use. By using a household refrigerator as an example, the front-rear direction is a depth direction of the refrigerator; and the left-right direction is a width direction of the refrigerator. Referring to the accompanying drawings, the front is a direction the same as a y direction, the rear is a direction opposite to the y direction, and the left-right direction may be an x direction or a direction opposite to the x direction.

[0063] Although specific implementations have been described above, these implementations are not intended

ed to limit the scope of this application, even if only one implementation is described with respect to specific features. The feature example provided in this application is intended to be illustrative rather than limiting, unless otherwise stated. During specific implementation, according to an actual requirement, in a technically feasible case, the technical features of one or more dependent claims may be combined with the technical features of the independent claims, and the technical features from the corresponding independent claims may be combined in any appropriate way instead of using just specific combinations listed in the claims.

[0064] The various specific implementations described above and shown in the accompanying drawings are only used to illustrate this application, but are not all of this application. Any variation made by a person of ordinary skill in the art to this application within the scope of the basic technical concept of this application shall fall within the protection scope of this application.

Claims

1. A refrigeration device (100), comprising:

a main body (1), wherein a machine compartment (2) is disposed below the main body (1), and a compressor (3), a condenser (4), and a fan (5) are disposed in the machine compartment (2); and the machine compartment (2) comprises a bottom wall (6), a rear wall (7), and a first side wall (8) and a second side wall (9) disposed opposite to each other, wherein in the first side wall (8) and the second side wall (9), the condenser (4) is closer to the first side wall (8) than the compressor (3), and the compressor (3) is closer to the second side wall (9) than the condenser (4); and

a first weather strip (10) connected to the bottom wall (6), wherein the first weather strip (10) extends in a front-rear direction, and the bottom wall (6) comprises a first bottom wall portion (61) located between the first side wall (8) and the first weather strip (10) and a second bottom wall portion (62) located between the second side wall (9) and the first weather strip (10); the rear wall (7) comprises a first rear wall portion (71) corresponding to the first bottom wall portion (61) and a second rear wall portion (72) corresponding to the second bottom wall portion (62); and

at least one of the first side wall (8) and the first rear wall portion (71) is provided with an air inlet (11) used for guiding external air into the machine compartment (2), and the second bottom wall portion (62) is provided with an air outlet (12) used for discharging the air of the machine compartment (2).

2. The refrigeration device (100) according to claim 1, **characterized in that** the air inlet comprises a first air inlet (111) located on the first side wall (8), and the first air inlet (111) faces the condenser (4).

3. The refrigeration device (100) according to claim 1, **characterized in that** the air inlet (11) comprises a second air inlet (112) located on the first rear wall portion (71).

4. The refrigeration device (100) according to claim 1, **characterized in that** in a left-right direction, a part of the air outlet (12) is located between the first weather strip (10) and the condenser (4), and/or a part of the air outlet (12) is located between the second side wall (9) and the compressor (3).

5. The refrigeration device (100) according to claim 1, **characterized in that** the machine compartment (2) further comprises a front wall (13) disposed opposite to the rear wall (7), and the air outlet (12) is located between the front wall (13) and the bottom wall (6).

6. The refrigeration device (100) according to claim 1, **characterized by**

further comprising a second weather strip (14), wherein the second weather strip (14) extends in a left-right direction; and the second weather strip (14) is connected to a lower end of the rear wall (7) and extends from the first rear wall portion (71) to the second rear wall portion (72), or the second weather strip (14) is connected to a rear end of the bottom wall (6) and extends from the first bottom wall portion (61) to the second bottom wall portion (62).

7. The refrigeration device (100) according to claim 1, **characterized in that** the air inlet (11) is provided with a conical air duct (21), and the air duct (21) has an exterior size less than an interior size.

8. The refrigeration device (100) according to claim 1, **characterized in that**

the machine compartment (2) comprises a first zone (15) between the first side wall (8) and the condenser (4), and a second zone (16) between the second side wall (9) and the condenser (4); and the compressor (3) and the fan (5) are located in the second zone (16), and/or the machine compartment (2) further comprises a water col-

lection box (17) located in the second zone (16),
and/or the fan (5) is located between the con-
denser (4) and the compressor (3).

9. The refrigeration device (100) according to claim 1, 5
characterized by

further comprising an air intake structure (18),
wherein the air inlet (11) is formed on the air
intake structure (18); and the air intake structure 10
(18) comprises an air duct support (19) located
in the machine compartment (2) and a through
hole (20) located on the first side wall (8) and/or
the rear wall (7), and the air duct support (19) is
provided with an air duct (21) for air to pass 15
through and for forming the air inlet (11); and
further comprising a first clamping structure
(22), wherein the first clamping structure (22) is
adapted to clamp the air duct support (19) to the
first side wall (8) and/or the rear wall (7). 20

10. The refrigeration device (100) according to claim 9,
characterized by
further comprising a cover plate (23) and a second
clamping structure (24), wherein the cover plate (23) 25
is located outside the machine compartment (2), and
the second clamping structure (24) is adapted to
clamp the cover plate (23) to the air duct support (19).

11. The refrigeration device (100) according to claim 9, 30
characterized in that
the first side wall (8) or the rear wall (7) is provided
with a flange (25) folded toward the interior of the
machine compartment (2); and the first clamping
structure (22) comprises a clamping hole (221) lo- 35
cated on the flange (25) and a first clamping buckle
(222) located on the air duct support (19), and the
first clamping buckle (222) is at least partially located
in the clamping hole (221) to connect a cover plate
(23) of the air duct to the first side wall (8) or the rear 40
wall (7).

12. The refrigeration device (100) according to claim 10,
characterized in that
the second clamping structure (24) comprises a 45
clamping claw (241) located on the cover plate (23)
and a second clamping buckle (242) located on the
air duct support (19); and the clamping claw (241) is
adapted to pass through the through hole (20) and
be clamped to the second clamping buckle (242). 50

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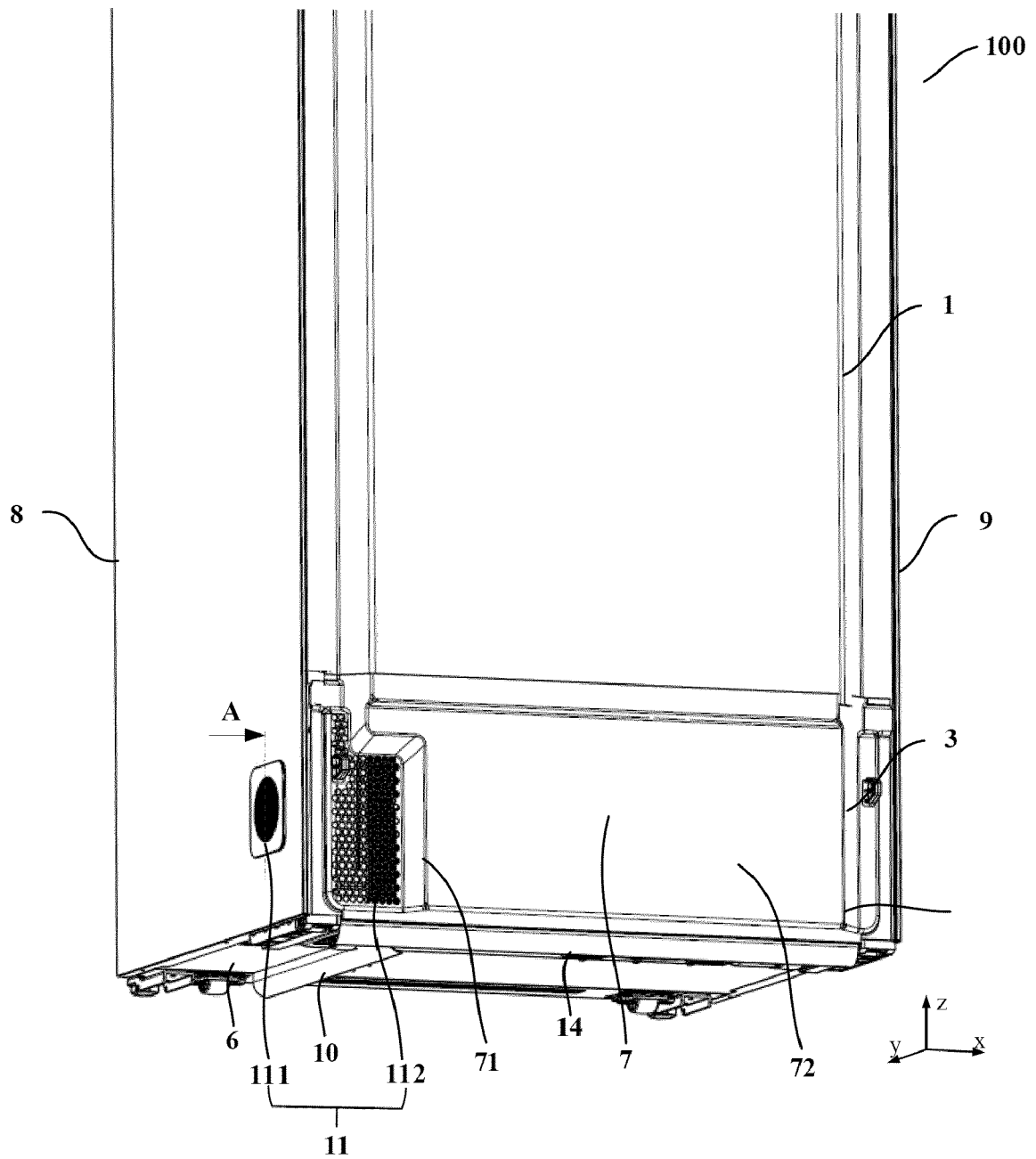


FIG. 1

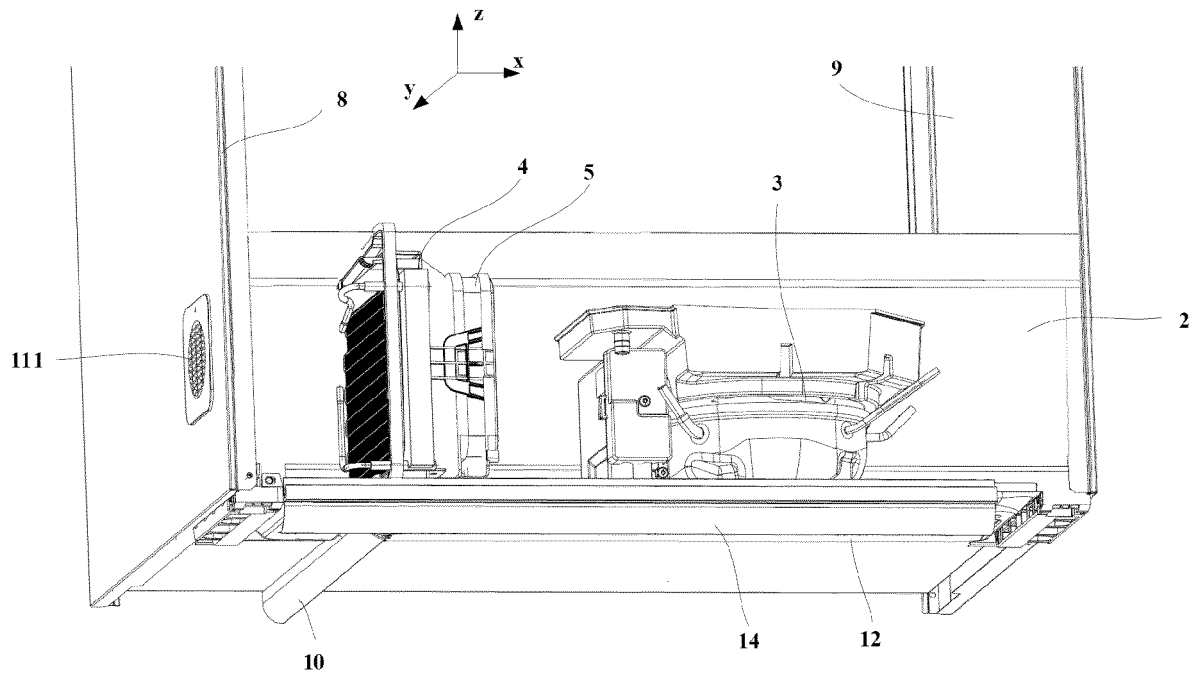


FIG. 2

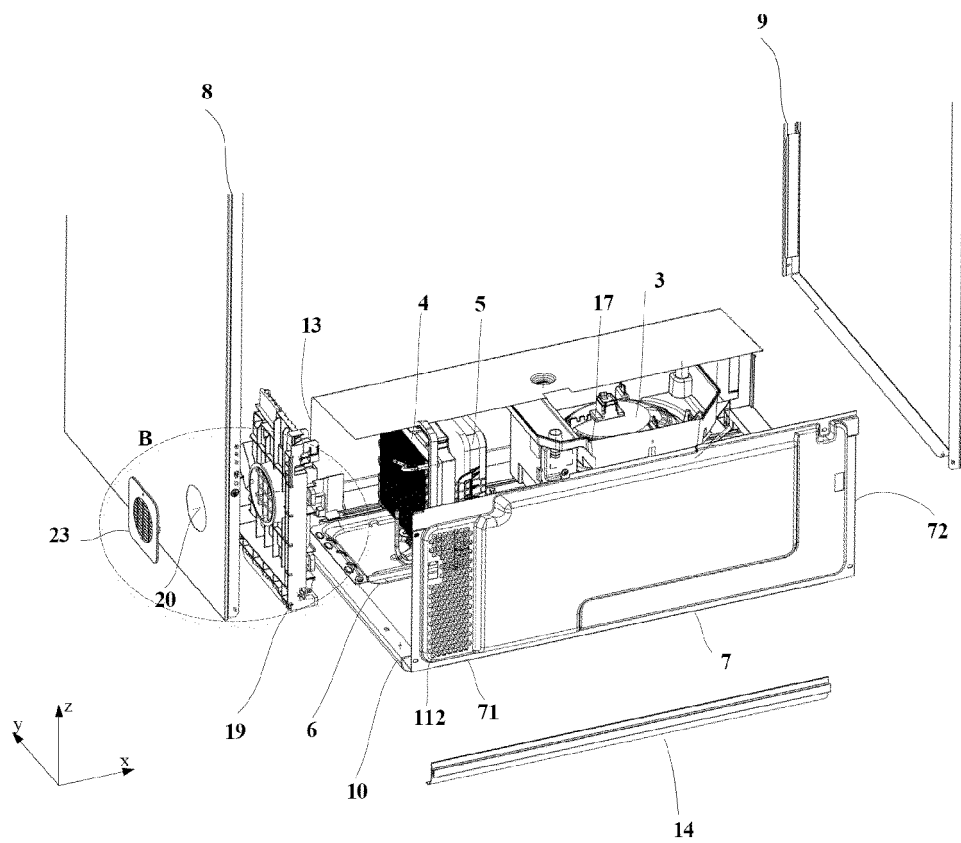


FIG. 3

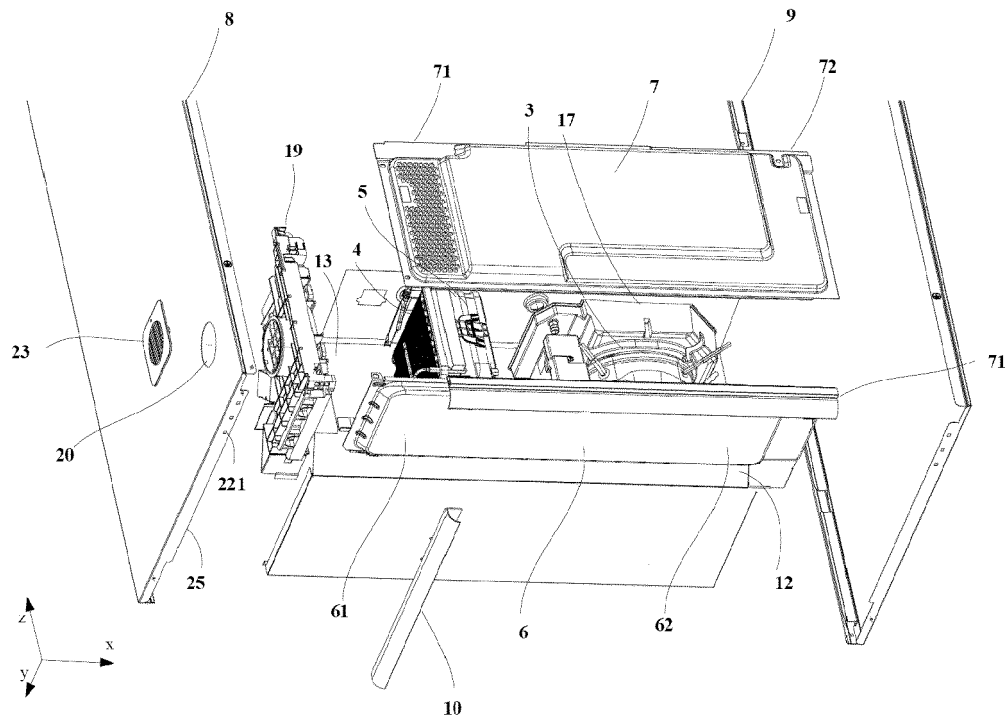


FIG. 4

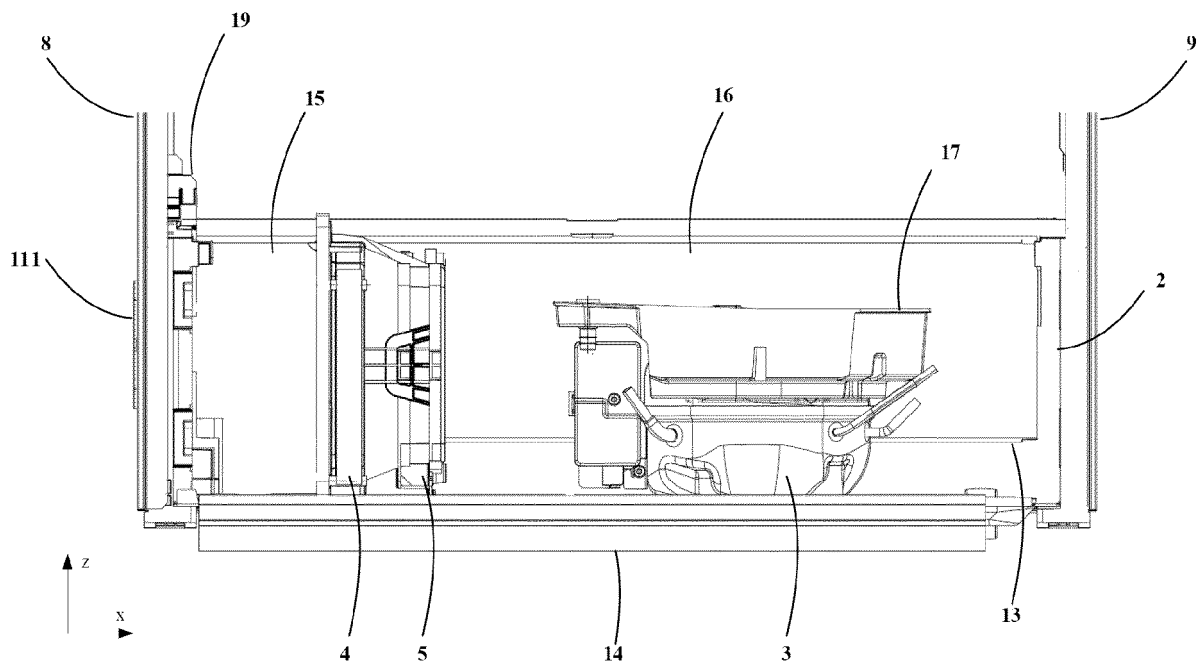


FIG. 5

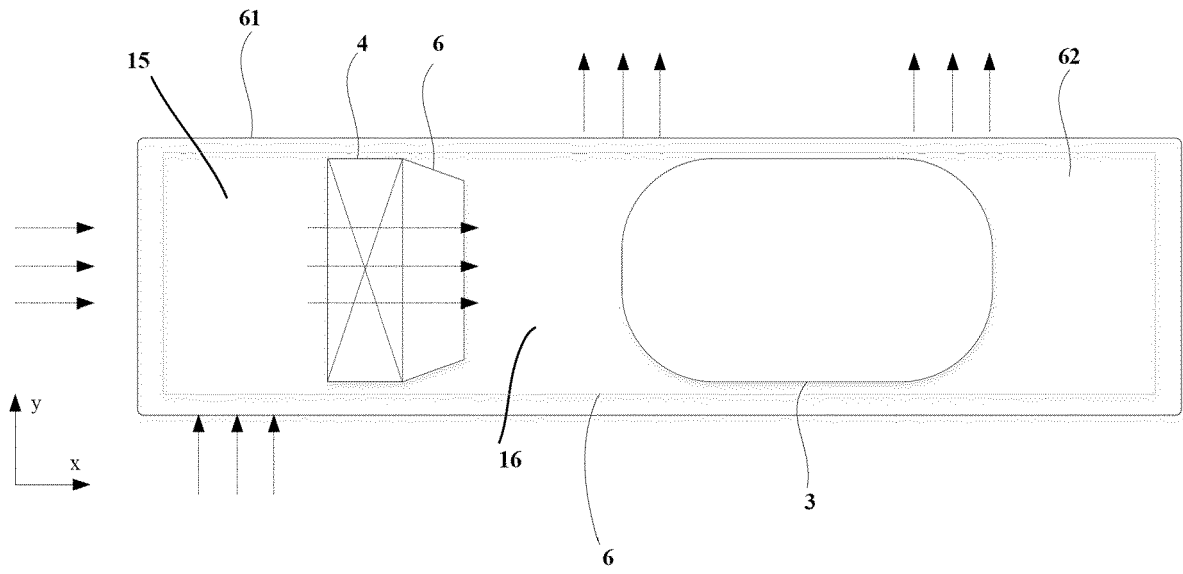


FIG. 6

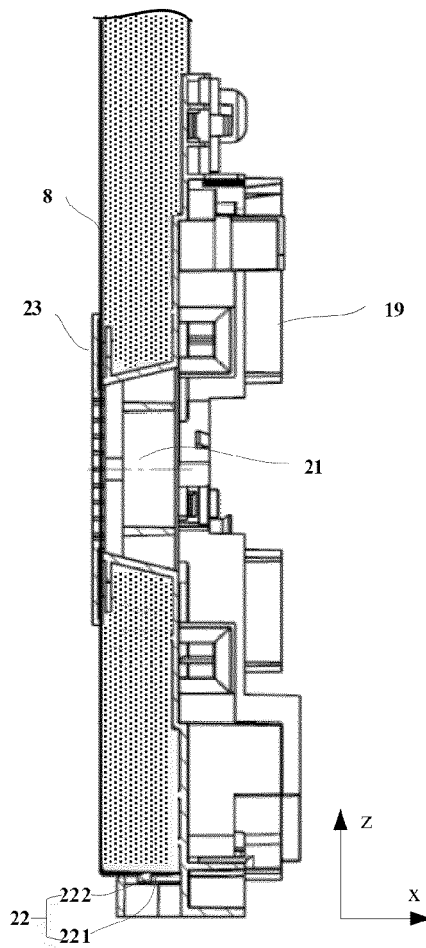


FIG. 7

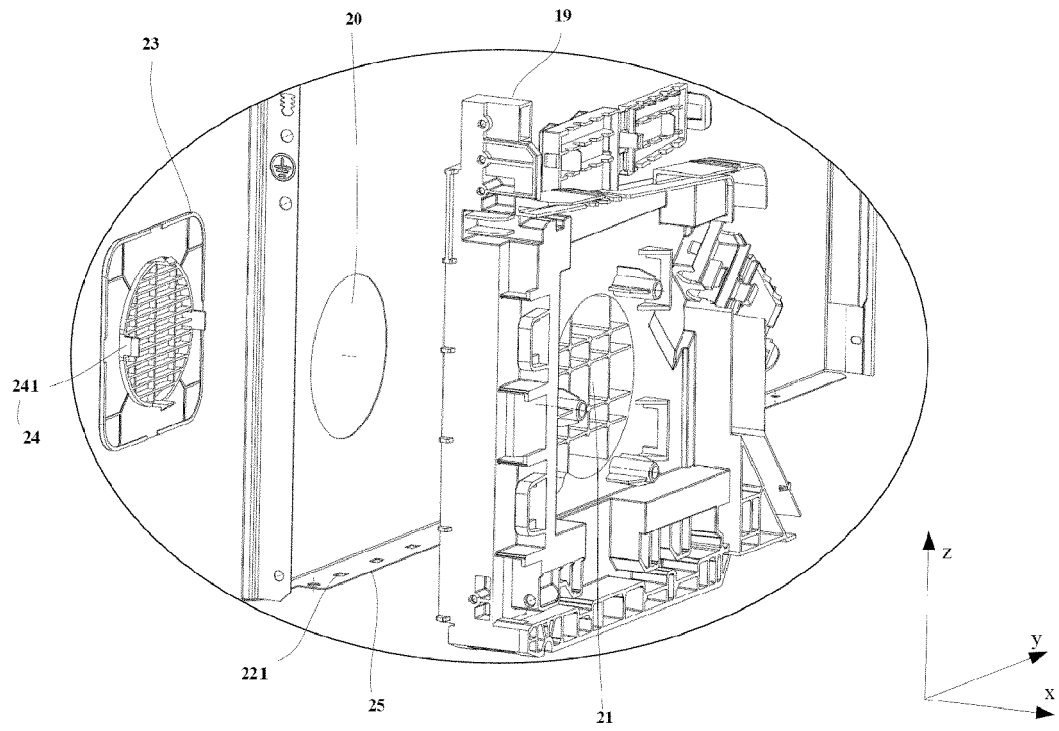


FIG. 8

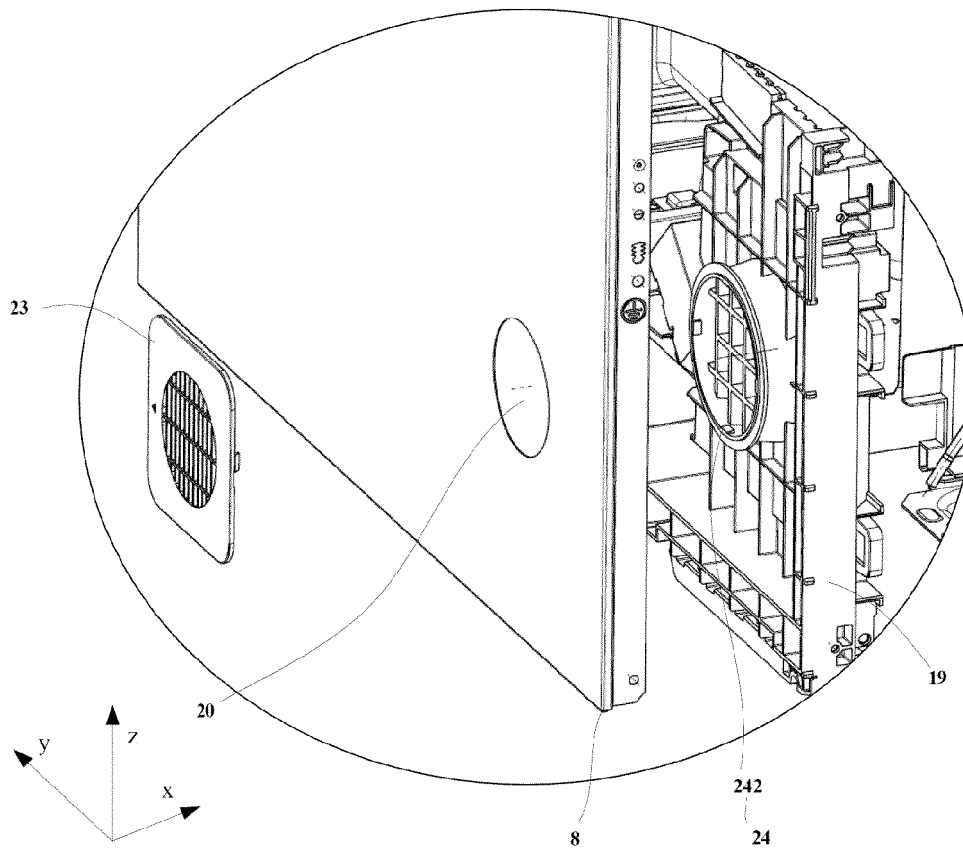


FIG. 9



EUROPEAN SEARCH REPORT

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EPO FORM 1503 03.82 (P04C01)

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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A	JP H08 189747 A (MATSUSHITA REFRIGERATION) 23 July 1996 (1996-07-23) * abstract *	1-12	
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			TECHNICAL FIELDS SEARCHED (IPC)
			F25D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 24 August 2022	Examiner Yousufi, Stefanie
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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