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(54) **DRAWER ASSEMBLY AND REFRIGERATION DEVICE**

(57) The present application discloses a drawer assembly and refrigeration equipment, the drawer assembly comprising a drawer body, a partition assembly, and a telescopic plate. The partition assembly is slidably disposed within the drawer body, is configured to separate a dry zone and a wet zone, and the partition assembly is provided with a mounting interlayer therein; the telescopic plate is slidably disposed within the mounting interlayer of the partition assembly; the telescopic plate is slidable along a predetermined trajectory within the mounting interlayer to extend out of the mounting interlayer and abut against a side wall surface of the drawer body, or, retract into the mounting interlayer and disengage from the side wall surface of the drawer body.

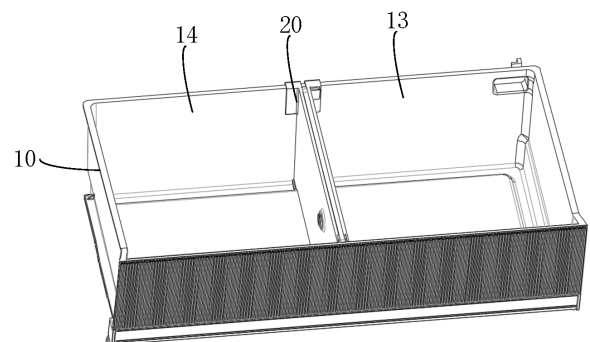


FIG. 2

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Description

[0001] The present application is based on Chinese patent application with application number CN202311120566.3 and application date of August 31, 2023, Chinese patent application with application number CN202311515661.3 and application date of November 14, 2023, and Chinese patent application with application number CN202311515633.1 and application date of November 14, 2023, and claims priority of the above Chinese patent applications.

TECHNICAL FIELD

[0002] The present application relates to a field of household appliance technology, for example, to a drawer assembly and refrigeration equipment.

BACKGROUND TECHNOLOGY

[0003] A refrigerator is a household appliance that is configured to reduce an internal temperature to provide a low-temperature storage chamber for storing food or ingredients, thereby extending a preservation period of the food or the ingredients. A refrigerator generally includes three parts: a cabinet body, a refrigeration system, and a control system. During a flow process of a refrigerant, heat exchange between a storage chamber of the refrigerator and an external environment can be completed through methods such as evaporation and condensation, thereby ensuring that the storage chamber remains in a low-temperature state. As types of items stored by users in a refrigerator become more diversified, user demands for the refrigerator also continue to increase. For example, when users need to store multiple different items, a required preservation humidity for different items may also be different.

[0004] Therefore, current refrigerators generally provide mutually independent wet zones and dry zones within the cabinet body to meet user needs for storing different items.

[0005] In a process of implementing embodiments of the present application, at least the following problems are found to exist in the related technology:

Existing refrigerators generally provide multiple drawers with independent structures within the cabinet body, constructing independent wet zones and dry zones by adjusting a humidity within the multiple drawers. As a result, users are unable to independently adjust sizes of the wet zone and the dry zone, reducing experience of users.

[0006] The information disclosed in the above background technology section is only for the purpose of enhancing understanding of a background of the present application, and therefore may include information that does not constitute prior art known to a person of ordinary skill in the art.

[0007] Any prior art mentioned in the specification does

not represent a confirmation or suggestion that the prior art constitutes a part of common knowledge in any jurisdiction, or that the prior art can be reasonably expected to be understood, regarded as relevant and/or combined with other prior art by a person skilled in the art.

SUMMARY OF THE INVENTION

[0008] To provide a basic understanding of some aspects of the disclosed embodiments, a brief summary is given below. The summary is not a general review, nor is the summary intended to identify key/important components or delineate a protection scope of these embodiments, but serves as a preface to a detailed description that follows.

[0009] Embodiments of the present application provide a drawer assembly and refrigeration equipment, allowing users to independently adjust sizes of a dry zone and a wet zone, thereby improving experience of users.

[0010] Embodiments of the present application provide a drawer assembly comprising a drawer body, a partition assembly, and a telescopic plate. The drawer body is provided with a dry zone and a wet zone; the partition assembly is slidably disposed within the drawer body, configured to separate the dry zone and the wet zone, and the partition assembly is provided with a mounting interlayer therein; the telescopic plate is slidably disposed within the mounting interlayer of the partition assembly and correspondingly disposed with a side wall surface of the drawer body; wherein the telescopic plate is slidable along a predetermined trajectory within the mounting interlayer to extend out of the mounting interlayer and abut against the side wall surface of the drawer body, or, retract into the mounting interlayer and disengage from the side wall surface of the drawer body.

[0011] In some embodiments, the drawer assembly further comprises a drive assembly, the drive assembly is disposed within the mounting interlayer of the partition assembly and is in a transmission connection with the telescopic plate; the drive assembly comprises a drive rack, a telescopic rack, and a gear. The drive rack is disposed within the mounting interlayer; the telescopic rack is horizontally disposed in the mounting interlayer and is connected to the telescopic plate; the gear is respectively meshed with the drive rack and the telescopic rack; wherein the drive rack is movable in a first direction and is configured to drive the telescopic rack and the telescopic plate to extend out of the mounting interlayer through the gear, or, the drive rack is movable in a second direction and is configured to drive the telescopic rack and the telescopic plate to retract into the mounting interlayer through the gear.

[0012] In some embodiments, the drive rack is provided with a pushing portion; a side wall surface of the partition assembly is correspondingly provided with a first clearance opening at the pushing portion; wherein the pushing portion is extendable outside the partition assembly through the first clearance opening, and the drive

rack is pushable to move in the first direction or the second direction through the pushing portion.

[0013] In some embodiments, the drive assembly further comprises a first elastic element. The first elastic element is disposed within the mounting interlayer, and two ends of the first elastic element are respectively connected to the drive rack and the partition assembly; wherein the first elastic element is configured to push the drive rack to move in the first direction.

[0014] In some embodiments, the drive rack is provided with a guiding portion; the partition assembly is further correspondingly provided with a guiding mating portion at the guiding portion; wherein the guiding mating portion is configured to guide the guiding portion to enable the drive rack to move along the first direction or the second direction.

[0015] In some embodiments, the partition assembly is further correspondingly provided with a guiding bracket at the telescopic rack, and the telescopic rack is mounted on the guiding bracket; wherein the telescopic rack is configured for horizontal sliding along the guiding bracket.

[0016] In some embodiments, the drawer assembly is provided with two sets of telescopic plates, and the two sets of the telescopic plates are oppositely disposed on two sides of the partition assembly; wherein the drive assembly is respectively in a transmission connection with the two sets of the telescopic plates.

[0017] In some embodiments, the telescopic rack comprises a first telescopic rack and a second telescopic rack, and the first telescopic rack and the second telescopic rack are respectively connected to the two sets of the telescopic plates; the gear comprises a first gear and a second gear respectively correspondingly disposed to the first telescopic rack and the second telescopic rack; wherein the first gear is respectively meshed with the first telescopic rack and the drive rack, and the second gear is respectively meshed with the second telescopic rack and the drive rack.

[0018] In some embodiments, the drawer assembly comprises a connecting rod assembly and a drive block, the drive block is movably mounted within the mounting interlayer; the connecting rod assembly is configured to connect the drive block and the telescopic plate; the drive block is configured to drive the telescopic plate to slide along the predetermined trajectory within the mounting interlayer through the connecting rod assembly, so as to enable the telescopic plate to extend out of the mounting interlayer and abut against the side wall surface of the drawer body, or, enable the telescopic plate to retract into the mounting interlayer and disengage from the side wall surface of the drawer body.

[0019] In some embodiments, the connecting rod assembly comprises a first connecting rod, a second connecting rod, and a third connecting rod; the first connecting rod comprises a first end rotatably connected to the drive block; the second connecting rod comprises a first end rotatably connected to the first connecting rod and a

second end rotatably connected to the telescopic plate; the third connecting rod comprises a first end rotatably connected to the partition assembly and a second end rotatably connected to the first end of the second connecting rod.

[0020] In some embodiments, the first end of the first connecting rod is higher than the first end of the second connecting rod; the second end of the second connecting rod is higher than the first end of the second connecting rod; the first end of the third connecting rod is higher than the first end of the second connecting rod, and the first end of the third connecting rod is located on a side of the first end of the second connecting rod proximate to the drive block.

[0021] In some embodiments, the connecting rod assembly further comprises a fourth connecting rod and a fifth connecting rod, the fourth connecting rod comprises a first end rotatably connected to the partition assembly; the fifth connecting rod comprises a first end rotatably connected to the fourth connecting rod and a second end rotatably connected to the telescopic plate; wherein the first end of the fourth connecting rod and the first end of the first connecting rod are located on a same vertical line.

[0022] In some embodiments, the first end of the fourth connecting rod is located below the first end of the first connecting rod; the first end of the fifth connecting rod is located above the first end of the second connecting rod; the second end of the fifth connecting rod is located below the second end of the second connecting rod.

[0023] In some embodiments, the connecting rod assembly further comprises a sixth connecting rod, the sixth connecting rod comprises a first end rotatably connected to the first end of the fifth connecting rod and a second end rotatably connected to the second connecting rod.

[0024] In some embodiments, the drawer assembly further comprises a lower telescopic plate, the lower telescopic plate is slidably disposed within the mounting interlayer of the partition assembly and is correspondingly disposed with a bottom wall surface of the drawer body; wherein the lower telescopic plate is fixedly connected to the drive block, so as to enable the lower telescopic plate to drive the drive block to move along a vertical direction.

[0025] In some embodiments, the drawer assembly further comprises a second elastic element, the second elastic element is disposed within the mounting interlayer, and two ends of the second elastic element are respectively connected to the lower telescopic plate and the partition assembly; wherein the second elastic element is configured to push the lower telescopic plate toward a direction proximate to the bottom wall surface of the drawer body.

[0026] In some embodiments, the drawer assembly comprises a third elastic element, the third elastic element comprises a first end connected to the telescopic plate and a second end connected to the partition assembly; wherein the third elastic element is configured to

push the telescopic plate to slide in the first direction, so as to enable the telescopic plate to extend out of the mounting interlayer and abut against the side wall surface of the drawer body.

[0027] In some embodiments, the telescopic plate is provided with a first guiding portion; the drawer assembly further comprises an unlock button, the unlock button is disposed at a position of the partition assembly corresponding to the first guiding portion of the telescopic plate, and the unlock button comprises a first guiding mating portion abutting against the first guiding portion; wherein the unlock button is movable toward the partition assembly and is configured to press the first guiding portion through the first guiding mating portion, so as to enable the telescopic plate to slide in the second direction.

[0028] In some embodiments, the drawer assembly further comprises a fourth elastic element, the fourth elastic element comprises a first end connected to the telescopic plate and a second end connected to the unlock button; wherein the fourth elastic element is configured to push the unlock button to move in a direction away from the telescopic plate.

[0029] In some embodiments, the partition assembly is provided with a second guiding portion; the unlock button is correspondingly provided with a second guiding mating portion at the second guiding portion; wherein the second guiding portion is configured to guide the second guiding mating portion to enable a movement trajectory of the unlock button to be perpendicular to the telescopic plate.

[0030] In some embodiments, the edge of the partition assembly is provided with a sealing structure.

[0031] In some embodiments, the partition assembly is further provided with a first sliding groove, the partition assembly is slidably connected to the edge of the drawer body through the first sliding groove, so as to enable the partition assembly to slide along the edge of the drawer body.

[0032] In some embodiments, the drawer assembly further comprises a rolling base, the rolling base is mounted on a lower edge of the partition assembly, and the rolling base comprises a rolling portion abutting against a bottom surface of the drawer body.

[0033] Embodiments of the present application also provide a refrigeration equipment comprising a cabinet body and the drawer assembly described above. The cabinet body is provided with a storage chamber; wherein the drawer assembly is disposed within the storage chamber.

[0034] In some embodiments, a side wall surface of the dry zone of the drawer body is provided with a dehumidifying port; the refrigeration equipment further comprises a dehumidifying device. The dehumidifying device is in communication with the dry zone through the dehumidifying port and is configured to dehumidify the dry zone.

[0035] The drawer assembly and the refrigeration equipment provided by the embodiments of the present

application may achieve the following technical effects: The partition assembly is configured to separate the drawer body into a dry zone and a wet zone, allowing users to respectively store items requiring a low humidity preservation and items requiring a high humidity preservation in the dry zone and the wet zone. Users may retract the telescopic plate into the mounting interlayer and disengage the telescopic plate from the side wall surface of the drawer body, then enable the partition assembly to slide within the drawer body to adjust volumes of the dry zone and the wet zone. After an adjustment is completed, the telescopic plate may extend out of the mounting interlayer and abut against the side wall surface of the drawer body to prevent the partition assembly from sliding. With such a configuration, users may independently adjust sizes of the dry zone and the wet zone, thereby improving the experience of users.

[0036] The above general description and the descriptions hereinafter are merely exemplary and explanatory, and are not intended to limit the present application.

[0037] The term "comprise" as used herein and variations of the term, such as "comprises", "comprised", "comprising", "including", "containing", do not exclude other features, components, elements or steps unless a context clearly requires otherwise.

BRIEF DESCRIPTION OF THE DRAWINGS

[0038] One or more embodiments are illustrated by way of example with corresponding drawings, the exemplary illustrations and drawings do not constitute limitations on the embodiments, elements having a same reference numeral in the drawings are shown as similar elements, the drawings do not constitute a scale limitation, and wherein:

FIG. 1 is a structural schematic diagram of a drawer assembly provided by an embodiment of the present application;

FIG. 2 is a structural schematic diagram of another drawer assembly provided by an embodiment of the present application;

FIG. 3 is a partial structural schematic diagram of a drawer assembly provided by an embodiment of the present application;

FIG. 4 is a structural schematic diagram of a partition assembly provided by an embodiment of the present application;

FIG. 5 is a structural schematic diagram of a mounting interlayer provided by an embodiment of the present application;

FIG. 6 is a partial structural schematic diagram of a mounting interlayer provided by an embodiment of the present application;

FIG. 7 is a structural schematic diagram of a drive rack provided by an embodiment of the present application;

FIG. 8 is a structural schematic diagram of a tele-

scopic rack mounted on a guiding bracket provided by an embodiment of the present application;
FIG. 9 is a partial structural schematic diagram of a partition assembly provided by an embodiment of the present application;

FIG. 10 is a structural schematic diagram of a rolling base provided by an embodiment of the present application;

FIG. 11 is a structural schematic diagram of a ball cover provided by an embodiment of the present application;

FIG. 12 is a structural schematic diagram of a ball seat provided by an embodiment of the present application;

FIG. 13 is a structural schematic diagram of a mounting interlayer provided by an embodiment of the present application;

FIG. 14 is a partial structural schematic diagram of a mounting interlayer provided by an embodiment of the present application;

FIG. 15 is a partial structural schematic diagram of another mounting interlayer provided by an embodiment of the present application;

FIG. 16 is a structural schematic diagram of a partition assembly provided by an embodiment of the present application;

FIG. 17 is a structural schematic diagram of a first partition plate and an unlock button provided by an embodiment of the present application;

FIG. 18 is a structural schematic diagram of a second partition plate and a telescopic plate provided by an embodiment of the present application;

FIG. 19 is a structural schematic diagram of an unlock button provided by an embodiment of the present application;

FIG. 20 is a partial cross-sectional view of an unlock button and a telescopic plate provided by an embodiment of the present application.

[0039] Reference numerals:

10: drawer body; 11: cover plate; 12: moisture-permeable membrane; 13: dry zone; 14: wet zone; 15: dehumidifying port; 16: position sensor; 17: temperature sensor; 20: partition assembly; 201: first clearance opening; 202: guiding protrusion; 203: first partition plate; 2031: engaging groove; 204: second partition plate; 2041: engaging protrusion; 205: limiting portion; 206: second guiding portion; 21: telescopic plate; 211: second clearance opening; 212: first guiding portion; 22: first elastic element; 23: first sliding groove; 24: sealing member; 25: sealing ring; 26: guiding bracket; 27: lower telescopic plate; 271: limiting mating portion; 28: second elastic element; 29: fixing seat; 31: drive rack; 311: first guiding groove; 312: first teeth portion; 313: mounting groove; 32: telescopic rack; 321: second teeth portion; 33: gear; 34: pushing portion; 351: first connecting rod; 352: second connecting rod; 353: third connecting rod; 354: fourth connecting rod; 355: fifth connecting rod; 356: sixth con-

necting rod; 36: drive block; 361: clearance groove; 40: rolling base; 41: ball cover; 411: second hook; 412: buckle opening; 42: ball seat; 421: first hook; 43: ball; 51: third elastic element; 52: fourth elastic element; 60: unlock button; 61: first guiding mating portion; 62: second guiding mating portion.

DETAILED DESCRIPTION

[0040] To enable a more detailed understanding of characteristics and technical content of embodiments of the present application, an implementation of the embodiments of the present application is elaborated below in conjunction with accompanying drawings. The attached drawings are only for reference and illustration purposes and are not intended to limit the embodiments of the present application. In a following technical description, for convenience of explanation, numerous details are provided to offer a thorough understanding of the disclosed embodiments. However, one or more embodiments may still be implemented without the details. In other cases, well-known structures and devices may be shown in a simplified form to simplify the drawings.

[0041] In a specification and claims of the embodiments of the present application and the above drawings, terms such as "first", "second", etc. are used to distinguish similar objects and are not necessarily used to describe a specific order or sequence. The data used in this manner should be understood to be interchangeable under appropriate circumstances to facilitate the embodiments of the present application described herein. Furthermore, the terms "comprising" and "having" as well as any variations thereof are intended to cover non-exclusive inclusions.

[0042] In the embodiments of the present application, orientations or positional relationships indicated by terms such as "upper", "lower", "inner", "middle", "outer", "front", "rear", etc. are based on the orientations or the positional relationships shown in the drawings. These terms are primarily used to better describe the embodiments of the present application and their implementations, and are not intended to limit that the indicated devices, elements or components must have specific orientations or be constructed and operated in specific orientations. Moreover, some of the above terms may be used to express other meanings in addition to indicating orientational or positional relationships. For example, the term "upper" may in some cases also be used to express a certain attachment relationship or connection relationship. For a person of ordinary skill in the art, specific meanings of these terms in the embodiments of the present application may be understood according to specific circumstances.

[0043] Additionally, the terms "disposed", "connected", and "fixed" should be understood broadly. For example, a "connection" may be a fixed connection, a detachable connection, or an integral construction; the connection may be a mechanical connection or an electrical con-

nection; the connection may be a direct connection, or an indirect connection through an intermediate medium, or an internal communication between two devices, elements or components. For a person of ordinary skill in the art, specific meanings of the above terms in the embodiments of the present application may be understood according to specific circumstances.

[0044] Unless otherwise specified, the term "multiple" means two or more than two.

[0045] In the embodiments of the present application, a character "/" indicates that objects before and after the character have an "or" relationship. For example, A/B means: A or B.

[0046] The term "and/or" is a way of describing an associative relationship of objects, indicating that three relationships may exist. For example, A and/or B, means: A or B, or, A and B, these three relationships.

[0047] Notably, the embodiments in the present application and features in the embodiments may be combined with each other when there is no conflict.

[0048] As shown in FIG. 1 to FIG. 20, the embodiments of the present application provide a drawer assembly and refrigeration equipment, allowing users to independently adjust sizes of a dry zone 13 and a wet zone 14, thereby improving experience of users.

Embodiment 1

[0049] As shown in FIG. 1 to FIG. 12, an embodiment of the present application provides a drawer assembly, comprising a drawer body 10, a partition assembly 20, a telescopic plate 21, and a drive assembly.

[0050] The drawer body 10 is provided with a dry zone 13 and a wet zone 14.

[0051] The partition assembly 20 is slidably disposed within the drawer body 10, configured to separate the dry zone 13 and the wet zone 14, and the partition assembly 20 is provided with a mounting interlayer therein.

[0052] The telescopic plate 21 is slidably disposed within the mounting interlayer of the partition assembly 20 and is correspondingly disposed with a side wall surface of the drawer body 10. The telescopic plate 21 is slidable in a first direction to abut against the side wall surface of the drawer body 10 or is slidable in a second direction to disengage from the side wall surface of the drawer body 10.

[0053] Specifically, the telescopic plate 21 is mounted within the mounting interlayer and is slidable within the mounting interlayer in the first direction to a first position or is slidable in the second direction to a second position.

[0054] The drive assembly is disposed within the mounting interlayer of the partition assembly 20 and is in a transmission connection with the telescopic plate 21; wherein the drive assembly is configured to drive the telescopic plate 21 to slide along a predetermined trajectory within the mounting interlayer, so as to enable the telescopic plate 21 to extend out of the mounting interlayer and abut against the side wall surface of the drawer

body 10, or, enable the telescopic plate 21 to retract into the mounting interlayer and disengage from the side wall surface of the drawer body 10.

[0055] Specifically, the drawer body 10 is provided with a storage area, and the partition assembly 20 is disposed within the storage area to separate the storage area into the dry zone 13 and the wet zone 14, as shown in FIG. 2. The drawer assembly may be applied to refrigeration equipment, and the refrigeration equipment may independently adjust the humidity within the dry zone 13 and the wet zone 14. Users may store items requiring a low humidity preservation in the dry zone 13 and store items requiring a high humidity preservation in the wet zone 14. The telescopic plate 21 is slidably disposed within the mounting interlayer and is disposed at a position corresponding to a side wall surface of the storage area. The drive assembly is mounted within the mounting interlayer, and the drive assembly is in a transmission connection with the telescopic plate 21, as shown in FIG. 5. Users may drive the telescopic plate 21 to retract into the mounting interlayer and disengage from the side wall surface of the drawer body 10 through the drive assembly, then enable the partition assembly 20 to slide within the drawer body 10 to adjust volumes of the dry zone 13 and the wet zone 14. After an adjustment is completed, the telescopic plate 21 may be driven to extend out of the mounting interlayer and abut against the side wall surface of the drawer body 10 through the drive assembly to prevent the partition assembly 20 from sliding. Wherein, when there are more items requiring a low humidity preservation, users may slide the partition assembly 20 toward the wet zone 14 to increase the volume of the dry zone 13; when there are more items requiring a high humidity preservation, users may slide the partition assembly 20 toward the dry zone 13 to increase the volume of the wet zone 14. With such a configuration, users may independently adjust the sizes of the dry zone 13 and the wet zone 14, thereby improving experience of users.

[0056] As can be understood, when a user only needs to preserve low humidity items, the user may slide the partition assembly 20 toward the wet zone 14 to the corresponding side wall surface of the wet zone 14, at which time the storage area is completely the dry zone 13. Similarly, when a user only needs to preserve high humidity items, the user may slide the partition assembly 20 toward the dry zone 13 to the corresponding side wall surface of the dry zone 13, at which time the storage area is completely the wet zone 14.

[0057] As shown in FIG. 1 and FIG. 2, optionally, the drawer body 10 is further provided with an opening, and a cover plate 11 is disposed at the opening, the cover plate 11 is detachably mounted at the opening of the drawer body 10. When the cover plate 11 is engaged at the opening, the dry zone 13 and the wet zone 14 are in a completely sealed state.

[0058] As shown in FIG. 4 and FIG. 5, optionally, the partition assembly 20 comprises a first partition plate 203

and a second partition plate 204 engaged with the first partition plate 203, and a gap is provided between the first partition plate 203 and the second partition plate 204 to form the mounting interlayer.

[0059] As shown in FIG. 17 and FIG. 18, specifically, the first partition plate 203 is provided with an engaging groove 2031, and the second partition plate 204 is correspondingly provided with an engaging protrusion 2041 at the engaging groove 2031. The engaging protrusion 2041 is engageable with the engaging groove 2031 to enable the second partition plate 204 to engage with the first partition plate 203. When the second partition plate 204 is engaged with the first partition plate 203, a gap is left between the second partition plate 204 and the first partition plate 203 to constitute the mounting interlayer.

[0060] In practical applications, the storage area of the drawer body 10 is provided with a first side wall surface and a second side wall surface, the first side wall surface and the second side wall surface are oppositely disposed on two sides of the partition assembly 20, correspondingly, the first side wall surface and the second side wall surface are oppositely disposed on two sides of the telescopic plate 21.

[0061] When the telescopic plate 21 is located at the first position, the telescopic plate 21 extends out of the mounting interlayer and abuts against the first side wall surface of the storage area. Specifically, an edge of the telescopic plate 21 extends out of the mounting interlayer and abuts against the first side wall surface of the storage area, at which time an edge of the partition assembly 20 corresponding to the second side wall surface also abuts against the second side wall surface to prevent the partition assembly 20 from sliding.

[0062] When the telescopic plate 21 is located at the second position, the edge of the telescopic plate 21 retracts into the mounting interlayer to disengage from the first side wall surface.

[0063] In practical applications, a width of the partition assembly 20 is smaller than a width of the storage area to prevent edges on both sides of the partition assembly 20 from simultaneously abutting against the first side wall surface and the second side wall surface when the telescopic plate 21 is located at the second position.

[0064] As shown in FIG. 18, optionally, the telescopic plate 21 is provided with a second clearance opening 211, and the engaging protrusion 2041 and the engaging groove 2031 are disposed at positions corresponding to the second clearance opening 211. Wherein the engaging protrusion 2041 may pass through the second clearance opening 211 to engage with the engaging groove 2031. With such a configuration, the engaging protrusion 2041 may also function to position the telescopic plate 21 to prevent the telescopic plate 21 from shaking. Meanwhile, the engaging protrusion 2041 may also limit the telescopic plate 21 to prevent the telescopic plate 21 from sliding out of the mounting interlayer.

[0065] As shown in FIG. 5 to FIG. 8, in some embodiments, the drive assembly comprises a drive rack 31, a

telescopic rack 32, and a gear 33. The drive rack 31 is disposed within the mounting interlayer; the telescopic rack 32 is horizontally disposed in the mounting interlayer and is connected to the telescopic plate 21; the gear 33 is respectively meshed with the drive rack 31 and the telescopic rack 32; wherein the drive rack 31 is movable in a first direction and is configured to drive the telescopic rack 32 and the telescopic plate 21 to extend out of the mounting interlayer through the gear 33, or, the drive rack 31 is movable in a second direction and is configured to drive the telescopic rack 32 and the telescopic plate 21 to retract into the mounting interlayer through the gear 33.

[0066] Specifically, the drive rack 31 is vertically mounted within the mounting interlayer, and the drive rack 31 is provided with a first teeth portion 312 at an edge facing the telescopic plate 21. The telescopic rack 32 is horizontally disposed in the mounting interlayer and is located on a side of the drive rack 31 proximate to the telescopic plate 21, and the telescopic rack 32 is provided with a second teeth portion 321 at an edge corresponding to the first teeth portion 312. The gear 33 is rotatably disposed within the mounting interlayer, and the gear 33 is respectively meshed with the first teeth portion 312 and the second teeth portion 321. The drive rack 31 is movable vertically downward to drive the telescopic rack 32 to move outward, thereby driving the telescopic plate 21 to extend out of the mounting interlayer and abut against the side wall surface of the drawer body 10. The drive rack 31 is also movable vertically upward to drive the telescopic rack 32 to move inward, thereby driving the telescopic plate 21 to retract into the mounting interlayer and disengage from the side wall surface of the drawer body 10.

[0067] As shown in FIG. 7, in some embodiments, the drive rack 31 is provided with a pushing portion 34; as shown in FIG. 4, a side wall surface of the partition assembly 20 is correspondingly provided with a first clearance opening 201 at the pushing portion 34; wherein the pushing portion 34 is extendable outside the partition assembly 20 through the first clearance opening 201, and the drive rack 31 is pushable to move in the first direction or the second direction through the pushing portion 34.

[0068] Specifically, the drive rack 31 is provided with a pushing protrusion facing a side wall surface of the first partition plate 203 and/or the second partition plate 204 to constitute the pushing portion 34, and the first partition plate 203 and/or the second partition plate 204 is provided with a first clearance opening 201 at a position corresponding to the pushing protrusion. Wherein the pushing protrusion is extendable to another side of the first partition plate 203 and/or the second partition plate 204 through the first clearance opening 201. In this way, a user may push the drive rack 31 to move in the first direction or the second direction through the pushing protrusion.

[0069] As shown in FIG. 5, in some embodiments, the drive assembly further comprises a first elastic element 22. The first elastic element 22 is disposed within the

mounting interlayer, and two ends of the first elastic element are respectively connected to the drive rack 31 and the partition assembly 20; wherein the first elastic element 22 is configured to push the drive rack 31 to move in the first direction.

[0070] Specifically, the drive rack 31 is provided with a mounting groove 313 extending therethrough, the partition assembly 20 is provided with a fixing seat at a position corresponding to the mounting groove 313, and the fixing seat extends into the mounting groove 313, as shown in FIG. 5 and FIG. 7. One end of the first elastic element 22 is connected to the fixing seat, and another end is connected to a lower edge of the mounting groove 313. In this way, the first elastic element 22 may push the drive rack 31 to move downward.

[0071] In some embodiments, the drive rack 31 is provided with a guiding portion; the partition assembly 20 is further correspondingly provided with a guiding mating portion at the guiding portion; wherein the guiding mating portion is configured to guide the guiding portion to enable the drive rack 31 to move along the first direction or the second direction.

[0072] Specifically, the drive rack 31 is provided with a first guiding groove 311 to constitute the guiding portion, the partition assembly 20 is provided with a guiding protrusion 202 at a position corresponding to the first guiding groove 311 to constitute the guiding mating portion, and the guiding protrusion 202 is inserted into the first guiding groove 311, as shown in FIG. 6. During a movement of the drive rack 31, the guiding protrusion 202 may limit the first guiding groove 311 to enable the drive rack 31 to move along the first direction or the second direction.

[0073] As shown in FIG. 5, optionally, the drive rack 31 is provided with two first guiding grooves 311, and the two first guiding grooves 311 are distributed along a vertical direction. The partition assembly 20 is correspondingly provided with two guiding protrusions 202 at the two first guiding grooves 311, and the two guiding protrusions 202 are respectively inserted into the two first guiding grooves 311. In this way, the two guiding protrusions 202 may respectively limit the two first guiding grooves 311 to prevent the drive rack 31 from rotating.

[0074] As shown in FIG. 5 and FIG. 8, in some embodiments, the partition assembly 20 is further correspondingly provided with a guiding bracket 26 at the telescopic rack 32, and the telescopic rack 32 is mounted on the guiding bracket 26; wherein the telescopic rack 32 is configured for horizontal sliding along the guiding bracket 26.

[0075] Specifically, the mounting interlayer of the partition assembly 20 is provided with a guiding bracket 26 at a position corresponding to the telescopic rack 32, and the guiding bracket 26 is provided with a horizontal second guiding groove. The telescopic rack 32 is slidably disposed within the second guiding groove, and the second guiding groove may provide a support and a guidance for the telescopic rack 32 to enable the telescopic rack 32 to

move along a horizontal direction.

[0076] As shown in FIG. 5, in some embodiments, the drawer assembly is provided with two sets of telescopic plates 21, and the two sets of the telescopic plates 21 are oppositely disposed on two sides of the partition assembly 20; wherein the drive assembly is respectively in a transmission connection with the two sets of the telescopic plates 21.

[0077] Specifically, the two sets of the telescopic plates 21 are respectively a first telescopic plate and a second telescopic plate, and the drawer assembly comprises the first telescopic plate correspondingly disposed with the first side wall surface and the second telescopic plate correspondingly disposed with the second side wall surface. The drive assembly is respectively in a transmission connection with the first telescopic plate and the second telescopic plate to drive the first telescopic plate and the second telescopic plate to extend out of or retract into the mounting interlayer. The first telescopic plate may abut against the first side wall surface when extending out of the mounting interlayer, and the second telescopic plate may abut against the second side wall surface when extending out of the mounting interlayer.

[0078] As shown in FIG. 5, in some embodiments, the telescopic rack 32 comprises a first telescopic rack and a second telescopic rack, and the first telescopic rack and the second telescopic rack are respectively connected to the two sets of the telescopic plates 21; the gear 33 comprises a first gear and a second gear respectively correspondingly disposed to the first telescopic rack and the second telescopic rack; wherein the first gear is respectively meshed with the first telescopic rack and the drive rack 31, and the second gear is respectively meshed with the second telescopic rack and the drive rack 31.

[0079] Specifically, the first telescopic rack is disposed on a side of the drive rack 31 facing the first telescopic plate, and the first telescopic rack is connected to the first telescopic plate; the second telescopic rack is disposed on a side of the drive rack 31 facing the second telescopic plate, and the second telescopic rack is connected to the second telescopic plate. The first gear is respectively meshed with the first telescopic rack and the drive rack 31, and the drive rack 31 may drive the first telescopic rack to move through the first gear; the second gear is respectively meshed with the second telescopic rack and the drive rack 31, and the drive rack 31 may drive the second telescopic rack to move through the second gear.

[0080] As shown in FIG. 4, optionally, edges of the partition assembly 20 and the telescopic plate 21 are fitted with sealing rings 25, and the sealing rings 25 are made of a flexible material. When the telescopic plate 21 extends out of the mounting interlayer, that is, when the telescopic plate 21 moves in the first direction, the telescopic plate 21 may push the sealing rings 25 to stretch outward, and the sealing rings 25 around the partition assembly 20 abut against the drawer body 10 or the cover plate 11 to seal the dry zone 13 and the wet zone 14.

When the telescopic plate 21 retracts into the mounting interlayer, that is, when the telescopic plate 21 moves in the second direction, portions of the sealing rings 25 located at the telescopic plate 21 contract and disengage from the drawer body 10 to avoid interfering with a sliding of the partition assembly 20.

[0081] Optionally, edges of the partition assembly 20 and/or the telescopic plate 21 are provided with sealing grooves, and the sealing rings 25 may be mounted within the sealing grooves to prevent the sealing rings 25 from falling off.

[0082] As shown in FIG. 4, optionally, the partition assembly 20 is further provided with a first sliding groove 23, and the partition assembly 20 is slidably connected to an edge of the drawer body 10 through the first sliding groove 23, so as to enable the partition assembly 20 to slide along the edge of the drawer body 10.

[0083] Specifically, an upper edge of the partition assembly 20 is provided with the first sliding groove 23, the first sliding groove 23 extends outward to the edge of the drawer body 10, and the edge of the drawer body 10 is engaged within the first sliding groove 23 to enable the partition assembly 20 to slide along the edge of the drawer body 10. Engaging the edge of the drawer body 10 within the first sliding groove 23 may also prevent the partition assembly 20 from disengaging from the drawer body 10.

[0084] Specifically, the first sliding groove 23 is disposed at an end of the upper edge of the partition assembly 20 away from the telescopic plate 21.

[0085] As shown in FIG. 9 to FIG. 12, optionally, the drawer assembly further comprises a rolling base 40. The rolling base 40 is mounted on a lower edge of the partition assembly 20, and the rolling base 40 comprises a rolling portion abutting against a bottom surface of the drawer body 10.

[0086] Specifically, the rolling base 40 is disposed on the lower edge of the partition assembly 20, and the rolling portion of the rolling base 40 abuts against the bottom surface of the drawer body 10. When the partition assembly 20 slides along the edge of the drawer body 10, the rolling portion rolls on the bottom surface of the drawer body 10 to provide a support, which may improve a smoothness of a sliding of the partition assembly 20 and a service life of the partition assembly 20.

[0087] Optionally, the drawer assembly comprises multiple rolling bases 40, and the multiple rolling bases 40 are uniformly disposed on the lower edge of the partition assembly 20 along a length of the partition assembly 20.

[0088] In some practical applications, the drawer assembly comprises two rolling bases 40, and the two rolling bases 40 are respectively disposed at two ends of the lower edge of the partition assembly 20.

[0089] As shown in FIG. 9 to FIG. 12, optionally, the rolling base 40 comprises a ball cover 41, a ball seat 42, and a ball 43. The ball 43 may be placed on the ball cover 41, then the ball seat 42 is engaged on a side of the ball 43

away from the ball cover 41 to fix the ball 43 on the ball cover 41. The ball seat 42 is provided with a ball opening on a side away from the ball cover 41, and a diameter of the ball opening is smaller than a diameter of the ball 43.

5 The ball 43 may protrude out of the ball seat 42 from the ball opening, so as to enable the ball 43 to abut against the drawer body 10 and roll relative to the drawer body 10.

[0090] As shown in FIG. 9 to FIG. 12, optionally, the ball cover 41 is provided with a buckle opening 412, and the ball seat 42 is correspondingly provided with a first hook 421 at the buckle opening 412. When the ball seat 42 engages the ball 43 on the ball cover 41, the first hook 421 may engage with the buckle opening 412 to prevent the ball seat 42 from disengaging from the ball cover 41.

10 **[0091]** As shown in FIG. 9, optionally, the first partition plate 203 and/or the second partition plate 204 is provided with a card groove, and an edge of the ball cover 41 is correspondingly provided with a second hook 411 at the card groove. The edge of the ball cover 41 may slide into the card groove, then the second hook 411 is engaged with the card groove to engage the ball cover 41 with the first partition plate 203 and/or the second partition plate 204.

[0092] Optionally, an upper edge of the first side wall surface of the drawer body 10 is bent toward the partition assembly 20, and the partition assembly 20 may abut against the upper edge of the first side wall surface to prevent the partition assembly 20 from disengaging from the drawer body 10.

20 **[0093]** As shown in FIG. 1, an embodiment of the present application also provides a refrigeration equipment, comprising a cabinet body and the drawer assembly described above. The cabinet body is provided with a storage chamber; wherein the drawer assembly is disposed within the storage chamber.

25 **[0094]** Specifically, for the refrigeration equipment adopting the drawer assembly provided by the present application, a user may independently adjust the sizes of the dry zone 13 and the wet zone 14, thereby improving a user experience.

30 **[0095]** As shown in FIG. 3, in some embodiments, a side wall surface of the dry zone 13 of the drawer body 10 is provided with a dehumidifying port 15; the refrigeration equipment further comprises a dehumidifying device. The dehumidifying device is in communication with the dry zone 13 through the dehumidifying port 15 and is configured to dehumidify the dry zone 13.

35 **[0096]** Specifically, the refrigeration equipment further comprises a heat exchanger, and the heat exchanger may serve as the dehumidifying device. The dehumidifying device is in communication with the dehumidifying port 15 through an air duct, and may dehumidify the dry zone 13 through the dehumidifying port 15 to ensure that a humidity of the dry zone 13 is lower than a humidity of the wet zone 14. A user may store items requiring a low humidity preservation in the dry zone 13 and store items requiring a high humidity preservation in the wet zone 14. A user may slide the partition assembly 20 toward the dry

zone 13 to increase a volume of the wet zone 14, or a user may slide the partition assembly 20 toward the wet zone 14 to increase a volume of the dry zone 13.

[0097] Optionally, the storage area of the cabinet body may be a freezing chamber or a refrigerating chamber.

[0098] As shown in FIG. 3, in some embodiments, the refrigeration equipment further comprises a position sensor 16. The position sensor 16 is disposed on the drawer body 10 and/or the partition assembly 20, is electrically connected to the dehumidifying device, and is configured to detect a position of the partition assembly 20. Wherein, when the position sensor 16 detects that the partition assembly 20 moves toward the dry zone 13 to a first predetermined position, the position sensor 16 may control the dehumidifying device to stop dehumidifying the dry zone 13.

[0099] Specifically, the position sensor 16 may detect the position of the partition assembly 20 within the drawer body 10 in real time. When the partition assembly 20 is at the first predetermined position, the storage area is completely the wet zone 14. At this time, the partition assembly 20 may trigger the position sensor 16 to enable the position sensor 16 to control the dehumidifying device to stop dehumidifying the dry zone 13, so as to avoid the dehumidifying device affecting the humidity of the wet zone 14.

[0100] As shown in FIG. 3, in some embodiments, the position sensor 16 comprises a magnetic switch and a magnetic element. The magnetic switch is disposed on a side of the drawer assembly located at the dry zone 13. The magnetic element is disposed at a position of the partition assembly 20 corresponding to the magnetic switch. When the partition assembly 20 moves toward the dry zone 13 to the first predetermined position, the magnetic element may trigger the magnetic switch.

[0101] Specifically, the magnetic switch is fixedly disposed on a side of the drawer assembly located at the dry zone 13, and the magnetic switch is electrically connected to the dehumidifying device. When the partition assembly 20 moves toward the dry zone 13 to the first predetermined position, the magnetic element disposed on the partition assembly 20 may trigger the magnetic switch. At this time, the magnetic switch may control the dehumidifying device to stop dehumidifying the dry zone 13, so as to avoid affecting the humidity of the wet zone 14. When the partition assembly 20 moves toward the wet zone 14 and leaves the first predetermined position, the magnetic element cannot trigger the magnetic switch. At this time, the magnetic switch is in a closed state, and the dehumidifying device may dehumidify the dry zone 13 through the dehumidifying port 15.

[0102] As shown in FIG. 3, optionally, the magnetic switch is disposed at an end of the cover plate 11 located on a side of the dry zone 13, and the magnetic element is disposed at an upper edge of the partition assembly 20.

[0103] As shown in FIG. 1, in some embodiments, the refrigeration equipment further comprises a moisture-permeable membrane 12. The moisture-permeable

membrane 12 is correspondingly disposed with the wet zone 14. When a humidity within the wet zone 14 is less than or equal to a predetermined humidity, the moisture-permeable membrane 12 may block a water vapor within the wet zone 14.

[0104] Optionally, when the humidity of the wet zone 14 is less than or equal to the predetermined humidity, the moisture-permeable membrane 12 may block a water vapor within the wet zone 14 from leaking outward. When the humidity of the wet zone 14 is greater than the predetermined humidity, a water vapor within the wet zone 14 may leak outward through the moisture-permeable membrane 12 until the humidity of the wet zone 14 is less than or equal to the predetermined humidity.

[0105] Optionally, the predetermined humidity is greater than or equal to 75% and less than or equal to 95%. For example, the predetermined humidity may be 75%, 80%, 85%, 90%, or 95%.

[0106] In practical applications, the predetermined humidity may be determined according to an actual need of a user. For example, the predetermined humidity is 90%.

[0107] As can be understood, after a user stores items, the items themselves may contain some moisture, and this moisture may evaporate into the wet zone 14 to humidify the wet zone 14.

[0108] As shown in FIG. 1, in some embodiments, the moisture-permeable membrane 12 is disposed at a position of the cover plate 11 corresponding to the wet zone 14, and the moisture-permeable membrane 12 is flush with an inner side surface of the cover plate 11.

[0109] Specifically, the cover plate 11 is provided with an opening on a side located at the wet zone 14 to communicate the wet zone 14 and an external environment, and the moisture-permeable membrane 12 is disposed at the opening to control a humidity within the wet zone 14. The moisture-permeable membrane 12 is disposed flush with the inner side surface of the cover plate 11, which may prevent the moisture-permeable membrane 12 from interfering with a movement of the partition assembly 20.

[0110] As can be understood, since a humidity of the storage chamber of the refrigeration equipment is generally small, when the partition assembly 20 slides toward the wet zone 14 such that the moisture-permeable membrane 12 is located within the dry zone 13, a water vapor from the storage chamber also cannot enter the dry zone 13 through the moisture-permeable membrane 12.

[0111] As shown in FIG. 3, in some embodiments, the dehumidifying port 15 is disposed on the drawer body 10. The partition assembly 20 is correspondingly provided with a sealing member 24 at the dehumidifying port 15. Wherein, when the partition assembly 20 moves toward the dry zone 13 to the first predetermined position, the sealing member 24 may seal the dehumidifying port 15.

[0112] Specifically, the dehumidifying port 15 is disposed on a side wall surface of the drawer body 10 located on a side of the dry zone 13, and the partition assembly 20 is correspondingly provided with a sealing

foam at the dehumidifying port 15 to constitute the sealing member 24. When the partition assembly 20 moves toward the dry zone 13 to the first predetermined position, the sealing foam may seal the dehumidifying port 15 to further prevent the dehumidifying device or the external environment from affecting the humidity of the wet zone 14.

[0113] As shown in FIG. 3, in some embodiments, the refrigeration equipment further comprises a temperature sensor 17. The temperature sensor 17 is disposed on the drawer assembly and is configured to detect a temperature of the dry zone 13.

[0114] Specifically, the temperature sensor 17 is configured to detect the temperature of the dry zone 13, and the temperature sensor 17 is electrically connected to the dehumidifying device, and may control a dehumidifying efficiency of the dehumidifying device according to the temperature of the dry zone 13.

[0115] Optionally, the temperature sensor 17 is disposed at an edge of the cover plate 11 located on a side of the dry zone 13.

Embodiment 2

[0116] Differences between this embodiment and Embodiment 1 are as follows.

[0117] Referring to FIG. 13 to FIG. 15, the drawer assembly comprises a connecting rod assembly and a drive block 36, the drive block 36 is movably mounted within the mounting interlayer; the connecting rod assembly is configured to connect the drive block 36 and the telescopic plate 21, wherein the telescopic plate 21 is a lateral telescopic plate, and the drive block 36 may drive the telescopic plate 21 to slide along a predetermined trajectory within the mounting interlayer through the connecting rod assembly, so as to enable the telescopic plate 21 to extend out of the mounting interlayer and abut against a side wall surface of the drawer body 10, or, enable the telescopic plate 21 to retract into the mounting interlayer and disengage from the side wall surface of the drawer body 10.

[0118] The drive block 36 is movable vertically within the mounting interlayer. The connecting rod assembly is disposed within the mounting interlayer and is configured to connect the drive block 36 and the telescopic plate 21, as shown in FIG. 13. A user may enable the drive block 36 to move upward to enable the drive block 36 to drive the telescopic plate 21 to retract into the mounting interlayer and disengage from the side wall surface of the drawer body 10 through the connecting rod assembly, then enable the partition assembly 20 to slide within the drawer body 10 to adjust volumes of the dry zone 13 and the wet zone 14. After an adjustment is completed, the drive block 36 may be enabled to move downward to enable the drive block 36 to drive the telescopic plate 21 to extend out of the mounting interlayer and abut against the side wall surface of the drawer body 10, so as to prevent the partition assembly 20 from sliding.

[0119] As shown in FIG. 13, in some embodiments, the connecting rod assembly comprises a first connecting rod 351, a second connecting rod 352, and a third connecting rod 353. The first connecting rod 351 comprises a first end rotatably connected to the drive block 36; the second connecting rod 352 comprises a first end rotatably connected to the first connecting rod 351 and a second end rotatably connected to the telescopic plate 21; the third connecting rod 353 comprises a first end rotatably connected to the partition assembly 20 and a second end rotatably connected to the first end of the second connecting rod 352.

[0120] Specifically, the first connecting rod 351 comprises a first end and a second end oppositely disposed, and the first end is rotatably connected to the drive block 36. The first end of the second connecting rod 352 is rotatably connected to the second end of the first connecting rod 351, and the second end is rotatably connected to the telescopic plate 21. The first end of the third connecting rod 353 is rotatably disposed on the first partition plate 203 or the second partition plate 204, and the second end is rotatably connected to the first end of the second connecting rod 352. A connection point of the second end of the first connecting rod 351 and the first end of the second connecting rod 352 is a first connection point, a connection point of the second end of the third connecting rod 353 and the first end of the second connecting rod 352 is a second connection point, and the first connection point and the second connection point are coincidentally disposed.

[0121] As shown in FIG. 13, in some embodiments, the first end of the first connecting rod 351 is higher than the first end of the second connecting rod 352; the second end of the second connecting rod 352 is higher than the first end of the second connecting rod 352; the first end of the third connecting rod 353 is higher than the first end of the second connecting rod 352, and the first end of the third connecting rod 353 is located on a side of the first end of the second connecting rod 352 proximate to the drive block 36.

[0122] Specifically, the first end of the third connecting rod 353 is located above the first end of the first connecting rod 351. When the drive block 36 moves upward, the drive block 36 may drive the first connecting rod 351 to move. At a same time, since the first end of the third connecting rod 353 is disposed on the partition assembly 20, the second end of the first connecting rod 351 may rotate around the first end toward a direction proximate to the drive block 36, thereby driving the second end of the second connecting rod 352 to rotate around the first end toward the direction proximate to the drive block 36. At this time, the second end of the second connecting rod 352 may drive the telescopic plate 21 to retract into the mounting interlayer. Similarly, when the drive block 36 moves downward, the drive block 36 may drive the second end of the first connecting rod 351 to rotate toward a direction away from the drive block 36, thereby driving the telescopic plate 21 to extend out of the mount-

ing interlayer through the second connecting rod 352.

[0123] As shown in FIG. 13, in some embodiments, the connecting rod assembly further comprises a fourth connecting rod 354 and a fifth connecting rod 355. The fourth connecting rod 354 comprises a first end rotatably connected to the partition assembly 20; the fifth connecting rod 355 comprises a first end rotatably connected to the fourth connecting rod 354 and a second end rotatably connected to the telescopic plate 21; wherein the first end of the fourth connecting rod 354 and the first end of the first connecting rod 351 are located on a same vertical line.

[0124] Specifically, the fourth connecting rod 354 comprises a first end and a second end oppositely disposed, and the first end is rotatably connected to the first partition plate 203 and/or the second partition plate 204. When the drive block 36 drives the telescopic plate 21 to move through the first connecting rod 351 and the second connecting rod 352, the telescopic plate 21 may drive the fourth connecting rod 354 and the fifth connecting rod 355 to move simultaneously. The first end of the fifth connecting rod 355 is rotatably connected to the second end of the fourth connecting rod 354, and the second end of the fifth connecting rod 355 is rotatably connected to the telescopic plate 21. Wherein the second end of the fifth connecting rod 355 and the second end of the second connecting rod 352 are not at a same horizontal height. With such a configuration, a stability of the telescopic plate 21 during a movement may be improved.

[0125] As shown in FIG. 13, in some embodiments, the first end of the fourth connecting rod 354 is located below the first end of the first connecting rod 351; the first end of the fifth connecting rod 355 is located above the first end of the second connecting rod 352; the second end of the fifth connecting rod 355 is located below the second end of the second connecting rod 352.

[0126] Specifically, the second end of the second connecting rod 352 is connected to an upper half of the telescopic plate 21, and the second end of the fifth connecting rod 355 is connected to a lower half of the telescopic plate 21. In this way, the second connecting rod 352 and the fifth connecting rod 355 may respectively drive the upper half and the lower half of the telescopic plate 21 to move, so as to further improve a stability of the telescopic plate 21 during a movement.

[0127] As shown in FIG. 13, in some embodiments, the connecting rod assembly further comprises a sixth connecting rod 356. The sixth connecting rod 356 comprises a first end rotatably connected to the first end of the fifth connecting rod 355 and a second end rotatably connected to the second connecting rod 352.

[0128] Specifically, two ends of the sixth connecting rod 356 are respectively connected to the fifth connecting rod 355 and the second connecting rod 352, and the second end of the sixth connecting rod 356 is connected to a middle portion of the second connecting rod 352. With such a configuration, a stability when the fourth connecting rod 354 drives the fifth connecting rod 355

to rotate toward a direction proximate to or away from the drive block 36 may be ensured.

[0129] As shown in FIG. 13, in some embodiments, the drawer assembly further comprises a lower telescopic plate 27. The lower telescopic plate 27 is slidably disposed within the mounting interlayer of the partition assembly and is correspondingly disposed with a bottom wall surface of the drawer body 10; wherein the lower telescopic plate 27 is fixedly connected to the drive block 36, so as to enable the lower telescopic plate 27 to drive the drive block 36 to move along a vertical direction.

[0130] Specifically, the lower telescopic plate 27 is mounted within the mounting interlayer and is disposed at a position corresponding to the bottom wall surface of the storage area. Wherein the lower telescopic plate 27 is slidable vertically within the mounting interlayer. In this way, a user may press the partition assembly 20 downward to enable the lower telescopic plate 27 to drive the drive block 36 to move upward relative to the partition assembly 20, thereby driving the telescopic plate 21 to retract into the mounting interlayer. Such a configuration makes adjusting a position of the partition assembly 20 more convenient for a user.

[0131] As shown in FIG. 13 to FIG. 15, in some embodiments, the drawer assembly further comprises a second elastic element 28. The second elastic element 28 is disposed within the mounting interlayer, and two ends of the second elastic element are respectively connected to the lower telescopic plate 27 and the partition assembly 20; wherein the second elastic element 28 may push the lower telescopic plate 27 toward a direction proximate to the bottom wall surface of the drawer body 10.

[0132] Specifically, the first partition plate 203 or the second partition plate 204 is provided with a fixing seat 29, and the fixing seat 29 is located above the lower telescopic plate 27. Two ends of the second elastic element 28 are respectively connected to the fixing seat 29 and the lower telescopic plate 27, so as to enable the second elastic element 28 to push the lower telescopic plate 27 downward. In this way, when a user releases the partition assembly 20, the second elastic element 28 may push the lower telescopic plate 27 downward to drive the drive block 36 to move downward, thereby driving the telescopic plate 21 to extend out of the mounting interlayer.

[0133] As shown in FIG. 13, optionally, the drawer assembly comprises multiple second elastic elements 28, and the multiple second elastic elements 28 are disposed along a length direction of the lower telescopic plate 27. The first partition plate 203 or the second partition plate 204 is provided with multiple fixing seats 29 at the multiple second elastic elements 28, so as to enable the multiple second elastic elements 28 to simultaneously push the lower telescopic plate 27 to move downward.

[0134] As shown in FIG. 14, optionally, the drive block 36 is provided with a clearance groove 361 at an end proximate to the lower telescopic plate 27, and at least

one second elastic element 28 is mounted within the clearance groove 361. Two ends of the second elastic element 28 mounted within the clearance groove 361 are respectively connected to an upper wall surface of the clearance groove 361 and the lower telescopic plate 27.

[0135] As shown in FIG. 15, optionally, the partition assembly 20 is provided with a limiting portion 205, and the lower telescopic plate 27 is correspondingly provided with a limiting mating portion 271 at the limiting portion 205. When the lower telescopic plate 27 moves downward to a second predetermined position, the limiting portion 205 may stop the limiting mating portion 271 to prevent the lower telescopic plate 27 from continuing to move downward, thereby preventing the lower telescopic plate 27 from disengaging from the mounting interlayer.

[0136] As shown in FIG. 13, optionally, the drawer assembly is provided with two sets of telescopic plates 21, and the two sets of the telescopic plates 21 are oppositely disposed on two sides of the partition assembly 20. Wherein the drive block 36 is respectively connected to the two sets of the telescopic plates 21 through the connecting rod assembly.

[0137] Specifically, the two sets of the telescopic plates 21 are respectively a first lateral telescopic plate and a second lateral telescopic plate, that is, the drawer assembly comprises the first lateral telescopic plate correspondingly disposed with the first side wall surface and the second lateral telescopic plate correspondingly disposed with the second side wall surface. Wherein the first connecting rod 351, the second connecting rod 352, the third connecting rod 353, the fourth connecting rod 354, the fifth connecting rod 355, and the sixth connecting rod 356 are respectively provided in two sets corresponding to the first lateral telescopic plate and the second lateral telescopic plate. In this way, the drive block 36 may respectively drive the two sets of the telescopic plates to extend out of or retract into the mounting interlayer through the connecting rod assembly. The first lateral telescopic plate may abut against the first side wall surface when extending out of the mounting interlayer, and the second lateral telescopic plate may abut against the second side wall surface when extending out of the mounting interlayer.

[0138] In this embodiment, sealing rings are fitted on edges of the partition assembly 20, the telescopic plate 21, and/or the lower telescopic plate 27. When the telescopic plate 21 and/or the lower telescopic plate 27 extend out of the mounting interlayer, the telescopic plate 21 and/or the lower telescopic plate 27 may push the sealing rings 25 to stretch outward, and the sealing rings 25 around the partition assembly 20 abut against the drawer body 10 or the cover plate 11 to seal the dry zone 13 and the wet zone 14. When the telescopic plate 21 and/or the lower telescopic plate 27 retract into the mounting interlayer, portions of the sealing rings 25 located at the telescopic plate 21 and/or the lower telescopic plate 27 contract and disengage from the drawer body 10 to avoid interfering with a sliding of the partition

assembly 20.

[0139] Optionally, edges of the partition assembly 20, the lateral telescopic plate 21, and/or a lower telescopic plate 22 are provided with sealing grooves, and the sealing rings 25 may be mounted within the sealing grooves to prevent the sealing rings 25 from falling off.

[0140] Embodiment 2 is the same as Embodiment 1 except for the above differences, and will not be repeated here.

Embodiment 3

[0141] In this embodiment, the drawer assembly comprises the aforementioned drawer body 10, the aforementioned partition assembly 20, and further comprises a locking device, wherein the locking device comprises the aforementioned telescopic plate 21.

[0142] Difference between this embodiment and Embodiment 1 are as follows.

[0143] Referring to FIG. 16 to FIG. 20, the locking device is slidably disposed within the mounting interlayer of the partition assembly 20. Wherein the locking device is slidable in a first direction to abut against a side wall surface of the drawer body 10 to lock the partition assembly 20 to the drawer body 10, and is also slidable in a second direction to disengage from the side wall surface of the drawer body 10 to unlock the partition assembly 20 from the drawer body 10. When the partition assembly 20 is unlocked from the drawer body 10, the partition assembly 20 may slide toward the dry zone 13 or the wet zone 14 to adjust sizes of the dry zone 13 and the wet zone 14.

[0144] The locking device is disposed within the mounting interlayer at a position corresponding to the first side wall surface, and the locking device is slidable in a first direction to abut against the first side wall surface, or is slidable in a second direction to disengage from the first side wall surface. Wherein a sliding of the locking device in the first direction refers to the locking device sliding toward a direction proximate to the first side wall surface, and a sliding of the locking device in the second direction refers to the locking device sliding toward a direction away from the first side wall surface. When the locking device slides in the first direction and abuts against the first side wall surface, then the partition assembly 20 is locked to the drawer body 10, that is, the partition assembly 20 cannot slide within the storage area. When the locking device slides in the second direction and disengages from the first side wall surface, then the partition assembly 20 is unlocked from the drawer body 10, that is, the partition assembly 20 may slide within the storage area.

[0145] When the partition assembly 20 is unlocked from the drawer body 10, a user may slide the partition assembly 20 toward the dry zone 13 to increase a volume of the wet zone 14, or a user may slide the partition assembly 20 toward the wet zone 14 to increase a volume of the dry zone 13.

[0146] When the telescopic plate 21 is located at the first position, a friction force between the telescopic plate 21 and the first side wall surface and a friction force between the partition assembly 20 and the second side wall surface lock the partition assembly 20 to the drawer body 10 to prevent the partition assembly 20 from sliding within the storage area. When the telescopic plate 21 is located at the second position, the partition assembly 20 is unlocked from the drawer body 10, and a user may push the partition assembly 20 to slide within the storage area.

[0147] Optionally, the first partition plate 203 or the second partition plate 204 is provided with a slide rail, and the telescopic plate 21 is provided with a second sliding groove. The slide rail is slidably connected to the second sliding groove to enable the telescopic plate 21 to slide along the slide rail in the first direction or the second direction.

[0148] As shown in FIG. 18, in some embodiments, the drawer assembly further comprises a third elastic element 51. The third elastic element 51 comprises a first end connected to the telescopic plate 21 and a second end connected to the partition assembly 20. Wherein the third elastic element 51 may push the telescopic plate 21 to slide in the first direction.

[0149] Specifically, the telescopic plate 21 is provided with a first fixing seat, and the first partition plate 203 or the second partition plate 204 is correspondingly provided with a second fixing seat at the first fixing seat. Wherein the first fixing seat is located between the second fixing seat and the first side wall surface of the storage area. The first end of the third elastic element 51 is connected to the first fixing seat, the second end is connected to the second fixing seat, and the third elastic element 51 may push the telescopic plate 21 in the first direction until the telescopic plate 21 abuts against the first side wall surface of the storage area.

[0150] As shown in FIG. 16 to FIG. 20, in some embodiments, the telescopic plate 21 is provided with a first guiding portion 212. The locking device further comprises an unlock button 60. The unlock button 60 is disposed at a position of the partition assembly 20 corresponding to the first guiding portion 212 of the telescopic plate 21, and the unlock button 60 comprises a first guiding mating portion 61 abutting against the first guiding portion 212. Wherein the unlock button 60 is movable toward the partition assembly 20 and is configured to press the first guiding portion 212 through the first guiding mating portion 61, so as to enable the telescopic plate 21 to slide in the second direction.

[0151] Specifically, the telescopic plate 21 is provided with a guiding protrusion, the unlock button 60 is disposed between the guiding protrusion and the first side wall surface, and the guiding protrusion is provided with an inclined first guiding surface on a side facing the unlock button 60 to constitute the first guiding portion 212. Wherein a height of an edge of the first guiding surface proximate to the unlock button 60 is lower than

a height of an edge away from the unlock button 60. The unlock button 60 is correspondingly provided with an inclined second guiding surface at the first guiding surface to constitute the first guiding mating portion 61, and the first guiding surface and the second guiding surface are fitted together. When the unlock button 60 moves toward a direction proximate to the telescopic plate 21, the second guiding surface presses the first guiding surface to push the telescopic plate 21 to slide in the second direction.

[0152] In the above embodiment, the height of the edge of the first guiding portion 212 refers to a distance from the edge of the first guiding portion 212 to a plate surface of the telescopic plate 21.

[0153] As shown in FIG. 19, in some embodiments, the locking device further comprises a fourth elastic element 52. The fourth elastic element 52 comprises a first end connected to the telescopic plate 21 and a second end connected to the unlock button 60. Wherein the fourth elastic element 52 may push the unlock button 60 to move in a direction away from the telescopic plate 21.

[0154] Specifically, the fourth elastic element 52 is disposed between the telescopic plate 21 and the unlock button 60, and two ends of the fourth elastic element 52 are respectively connected to the telescopic plate 21 and the unlock button 60. The fourth elastic element 52 may push the unlock button 60 toward a direction away from the telescopic plate 21, at which time the fourth elastic element 52 may push the telescopic plate 21 in the first direction to lock the partition assembly 20.

[0155] As shown in FIG. 19, in some embodiments, the partition assembly 20 is provided with a second guiding portion 206. The unlock button 60 is correspondingly provided with a second guiding mating portion 62 at the second guiding portion 206. Wherein the second guiding portion 206 may guide the second guiding mating portion 62 to enable a movement trajectory of the unlock button 60 to be perpendicular to the telescopic plate 21.

[0156] Specifically, the first partition plate 203 or the second partition plate 204 is vertically provided with a guiding protrusion to constitute the second guiding portion 206, and the unlock button 60 is provided with a guiding groove at a position corresponding to the guiding protrusion to constitute the second guiding mating portion 62. The guiding protrusion may be inserted into the guiding groove to guide the unlock button 60, ensuring that a movement direction of the unlock button 60 is perpendicular to the telescopic plate 21.

[0157] As shown in FIG. 19, optionally, the second guiding portion 206 is disposed on the first partition plate 203. The unlock button 60 comprises a button body and a pressing portion protruding from the button body, and the pressing portion is located on a side of the button body facing the first partition plate 203. The first partition plate 203 is correspondingly provided with an opening at the pressing portion, and the pressing portion may protrude from the first partition plate 203 through the opening of the first partition plate 203. A user may press the pressing

portion to enable the unlock button 60 to move toward a direction proximate to the telescopic plate 21.

[0158] Embodiment 3 is the same as Embodiment 1 except for the above differences, and will not be repeated here.

[0159] The above description and drawings sufficiently illustrate the embodiments of the present application to enable a person skilled in the art to practice them. Other embodiments may include structural and other modifications. The embodiments merely represent possible variations. Individual components and functions are optional unless explicitly required, and an order of operations may vary. Portions and features of some embodiments may be included in or substituted for portions and features of other embodiments. The embodiments of the present application are not limited to the structures already described above and shown in the drawings, and various modifications and changes may be made without departing from a scope thereof. A scope of the present application is limited only by the appended claims.

Claims

1. A drawer assembly, **characterized in that** the drawer assembly comprises:

a drawer body (10) provided with a dry zone (13) and a wet zone (14);
 a partition assembly (20) slidably disposed within the drawer body (10), configured to separate the dry zone (13) and the wet zone (14), and the partition assembly (20) is provided with a mounting interlayer therein; and
 a telescopic plate (21) slidably disposed within the mounting interlayer of the partition assembly (20) and correspondingly disposed with a side wall surface of the drawer body (10);
 wherein the telescopic plate (21) is slidable along a predetermined trajectory within the mounting interlayer to extend out of the mounting interlayer and abut against the side wall surface of the drawer body (10), or, retract into the mounting interlayer and disengage from the side wall surface of the drawer body (10).

2. The drawer assembly according to claim 1, wherein the drawer assembly further comprises a drive assembly disposed within the mounting interlayer of the partition assembly (20) and in a transmission connection with the telescopic plate (21), the drive assembly comprising:

a drive rack (31) disposed within the mounting interlayer;
 a telescopic rack (32) horizontally disposed in the mounting interlayer and connected to the telescopic plate (21); and

a gear (33) respectively meshed with the drive rack (31) and the telescopic rack (32);
 wherein the drive rack (31) is movable in a first direction and is configured to drive the telescopic rack (32) and the telescopic plate (21) to extend out of the mounting interlayer through the gear (33), or, the drive rack (31) is movable in a second direction and is configured to drive the telescopic rack (32) and the telescopic plate (21) to retract into the mounting interlayer through the gear (33).

3. The drawer assembly according to claim 2, wherein the drive rack (31) is provided with a pushing portion (34); and a side wall surface of the partition assembly (20) is correspondingly provided with a first clearance opening (201) at the pushing portion (34); wherein the pushing portion (34) is extendable outside the partition assembly (20) through the first clearance opening (201), and the drive rack (31) is pushable to move in the first direction or the second direction through the pushing portion (34).

4. The drawer assembly according to claim 2, wherein the drive assembly further comprises:

a first elastic element (22) disposed within the mounting interlayer, with two ends of the first elastic element (22) respectively connected to the drive rack (31) and the partition assembly (20);
 wherein the first elastic element (22) is configured to push the drive rack (31) to move in the first direction.

5. The drawer assembly according to claim 2, wherein the drive rack (31) is provided with a guiding portion; and, the partition assembly (20) is further correspondingly provided with a guiding mating portion at the guiding portion; wherein the guiding mating portion is configured to guide the guiding portion to enable the drive rack (31) to move along the first direction or the second direction.

6. The drawer assembly according to claim 2, wherein the partition assembly (20) is further correspondingly provided with a guiding bracket (26) at the telescopic rack (32), and the telescopic rack (32) is mounted on the guiding bracket (26); wherein the telescopic rack (32) is configured for horizontal sliding along the guiding bracket (26).

7. The drawer assembly according to claim 1, wherein the drawer assembly further comprises a connecting rod assembly and a drive block (36), the drive block (36) is movably mounted within the mounting interlayer; the connecting rod assembly is configured to connect the drive block (36) and the telescopic plate

(21); the drive block (36) is configured to drive the telescopic plate (21) to slide along the predetermined trajectory within the mounting interlayer through the connecting rod assembly, so as to enable the telescopic plate (21) to extend out of the mounting interlayer and abut against the side wall surface of the drawer body (10), or, enable the telescopic plate (21) to retract into the mounting interlayer and disengage from the side wall surface of the drawer body (10).

8. The drawer assembly according to claim 7, wherein the connecting rod assembly comprises:

a first connecting rod (351), comprising a first end rotatably connected to the drive block (36); a second connecting rod (352), comprising a first end rotatably connected to the first connecting rod (351) and a second end rotatably connected to the telescopic plate (21); and a third connecting rod (353), comprising a first end rotatably connected to the partition assembly (20) and a second end rotatably connected to the first end of the second connecting rod (352).

9. The drawer assembly according to claim 8, wherein the connecting rod assembly further comprises:

a fourth connecting rod (354), comprising a first end rotatably connected to the partition assembly (20); and a fifth connecting rod (355), comprising a first end rotatably connected to the fourth connecting rod (354) and a second end rotatably connected to the telescopic plate (21); wherein the first end of the fourth connecting rod (354) and the first end of the first connecting rod (351) are located on a same vertical line.

10. The drawer assembly according to claim 9, wherein the connecting rod assembly further comprises:

a sixth connecting rod (356), comprising a first end rotatably connected to the first end of the fifth connecting rod (355) and a second end rotatably connected to the second connecting rod (352).

11. The drawer assembly according to claim 1, wherein the drawer assembly further comprises a third elastic element (51), the third elastic element (51) comprises a first end connected to the telescopic plate (21) and a second end connected to the partition assembly (20); wherein the third elastic element (51) is configured to push the telescopic plate (21) to slide in a first direction, so as to enable the telescopic plate (21) to extend out of the mounting interlayer and abut against the side wall surface of the drawer body (10).

12. The drawer assembly according to claim 1, wherein

the telescopic plate (21) is provided with a first guiding portion (212); the drawer assembly further comprises an unlock button (60), the unlock button (60) is disposed at a position of the partition assembly (20) corresponding to the first guiding portion (212) of the telescopic plate (21), and comprises a first guiding mating portion (61) abutting against the first guiding portion (212); wherein the unlock button (60) is movable toward the partition assembly (20) and is configured to press the first guiding portion (212) through the first guiding mating portion (61), so as to enable the telescopic plate (21) to slide in a second direction.

13. The drawer assembly according to claim 12, wherein the drawer assembly further comprises:

a fourth elastic element (52), comprising a first end connected to the telescopic plate (21) and a second end connected to the unlock button (60); wherein the fourth elastic element (52) is configured to push the unlock button (60) to move in a direction away from the telescopic plate (21).

14. A refrigeration equipment, wherein the refrigeration equipment comprises a cabinet body and the drawer assembly according to claim 1; the cabinet body is provided with a storage chamber, and the drawer assembly is disposed within the storage chamber.

15. The refrigeration equipment according to claim 14, wherein a side wall surface of the dry zone (13) of the drawer body (10) is provided with a dehumidifying port (15); the refrigeration equipment further comprises:

a dehumidifying device, in communication with the dry zone (13) through the dehumidifying port (15), and configured to dehumidify the dry zone (13).

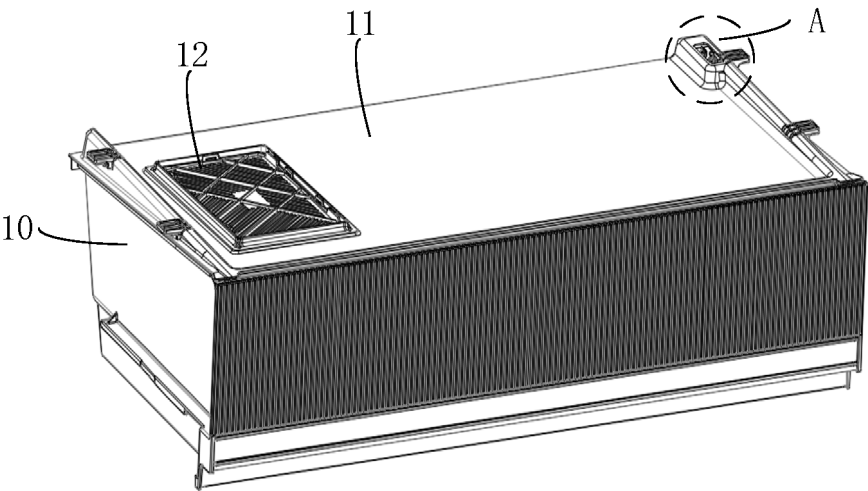


FIG. 1

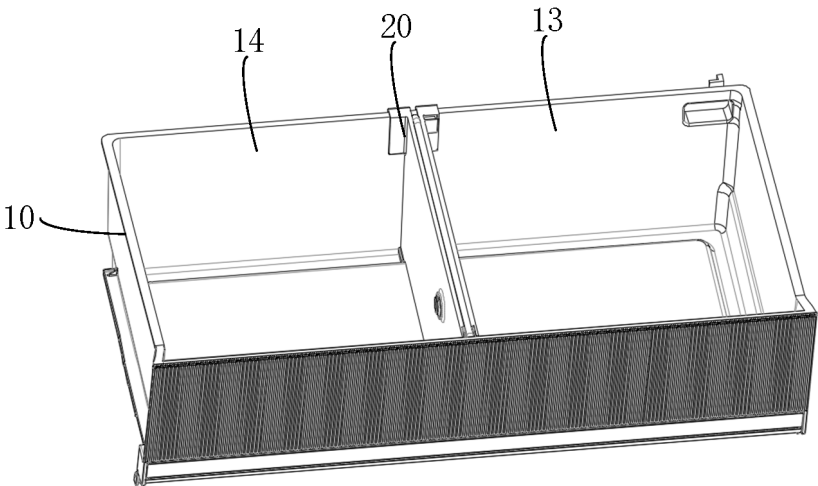


FIG. 2

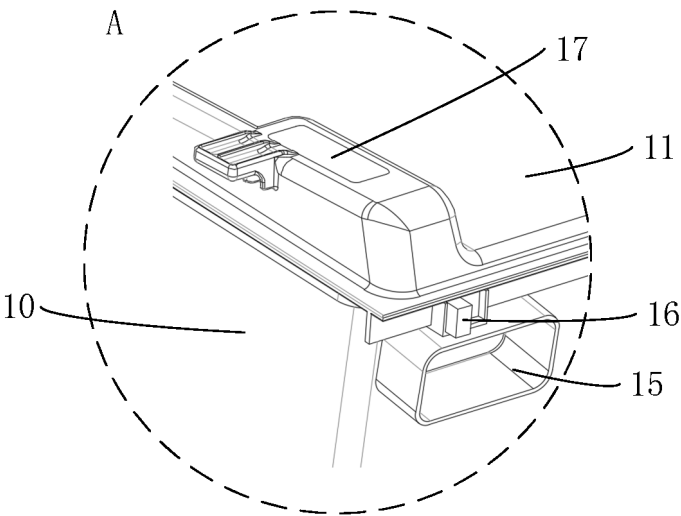


FIG. 3

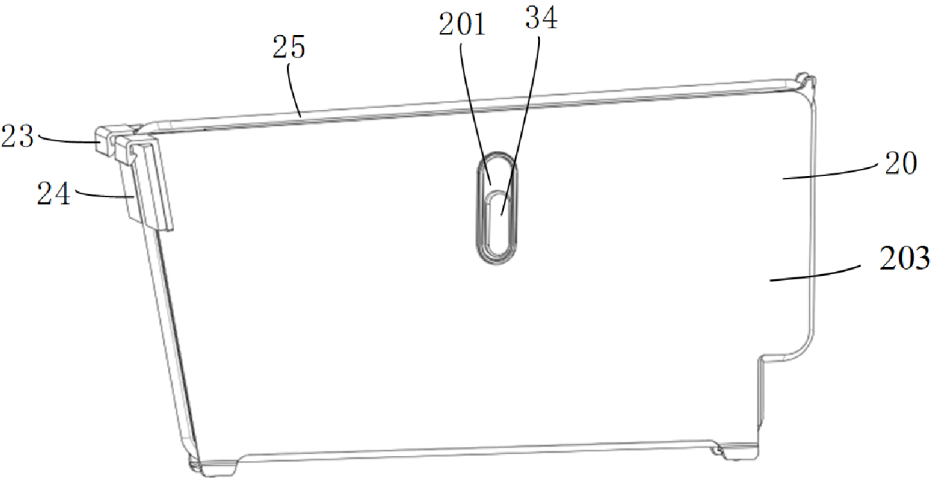


FIG. 4

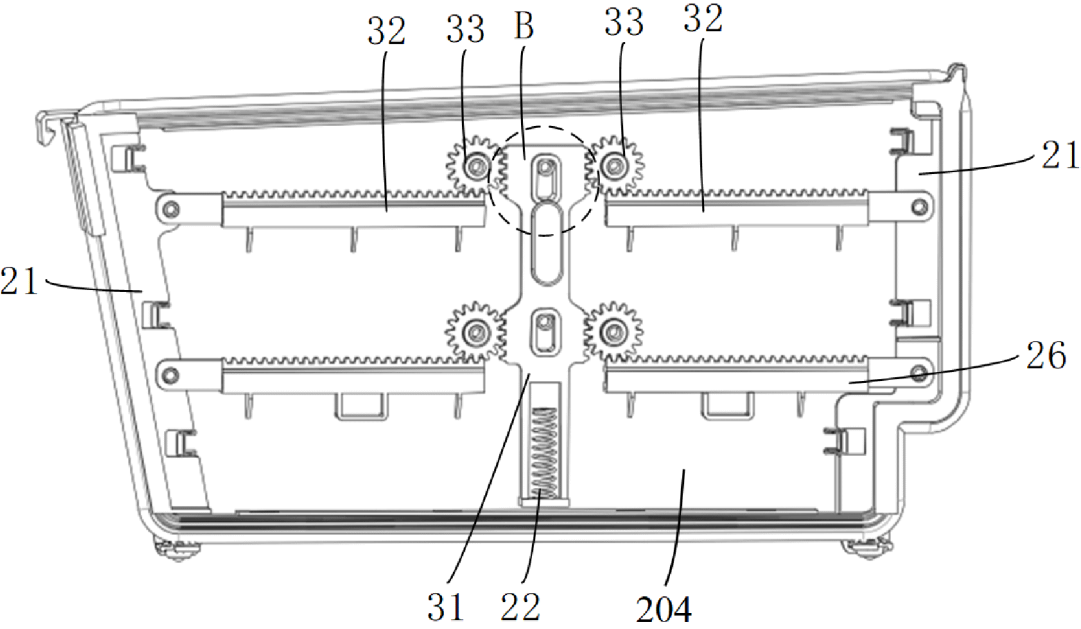


FIG. 5

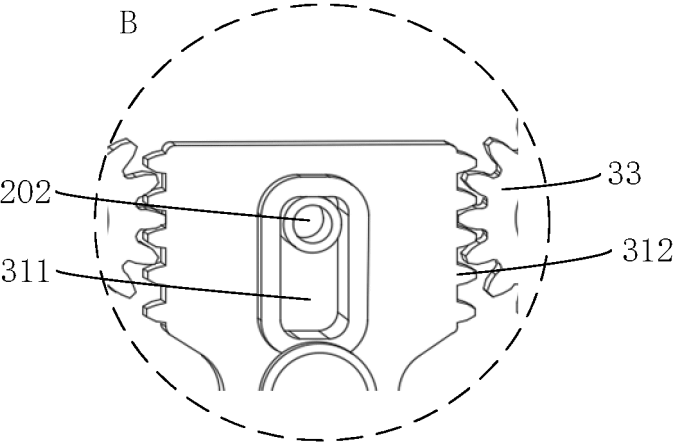


FIG. 6

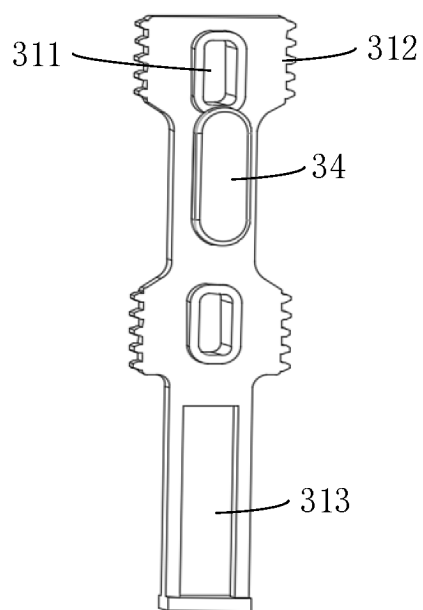


FIG. 7

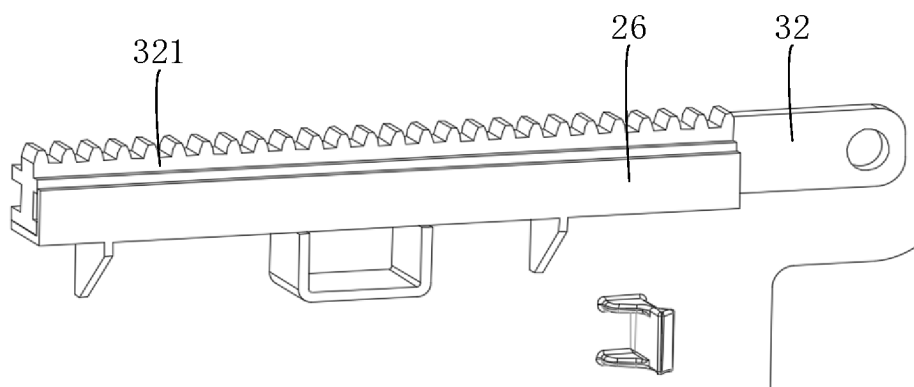


FIG. 8

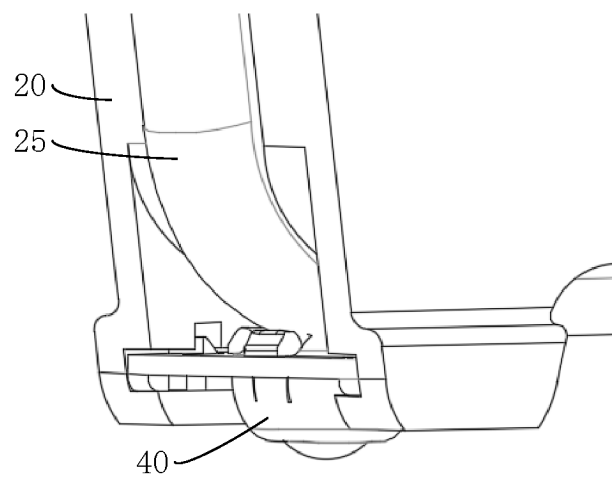


FIG. 9

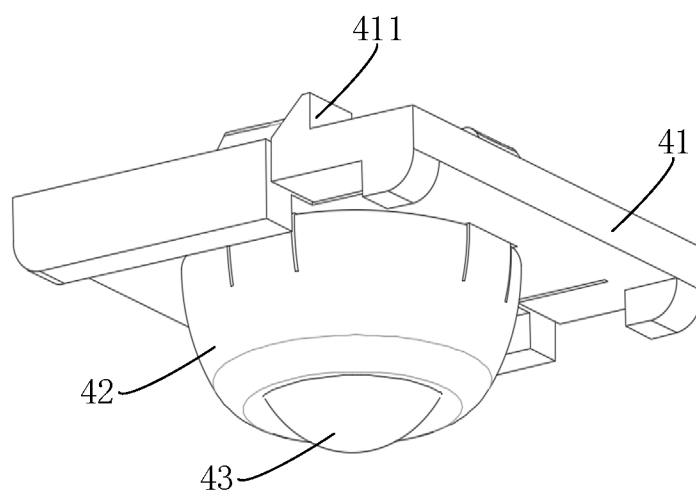


FIG. 10

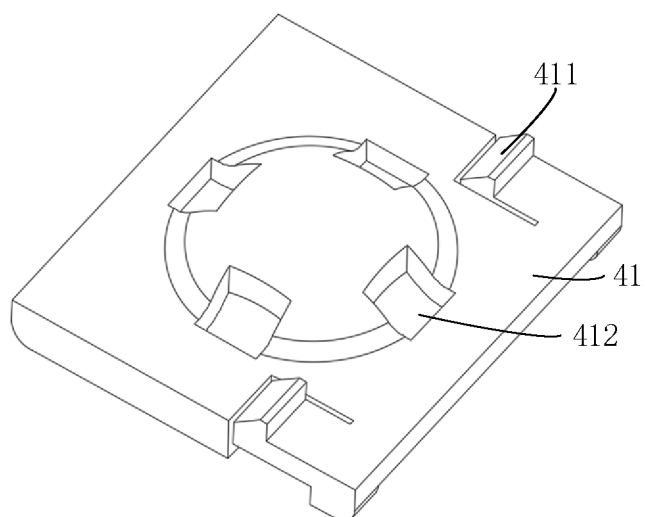


FIG. 11

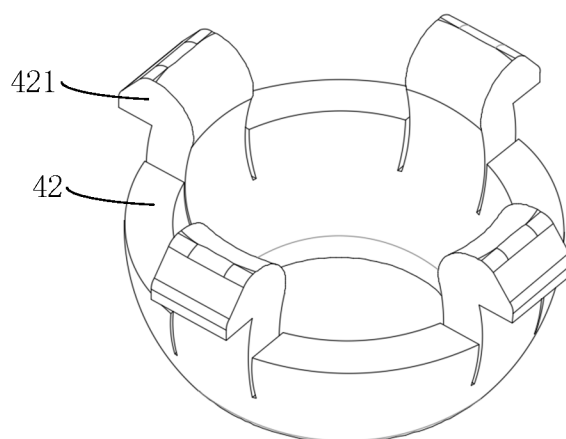


FIG. 12

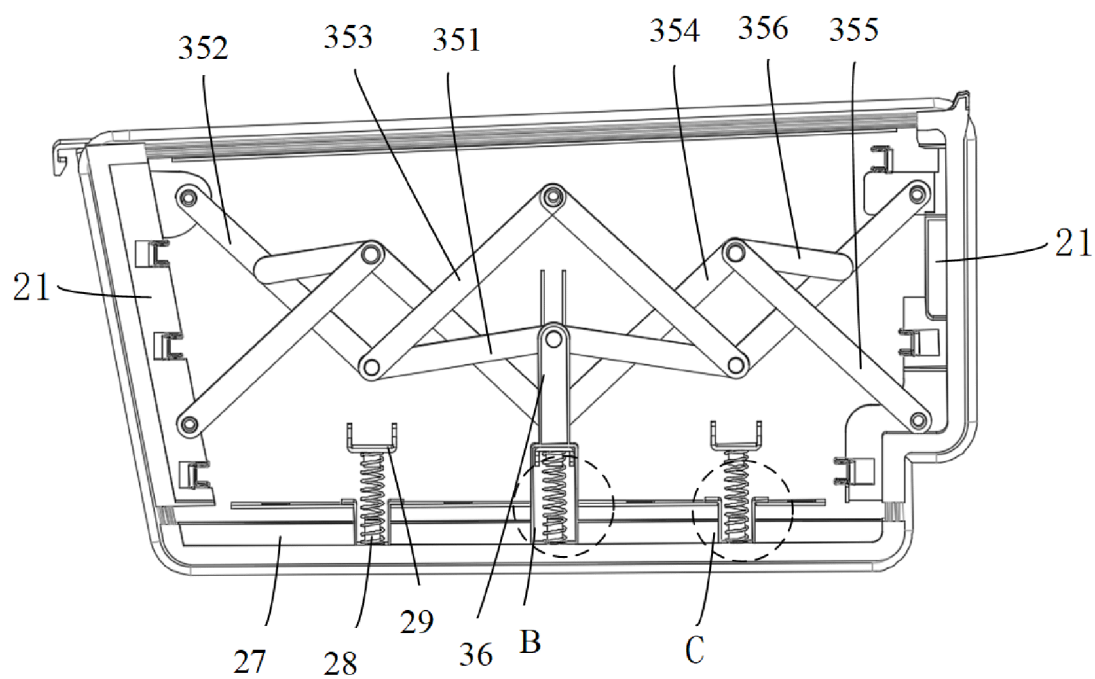


FIG. 13

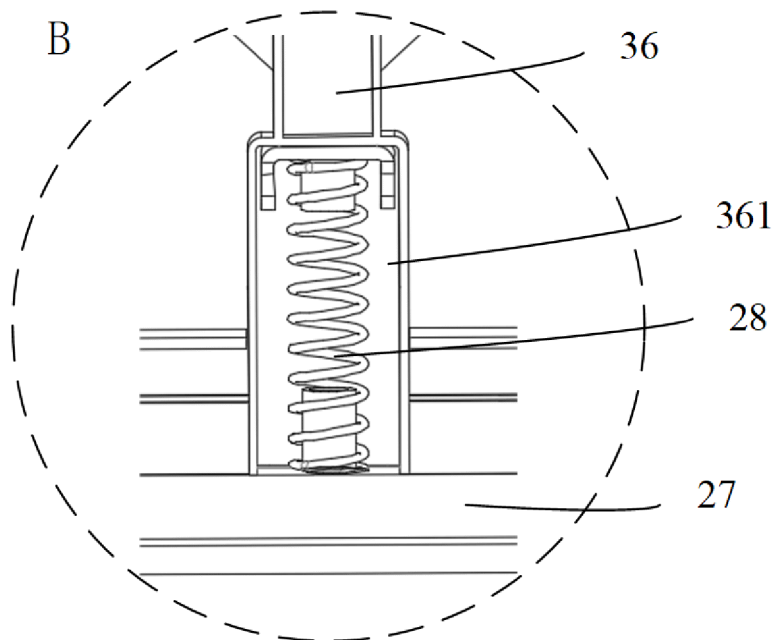


FIG. 14

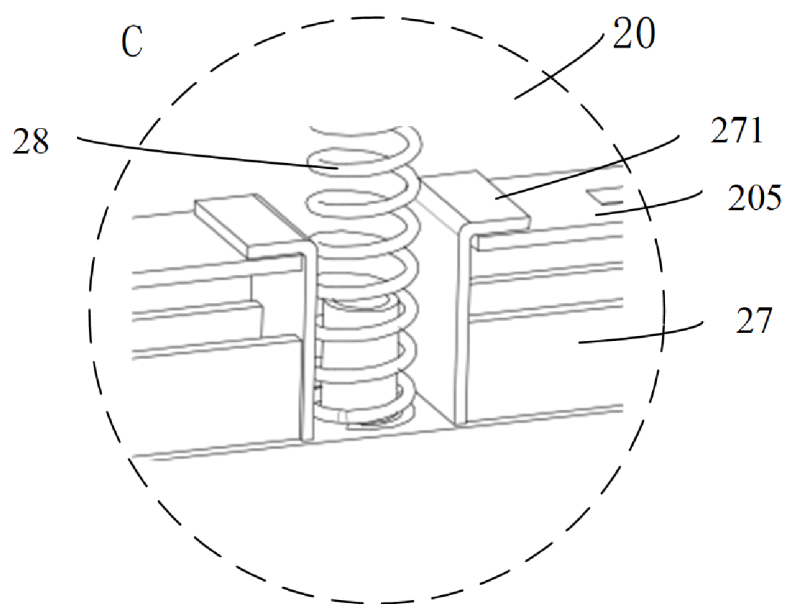


FIG. 15

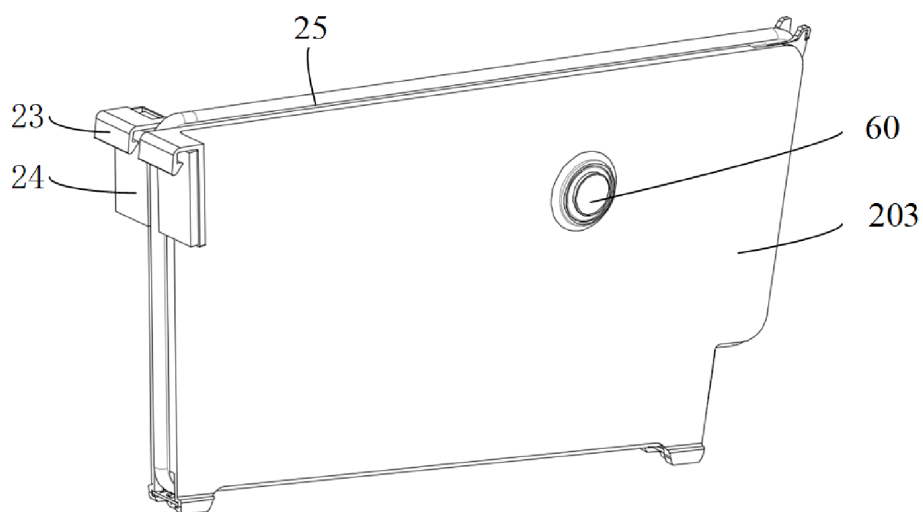


FIG. 16

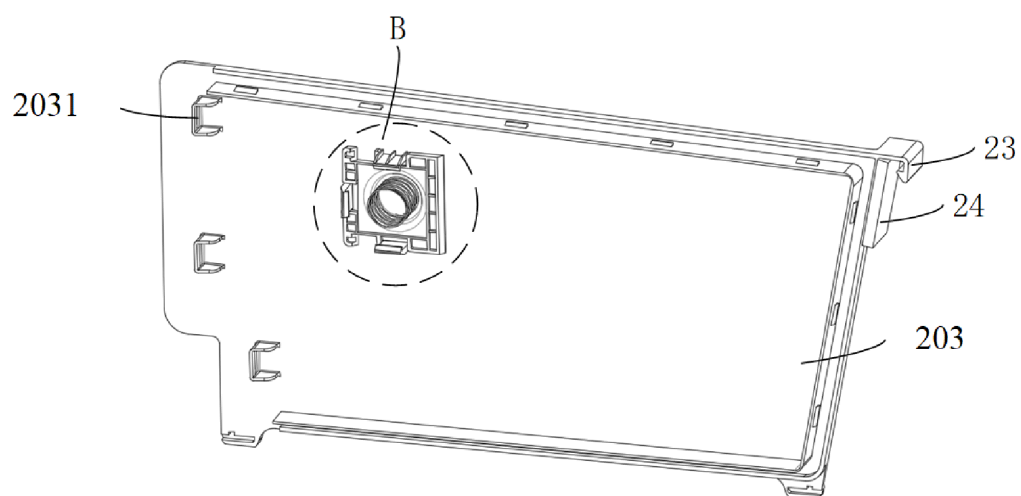


FIG. 17

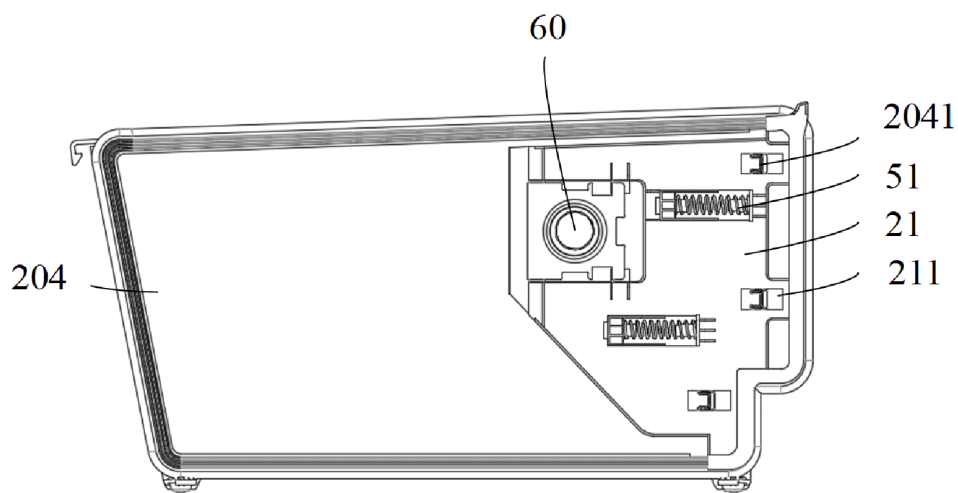


FIG. 18

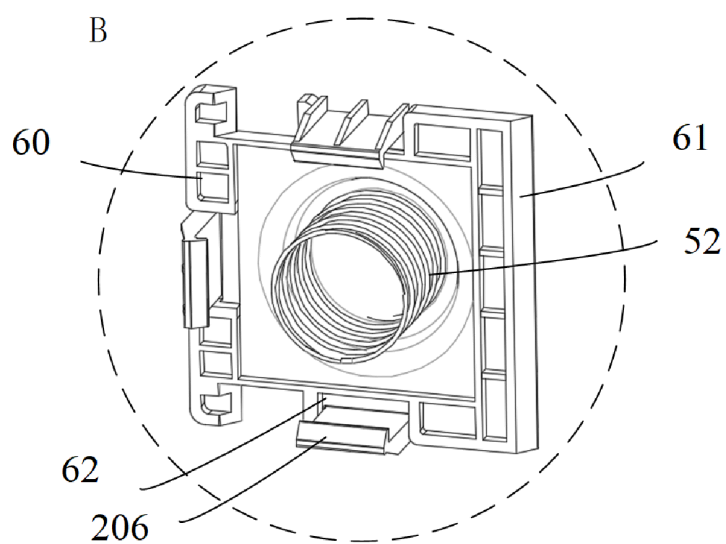


FIG. 19

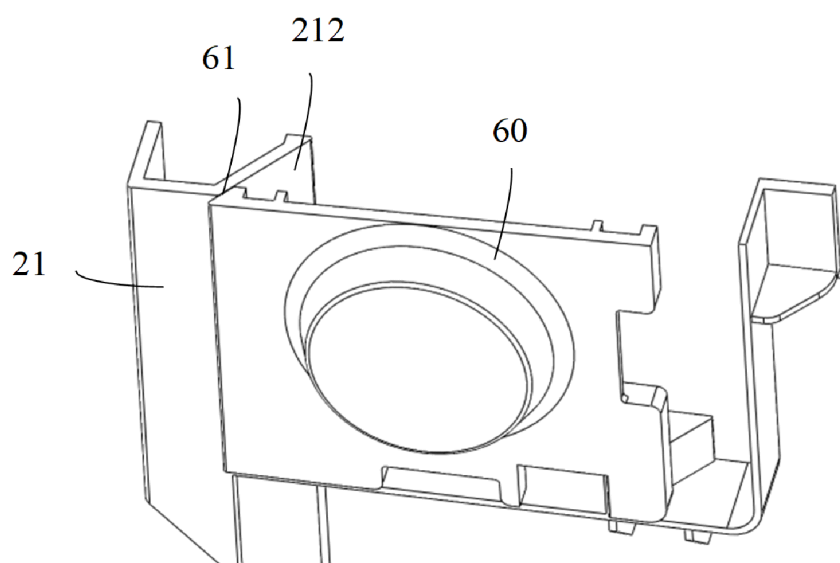


FIG. 20

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2024/115918

A. CLASSIFICATION OF SUBJECT MATTER

F25D11/02(2006.01)i; F25D17/04(2006.01)i; F25D23/12(2006.01)i; F25D25/02(2006.01)i; F25D29/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: F25D11/-,F25D17/-,F25D23/-,F25D25/-,F25D29/-

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNABS, WPABS, DWPI, CNTXT, ENTXT, 中国期刊网全文数据库, CJFD: 海尔, 抽屉 or 储物, 冰箱 or 制冷, 干区, 湿区, 隔板 or 挡板, 夹层 or 中间层, 伸缩板, 预设轨迹, 侧壁, haier, drawer or storage, refrigerat+, dry, wet, clapboard or partition, interlayer or interlining or sandwich, flex+, track or rail, sidewall

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 220959066 U (QINGDAO HAIER REFRIGERATOR CO., LTD. et al.) 14 May 2024 (2024-05-14) entire document	1, 11-15
A	CN 210036019 U (HEFEI HUALING CO., LTD. et al.) 07 February 2020 (2020-02-07) description, paragraphs [0045]-[0090], and figures 1-12	1-15
A	CN 115143719 A (GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI) 04 October 2022 (2022-10-04) entire document	1-15
A	CN 219531369 U (QINGDAO HAIER REFRIGERATOR CO., LTD. et al.) 15 August 2023 (2023-08-15) entire document	1-15
A	JP 2022032329 A (HITACHI GLOBAL LIFE SOLUTIONS, INC.) 25 February 2022 (2022-02-25) entire document	1-15

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"D" document cited by the applicant in the international application	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

14 November 2024

Date of mailing of the international search report

03 December 2024

Name and mailing address of the ISA/CN

China National Intellectual Property Administration (ISA/
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Beijing 100088

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2024/115918

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010319391 A1 (SAMSUNG ELECTRONICS CO., LTD.) 23 December 2010 (2010-12-23) entire document	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/CN2024/115918

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	220959066	U	14 May 2024	None			
CN	210036019	U	07 February 2020	None			
CN	115143719	A	04 October 2022	CN	115143719	B	18 August 2023
CN	219531369	U	15 August 2023	None			
JP	2022032329	A	25 February 2022	WO	2022034698	A1	17 February 2022
				JP	2022034124	A	03 March 2022
				JP	2022034125	A	03 March 2022
				JP	7545831	B2	05 September 2024
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				US	8789903	B2	29 July 2014
				US	8590992	B2	26 November 2013
				US	2014292174	A1	02 October 2014
				US	9103579	B2	11 August 2015

REFERENCES CITED IN THE DESCRIPTION

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- CN 202311120566 [0001]
- CN 202311515661 [0001]
- CN 202311515633 [0001]