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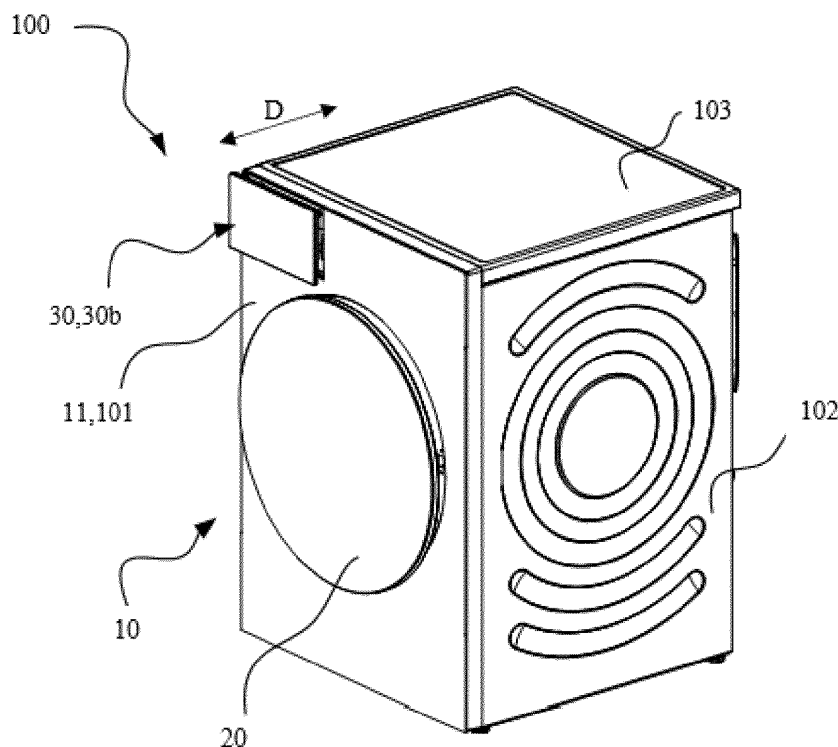
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(54) A LAUNDRY CARE DEVICE AND A PULL-OUT BOX THEREOF

(57) This application discloses a laundry care device (100), including a housing (10) and a pull-out box (30) slidably supported on the housing along a pull-out direction. The pull-out box includes a box body (30a) and a handle assembly (30b) connected to each other. The handle assembly includes a base board (33), a handle (32), and an engaging mechanism (34). The base board

is fixedly connected to the box body. The handle is slidably connected to the base board along the pull-out direction and has a holding position away from the base board and a closed position close to the base board. The engaging mechanism is located between the handle and the base board and is capable of keeping the handle in the holding position and the closed position separately.

**FIG. 2****EP 4 575 071 A1**

Description

[0001] This application relates to a laundry care device, and further relates to a pull-out box of the laundry care device.

[0002] With the improvement in people's living standards and the progress of technologies, more and more household appliances have entered thousands of households to help and enrich people's lives. Consumers' requirements for household appliances are no longer just about functionality, but also about aesthetically pleasing designs. Laundry care devices such as washing machines or drying machines usually have a pull-out box such as a detergent drawer. During use, the pull-out box needs to be pulled out of a shell to add a detergent or the like. Currently, the laundry care devices on the market have an opening portion arranged on an outer surface of the pull-out box to accommodate a human hand to operate. The outer surface has complex lines and the opening exposes an internal structure, which is unaesthetic and not easy to keep clean, affecting overall styling and user experience of the laundry care device.

[0003] Therefore, there is still a need for continuous improvement.

[0004] To overcome one of the foregoing shortcomings and/or other possible shortcomings in the prior art not mentioned herein, an objective of this application is to provide an improved laundry care device and a pull-out box thereof.

[0005] According to a first aspect of this application, a laundry care device is provided, including a housing and a pull-out box slidably supported on the housing along a pull-out direction. The pull-out box includes a box body and a handle assembly connected to each other. The handle assembly includes a base board, a handle, and an engaging mechanism. The base board is fixedly connected to the box body. The handle is slidably connected to the base board along the pull-out direction and has a holding position away from the base board and a closed position close to the base board. The engaging mechanism is located between the handle and the base board and is capable of keeping the handle in the holding position and the closed position separately.

[0006] An optional implementation includes that, the housing has a housing outside, the handle has a holding portion, and the engaging mechanism is capable of converting the handle between a first state and a second state, where in the first state, the handle and the holding portion are substantially received in the housing, and the handle is in the closed position, and in the second state, the handle and the holding portion protrude from the housing outside of the laundry care device adjacent to the handle, and the handle is in the holding position.

[0007] Preferably, in the first state, an outer side of the handle assembly is flush with the housing outside of the laundry care device adjacent to the handle assembly.

[0008] Preferably, the outer side of the handle assembly and the housing outside of the laundry care device

have similar and/or identical and/or consistent characteristics.

[0009] Preferably, the handle assembly further includes a decorative cover, where the decorative cover is arranged at least on the handle, an outer side of the decorative cover forms an entire outer side of the handle assembly, and in the first state, the outer side of the decorative cover is flush with the housing outside of the laundry care device adjacent to the decorative cover.

[0010] Preferably, the outer side of the handle assembly is substantially a plane, and the housing outside of the laundry care device is also substantially a plane.

[0011] An optional implementation further includes that the engaging mechanism includes a driving mechanism, and the driving mechanism is capable of providing a driving force for converting the handle between the closed position and the holding position.

[0012] Preferably, the driving mechanism includes a push-push locking assembly and at least one elastic element.

[0013] Preferably, the push-push locking assembly includes a snap-lock element and a locking element. Further, one of the snap-lock element and the locking element is arranged on the handle, and the other of the snap-lock element and the locking element is arranged on the base board.

[0014] Preferably, the elastic element is arranged between the handle and the base board.

[0015] An optional implementation further includes that the engaging mechanism includes a sliding mechanism, and the handle is slidably supported on the base board along the sliding mechanism.

[0016] Preferably, the sliding mechanism includes a guide rail and a protruding element.

[0017] Preferably, one of the guide rail and the protruding element is constructed on the handle, and the other of the guide rail and the protruding element is constructed on the base board.

[0018] Preferably, the guide rail is a guide hole, and the protruding element is a guide column that passes through the guide hole and slides along an inner peripheral surface of the guide hole.

[0019] Preferably, the guide rail is arranged on the base board, and the protruding element is arranged on the handle. An optional implementation further includes that the engaging mechanism includes a positioning mechanism and a limiting mechanism.

[0020] Preferably, the positioning mechanism includes a first positioning assembly and a second positioning assembly, and the limiting mechanism includes a first limiting assembly and a second limiting assembly; and the handle is positioned and limited in the closed position through the first positioning assembly and the first limiting assembly, and is positioned and limited in the holding position through the second positioning assembly and the second limiting assembly.

[0021] Preferably, the first positioning assembly includes a first positioning rib and a second positioning

rib that match each other and that are respectively arranged on the handle and the base board, and the first positioning rib and the second positioning rib define displacements of the handle relative to the base board in at least two directions on a plane perpendicular to the pull-out direction.

[0022] Preferably, the first limiting assembly includes locking portions of the snap-lock element and the locking element.

[0023] Preferably, the second positioning assembly includes fitting portions of the protruding element and the guide rail in a circumferential direction in the holding position.

[0024] Preferably, the second limiting assembly includes a snap at an end portion of the protruding element and an end surface of the guide rail that fits the snap.

[0025] An optional implementation further includes that the pull-out box is at least one of a detergent feeding box, a condensate water collection box, and a lint collection box.

[0026] The foregoing embodiments may be combined in any manner as allowed by technical conditions.

[0027] According to a second aspect of this application, a pull-out box is provided, used for the laundry care device according to any one of the foregoing embodiments.

[0028] According to some exemplary embodiments of this application, only when a user needs to pull the pull-out box out of the housing of the laundry care device, the handle is kept in the second state and the holding position to open or close the pull-out box; when the pull-out box does not need to be used or operated, the handle is always kept in the first state and the closed position. That is, the handle is substantially received in the housing of the laundry care device, so that an appearance of the pull-out box is more compact, integrated, and aesthetic. A sense of existence of the pull-out box in an overall appearance of the laundry care device is reduced, and it is easier to keep clean and safer. There is consistency between an outer side of the pull-out box and the housing outside of the laundry care device, so that an overall visual effect of the laundry care device is more concise and integrated, thereby obtaining a high-quality and high-grade appearance. The handle is slidably connected along the pull-out direction, so that a force acting on the handle is transferred to the box body evenly, and the pull is smoother, providing better user experience and better ergonomics. In addition, the sliding connection does not need to provide avoidance space for movement of the handle on a structure on the laundry care device adjacent to the handle, so that the handle has a small gap with an adjacent structural member, and the appearance is more integrated and aesthetic. The engaging mechanism is arranged between the handle and the base board, is used as a part of the pull-out box and the handle assembly, has little relevance to a mounting space or the box body of the pull-out box, facilitates maintenance, disassembly, and assembly of the handle assembly and

the pull-out box, and has strong compatibility. Only the handle part is movable, and the pull-out box can be operated with space left for a human hand to operate. A sliding distance is short, a design requirement for the engaging mechanism is low, and a gap and a step on the appearance surface are more easily ensured.

[0029] The following illustrates some specific embodiments of this application with reference to the accompanying drawings.

[0030] The following illustrates some specific embodiments of this application with reference to the accompanying drawings, so that principles, features, and advantages of this application can be better understood. The accompanying drawings include:

FIG. 1 is a schematic diagram of a laundry care device in a first state according to an embodiment of this application;

FIG. 2 is a schematic diagram of a laundry care device in a second state according to an embodiment of this application;

FIG. 3 is a schematic exploded diagram of a pull-out box of a laundry care device according to an embodiment of this application;

FIG. 4 is a schematic diagram of a handle and a partial engaging structure of a handle assembly of the pull-out box in FIG. 3;

FIG. 5 is a schematic diagram of a base board and a partial engaging structure of a handle assembly of the pull-out box in FIG. 3;

FIG. 6 is a schematic diagram of a handle assembly of the pull-out box in FIG. 3 in a first state;

FIG. 7 is a schematic diagram of a cross section along A-A in FIG. 6;

FIG. 8 is a schematic diagram of a handle assembly of the pull-out box in FIG. 3 in a second state;

FIG. 9 is a schematic diagram of a cross section along B-B in FIG. 8; and

FIG. 10 is a schematic enlarged diagram of a region C in FIG. 9.

[0031] To make the technical problem to be resolved by this application, the technical solutions and the beneficial technical effects of this application clearer and more comprehensible, the following further describes this application in detail with reference to the figures and a plurality of exemplary embodiments. It should be understood that the specific embodiments described herein are merely used to explain this application, instead of limiting

the protection scope of this application. In addition, the embodiments may share a same view or a plurality of views for description, but not all features in a same drawing can be interpreted as features necessary to one embodiment. On the contrary, the embodiments may be combined in any suitable manner provided that the embodiments are not technically mutually exclusive. Moreover, for the sake of simplicity, different embodiments of different aspects may be presented in a same specific design, but such presentation does not mean that the embodiments of these aspects should appear together. The disassemble and/or combination of all possible embodiments and/or technical features should also take into account the description of this specification and content that a person skilled in the art can directly and undoubtedly determine based on the description of this specification.

[0032] Before description, it should be pointed out that for the sake of convenience, this specification may use orientation terms or direction terms for description. The orientation terms or direction terms are relative to a routine use state of a drum washing machine. A person skilled in the art may clarify this from the description of this application without causing confusion. In this case, the orientation terms and direction terms should not be construed simply as indicating an orientation or direction in any state.

[0033] FIG. 1 and FIG. 2 show a laundry care device 100. The laundry care device 100 exemplarily shown in FIG. 1 and FIG. 2 may be, for example, a washing machine, a drying machine, or a washing and drying machine. The laundry care device 100 includes a housing 10, and the housing 10 has a housing outside 11. A drum (not shown in the figure) defining a laundry care cavity is arranged in the housing 10, and the housing 10 substantially includes a front wall 101, a side wall 102, and a top plate 103. In this embodiment, the housing outside 11 of the front wall 101 of the laundry care device 100 is substantially considered.

[0034] In addition, the laundry care device 100 includes at least one opening (not shown in the figure). The opening is constructed in the front wall 101 of the housing 10. The opening may be closed by a door unit 20. The door unit 20 is substantially connected to the housing 10 in an anti-torsion manner or fastened on the housing 10 in a rotatable manner. In addition, a pull-out box 30 is schematically shown in an upper region of the front wall 101 of the laundry care device 100, and the pull-out box 30 is slidably supported on the housing 10 along a pull-out direction D. For example, the pull-out box 30 is a detergent adding box. In other embodiments, the pull-out box 30 may alternatively be a condensate water collection box, a lint collection box, or the like. In addition to the pull-out box 30, a control panel (not shown in the figure) may be further arranged on the front wall 101 of the laundry care device 100, for example, arranged in the upper region of the front wall 101 together with the pull-out box 30. An outer side of a front surface of the control

panel forms a part of the housing outside 11 of the front wall 101 of the laundry care device 100. It may be understood that the pull-out box 30 may alternatively be arranged in another region of the front wall 101 of the laundry care device 100 as required. A control portion, a display portion, and the like may be arranged on the control panel. The control portion may be a touch control or a mechanical control such as a knob or a button.

[0035] FIG. 3 shows a pull-out box 30, where the pull-out box 30 has a box body 30a and a handle assembly 30b that are exemplarily shown. The box body 30a is configured to receive a detergent in a liquid state and/or a gel state and/or a powder state. The handle assembly 30b is mounted on the box body 30a.

[0036] The handle assembly 30b includes a decorative cover 31, a handle 32, a base board 33, and an engaging mechanism 34 located between the handle 32 and the base board 33. The base board 33 is fixedly connected to the box body 30a. For example, the base board 33 includes at least one connecting element 331, where the at least one connecting element 331 is configured to connect the handle assembly 30b to the box body 30a, thereby forming the pull-out box 30. The handle 32 is slidably connected to the base board 33 along the pull-out direction D and has a holding position away from the base board 33 and a closed position close to the base board 33. The engaging mechanism 34 is capable of keeping the handle 32 in the holding position and the closed position separately.

[0037] The handle 32 includes a holding portion 321. For example, the handle assembly 30b includes only one handle 32 and one holding portion 321. In other embodiments, the handle assembly 30b may alternatively have a plurality of handles 32 and a plurality of holding portions 321. The holding portion 321 is preferably constructed in a lower region of the handle 32. After the pull-out box 30 is mounted in place on the laundry care device 100, the engaging mechanism 34 can convert the handle 32 between the first state and the second state. As shown in FIG. 1, in the first state, the handle 32 and the holding portion 321 are substantially received in the housing 10, and the handle 32 is in the closed position. As shown in FIG. 2, in the second state, the handle 32 and the holding portion 321 protrude from the housing outside 11 of the laundry care device 100 adjacent to the handle 32, and the handle 32 is in the holding position. In this case, a user can reach the holding portion 321 and operate the handle 32 through the holding portion 321 to open or close the box body 30a of the pull-out box 30.

[0038] The decorative cover 31 is arranged toward the housing outside 11. The decorative cover 31 may be constructed in one piece or formed by a plurality of sub-elements. The decorative cover 31 and the housing outside 11 (especially the front wall 101) of the laundry care device 100 preferably have similar and/or identical and/or consistent characteristics (or compositions), including but not limited to color compositions, material compositions, and the like. The decorative cover 31 is

arranged at least on the handle 32.

[0039] For example, the handle 32 covers an entire surface of the base board 33, and the decorative cover 31 is substantially constructed as a plate and fastened to the handle 32 by bonding or another manner, to cover the handle 32. In the first state, an outer side of the decorative cover 31 forms an entire outer side of the handle assembly 30b, so that there is no division line on the entire outer side of the handle assembly 30b. Preferably, in the first state, the outer side of the decorative cover 31 is flush with the housing outside 11 of the laundry care device 100 adjacent to the decorative cover 31. In other embodiments, the handle 32 may cover only a part of the base board 33, and the decorative cover 31 includes a first decorative cover arranged on the handle 32 and a second decorative cover arranged on the remaining part of the base board 33. In the first state, outer sides of the first decorative cover and the second decorative cover form the entire outer side of the handle assembly 30b, and are both flush with the housing outside 11 of the laundry care device 100 adjacent to the decorative cover 31. Therefore, a substantially coherent front wall 101 or a flat front wall is visually created. In the front wall, substantially only the door unit 20 protrudes from the housing outside 11 of the front wall 101 of the laundry care device 100. Preferably, the outer side of the decorative cover 31 is substantially a plane. When the housing outside 11 of the laundry care device 100 is also substantially a plane, the laundry care device 100 has a fashionable and neat design.

[0040] It may be understood that the decorative cover 31 may not be arranged, and instead the handle 32 or the handle 32 and an outer side of the base board 33 form the outer side of the handle assembly 30b. In this case, the handle 32 and/or the base board 33 and the housing outside 11 (especially the front wall 101) of the laundry care device 100 preferably have similar and/or identical and/or consistent characteristics (or compositions).

[0041] With reference to FIG. 4 and FIG. 5, the engaging mechanism 34 includes a driving mechanism 341. The driving mechanism 341 can provide a driving force for converting the handle between the first state (the closed position) and the second state (the holding position). For example, the driving mechanism 341 is constructed as a push-push locking assembly 3411 and at least one elastic element 3412. The at least one elastic element 3412 may be a spring element or a spring-like element, which may be tensioned. In the current embodiment, the elastic element 3412 is constructed as a compression spring. Other spring-like elements are also feasible. The elastic element 3412 in this embodiment is shown in a substantially relaxed state in FIG. 4. In other embodiments, the driving mechanism 341 may alternatively be constructed as a micro-motor driving mechanism, an electromagnetic driving mechanism, or the like.

[0042] The push-push locking assembly 3411 preferably includes a snap-lock element 3411a and a locking element 3411b, one of which is arranged on the base

board 33, and the other of which is constructed on the handle 32. The locking element 3411b may be constructed as, for example, a locking hook and/or a locking pin. The locking element 3411b is constructed to be receivable by the snap-lock element 3411a, or the locking element 3411b is constructed to be pushable into the snap-lock element 3411a, so that the locking element 3411b is received in the snap-lock element 3411a. If the locking element 3411b is pushed into or received in the snap-lock element 3411a, the handle 32 is kept in the closed position.

[0043] In the first state of the handle 32 in FIG. 1, the elastic element 3412 is tensioned. In the second state of the handle 32 in FIG. 2, the elastic element 3412 is relaxed. After the locking element 3411b is unlocked from the snap-lock element 3411a, the elastic element 3412 causes the handle 32 to be pressed open/out. The elastic element 3412 is arranged between the handle 32 and the base board 33. Optionally, the elastic element 3412 is arranged on the base board 33 and abuts against the handle 32 and/or the decorative cover 31.

[0044] The engaging mechanism 34 further includes a sliding mechanism 342, and the handle 32 is slidably supported on the base board 33 along the sliding mechanism 342. The sliding mechanism 342 includes a guide rail 3421 and a protruding element 3422. One of the guide rail 3421 and the protruding element 3422 is constructed on the handle 32, and the other is constructed on the base board 33. For example, the guide rail 3421 is a guide hole, and the protruding element 3422 is a guide column that passes through the guide hole and slides along an inner peripheral surface of the hole. The guide rail 3421 is arranged on the base board 33, and the protruding element 3422 is arranged on the handle 32. The protruding element 3422 is guided or supported in a guided manner in the guide rail 3421. In this embodiment, four guide rails 3421 and four protruding elements 3422 are constructed, which are preferably constructed in four peripheral regions of the base board 33 and four peripheral regions of the handle 32 respectively. It may be understood that a quantity of guide rails 3421 and a quantity of protruding elements 3422 may alternatively be set as required, and the quantity of protruding elements 3422 matches the quantity of guide rails 3421.

[0045] The engaging mechanism 34 further includes a positioning mechanism 343 and a limiting mechanism 344. The positioning mechanism 343 includes a first positioning assembly 3431 and a second positioning assembly 3432. The limiting mechanism 344 includes a first limiting assembly 3441 and a second limiting assembly 3442. The handle 32 is positioned and limited in the holding position through the first positioning assembly 3431 and the first limiting assembly 3441, and is positioned and limited in the closed position through the second positioning assembly 3432 and the second limiting assembly 3442.

[0046] FIG. 6 and FIG. 7 are a schematic diagram and a cross-sectional view of the handle assembly 30b in the

closed position. In the closed position, a gap and a step corresponding to a case that the handle 32 and the base board 33 are accommodated in the housing 10 are ensured through the first positioning assembly 3431, so that appearance consistency is better. For example, the first positioning assembly 3431 includes a first positioning rib 3431a and a second positioning rib 3431b that match each other and that are respectively arranged on the handle 32 and the base board 33. The first positioning rib 3431a and the second positioning rib 3431b define displacements of the handle 32 relative to the base board 33 in horizontal and vertical directions on a plane perpendicular to the pull-out direction D. In other embodiments, displacements in at least two other directions may alternatively be defined.

[0047] The handle 32 and the base board 33 are limited in the pull-out direction in the closed position through the first limiting assembly 3441. As shown in FIG. 4 and FIG. 5, for example, the first limiting assembly 3441 includes locking portions of the snap-lock element 3411a and the locking element 3411b.

[0048] FIG. 8 to FIG. 10 are schematic diagrams and a cross-sectional view of the handle assembly 30b in the holding position. In the holding position, it is ensured through the second positioning assembly 3432 that the handle 32 and the base board 33 do not shake when being pulled open. For example, the second positioning assembly 3432 includes fitting portions of the protruding element 3422 and the guide rail 3421 in a circumferential direction in the holding position, including a protruding element fitting portion 3432a and a guide rail fitting portion 3432b. Preferably, the protruding element fitting portion 3432a is an outer periphery of at least two radially extending bosses arranged on an outer periphery at an end of the protruding element 3422 away from the handle 32, and the guide rail fitting portion 3432b is an inner periphery of the guide rail 3421. A boss is used as a positioning portion, which facilitates manufacturing, and there is no need to control the entire outer periphery at the end of the protruding element 3422 away from the handle 32.

[0049] In this embodiment, an inner peripheral surface of the guide hole used as the guide rail 3421 is a first cylindrical surface, an outer peripheral surface of the guide column used as the protruding element 3422 is a tapered surface, and a diameter at an end of the tapered surface close to the handle 32 is less than a diameter of an end at the tapered surface away from the handle 32. At least two bosses are arranged on an outer periphery at the end of the tapered surface away from the handle 32, outer peripheral surfaces of the at least two bosses are each a part of a second cylindrical surface, and diameters of the first cylindrical surface and the second cylindrical surface are substantially the same. Therefore, there is a gap between the guide rail 3421 and the protruding element 3422 in the first state, so that there is no much resistance during the movement, and the tapered transition gradually occurs, so that no large shaking occurs

during the movement, and the positioning during opening is implemented.

[0050] The handle 32 and the base board 33 are limited in the pull-out direction in the holding position through the second limiting assembly 3442.

[0051] For example, the second limiting assembly 3442 includes a snap 3442a at an end portion of the protruding element 3422 away from the handle 32 and an end surface 3442b of the guide rail 3421 that fits the snap 3442a in the holding position.

[0052] The following briefly describes how the handle 32 and the decorative cover 31 are converted from the first state to the second state. The handle 32 and the decorative cover 31 are in the first state, in which the handle 32 and the decorative cover 31 are substantially received in the housing 10 of the laundry care device 100, and the handle 32 and the decorative cover 31 are in the closed position. By pressing the decorative cover 31 from the outside, the locking element 3411b is disengaged from the snap-lock element 3411a. The elastic element 3412 tensioned in the first state causes the handle 32 and the decorative cover 31 to be pressed out. Because the handle 32 and the decorative cover 31 are slidably supported on the base board 33 through the sliding mechanism 342, the handle 32 and the decorative cover 31 are slidably moved and smoothly converted from the first state to the second state through the elastic element 3412. In the second state, the handle 32 and the decorative cover 31 extend from the housing 10 of the laundry care device 100 in such a way that the holding portion 321 of the handle 32 can be operated from the outside, that is, the handle 32 and the decorative cover 31 are in the holding position. The pull-out box 30 may be pulled out from the housing 10 of the laundry care device 100 through the holding portion 321. In a contrary process, that is, in a case that the handle 32 and the decorative cover 31 move from the second state to the first state, the handle 32 and the decorative cover 31 are pressed in, so that the elastic element 3412 is tensioned again and the locking element 3411b is received in the snap-lock element 3411a. The handle 32 and the decorative cover 31 are received in the laundry care device 100 in the first state.

[0053] Although specific implementations have been described above, these implementations are not intended to limit the scope of this application, even if only one implementation is described with respect to specific features. The feature example provided in this application is intended to be illustrative rather than limiting, unless otherwise stated. In specific implementation, a plurality of features may be combined with each other according to actual requirements and in a technically feasible manner. Modifications in any form made to this application by a person of ordinary skill in the art without departing from the basic technical idea of this application shall all fall within the protection scope of this application.

Claims

1. A laundry care device (100), comprising a housing (10) and a pull-out box (30) slidably supported on the housing (10) along a pull-out direction (D), wherein the pull-out box (30) comprises a box body (30a) and a handle assembly (30b) connected to each other, **characterized in that:** the handle assembly (30b) comprises a base board (33), a handle (32), and an engaging mechanism (34), the base board (33) is fixedly connected to the box body (30a), the handle (32) is slidably connected to the base board (33) along the pull-out direction (D) and has a holding position away from the base board (33) and a closed position close to the base board (33), and the engaging mechanism (34) is located between the handle (32) and the base board (33) and is capable of keeping the handle (32) in the holding position and the closed position separately.
2. The laundry care device according to claim 1, **characterized in that:** the housing (10) has a housing outside (11), the handle (32) has a holding portion (321), and the engaging mechanism (34) is capable of converting the handle (32) between a first state and a second state, wherein in the first state, the handle (32) and the holding portion (321) are substantially received in the housing (10), and the handle (32) is in the closed position, and in the second state, the handle (32) and the holding portion (321) protrude from the housing outside (11) of the laundry care device (100) adjacent to the handle (32), and the handle (32) is in the holding position.
3. The laundry care device according to claim 2, **characterized in that:** in the first state, an outer side of the handle assembly (30b) is flush with the housing outside (11) of the laundry care device (100) adjacent to the handle assembly (30b); and/or the outer side of the handle assembly (30b) and the housing outside (11) of the laundry care device (100) have similar and/or identical and/or consistent characteristics.
4. The laundry care device according to claim 3, **characterized in that:** the handle assembly (30b) further comprises a decorative cover (31), wherein the decorative cover (31) is arranged at least on the handle (32), an outer side of the decorative cover (31) forms an entire outer side of the handle assembly (30b), and in the first state, the outer side of the decorative cover (31) is flush with the housing outside (11) of the laundry care device (100) adjacent to the decorative cover (31); and/or the outer side of the handle assembly (30b) is substantially a plane, and the housing outside (11) of the laundry care device (100) is also substantially a plane.
5. The laundry care device according to claim 1, **characterized in that:** the engaging mechanism (34) comprises a driving mechanism (341), and the driving mechanism (341) is capable of providing a driving force for converting the handle (32) between the closed position and the holding position; and/or the engaging mechanism (34) comprises a sliding mechanism (342), and the handle (32) is slidably supported on the base board (33) along the sliding mechanism (342); and/or the engaging mechanism (34) comprises a positioning mechanism (343) and a limiting mechanism (344), the positioning mechanism (343) comprises a first positioning assembly (3431) and a second positioning assembly (3432), and the limiting mechanism (344) comprises a first limiting assembly (3441) and a second limiting assembly (3442); and the handle (32) is positioned and limited in the closed position through the first positioning assembly (3431) and the first limiting assembly (3441), and is positioned and limited in the holding position through the second positioning assembly (3432) and the second limiting assembly (3442).
6. The laundry care device according to claim 5, **characterized in that:** the driving mechanism (341) comprises a push-push locking assembly (3411) and at least one elastic element (3412), and the push-push locking assembly (3411) comprises a snap-lock element (3411a) and a locking element (3411b); one of the snap-lock element (3411a) and the locking element (3411b) is arranged on the handle (32), and the other of the snap-lock element (3411a) and the locking element (3411b) is arranged on the base board (33); and the elastic element (3412) is arranged between the handle (32) and the base board (33).
7. The laundry care device according to claim 5 or 6, **characterized in that:** the sliding mechanism (342) comprises a guide rail (3421) and a protruding element (3422), one of the guide rail (3421) and the protruding element (3422) is constructed on the handle (32), and the other of the guide rail (3421) and the protruding element (3422) is constructed on the base board (33).
8. The laundry care device according to claim 7, **characterized in that:** the first positioning assembly (3431) comprises a first positioning rib (3431a) and a second positioning rib (3431b) that match each other and that are respectively arranged on the handle (32) and the base board (33), and the first positioning rib (3431a) and the second positioning rib (3431b) define displacements of the handle (32) relative to the base board (33) in at least two directions on a plane perpendicular to the pull-out direction (D); the first limiting assembly (3441) comprises locking portions of the snap-lock element (3411a) and the locking element (3411b); the second positioning assembly (3432) comprises fitting portions of

the protruding element (3422) and the guide rail (3421) in a circumferential direction in the holding position; and the second limiting assembly (3442) comprises a snap (3442a) at an end portion of the protruding element (3422) and an end surface (3442b) of the guide rail (3421) that fits the snap (3442a) in the holding position. 5

9. The laundry care device according to claim 1, **characterized in that** the pull-out box (30) is at least one of a detergent feeding box, a condensate water collection box, and a lint collection box. 10

10. A pull-out box (30), **characterized by** being used for the laundry care device (100) according to any one of claims 1 to 9. 15

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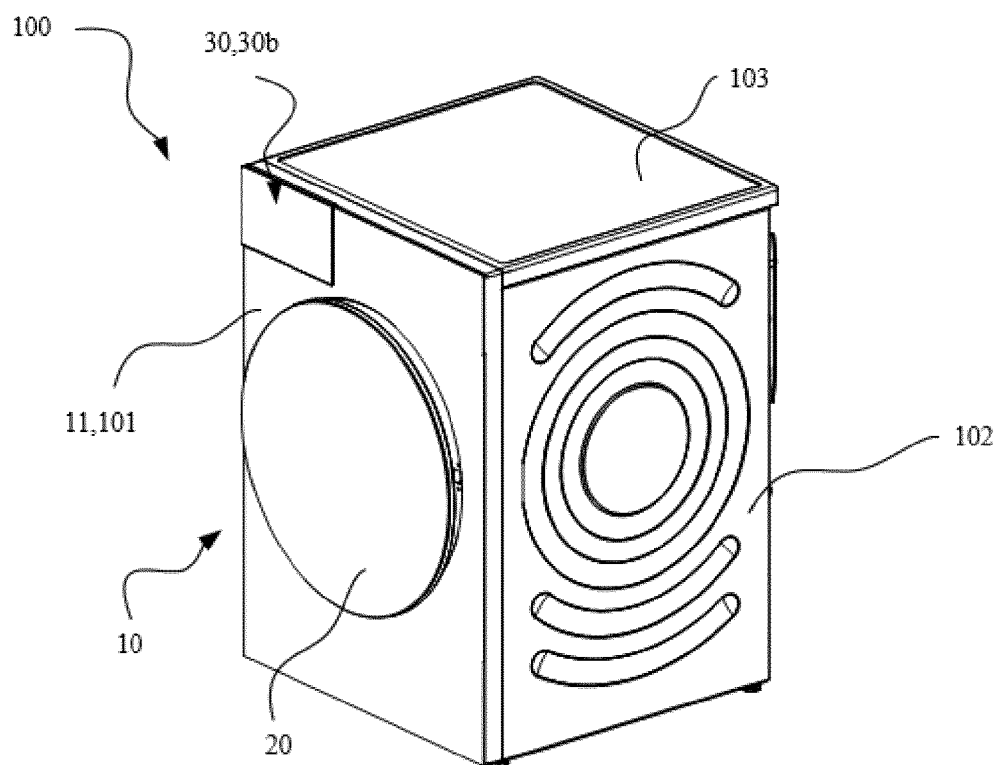


FIG. 1

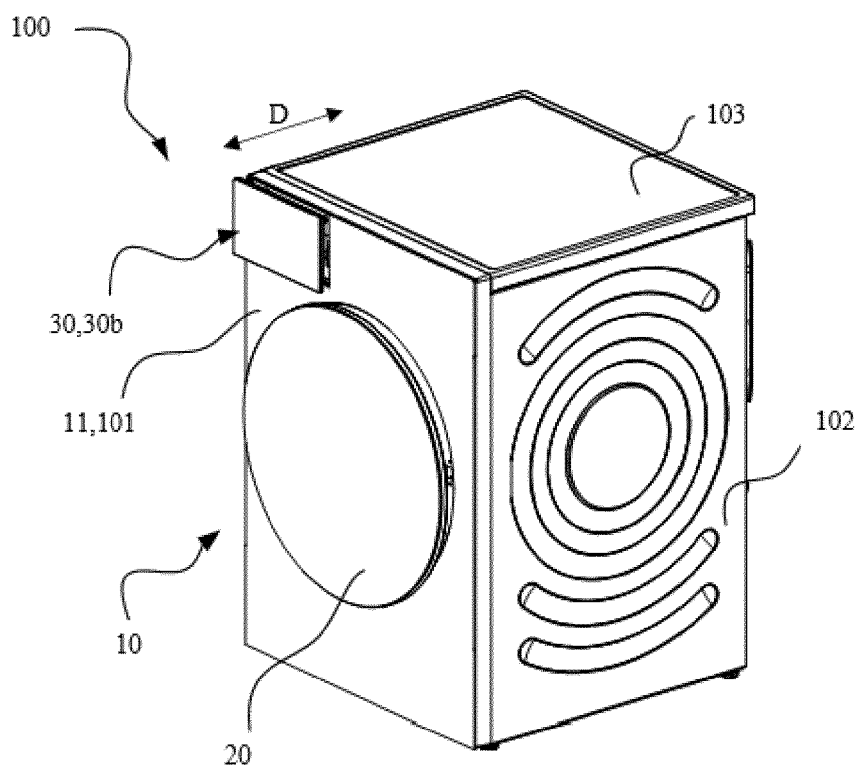


FIG. 2

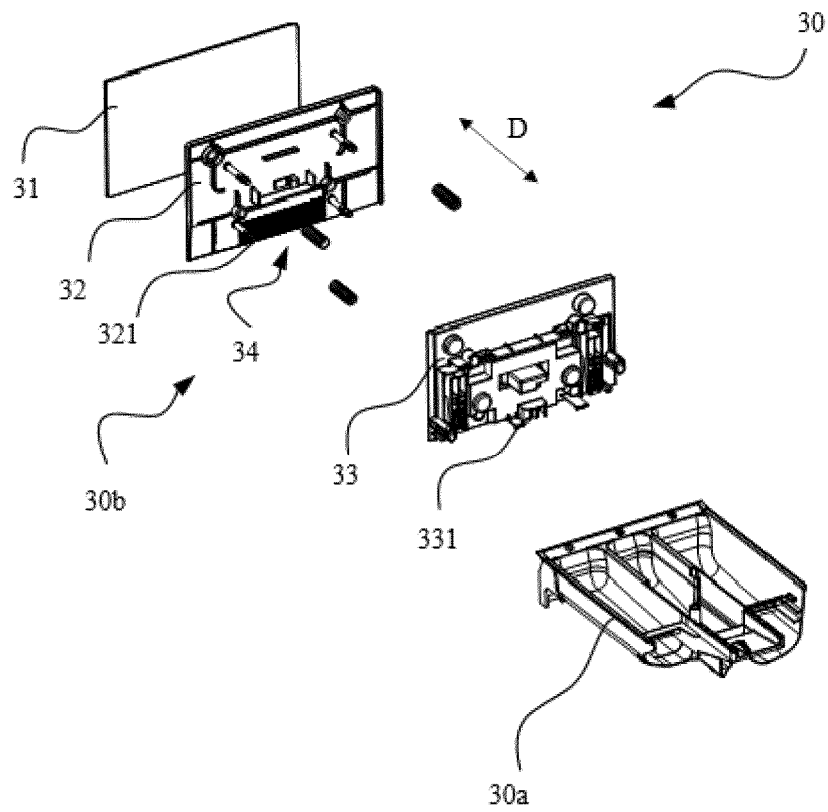


FIG. 3

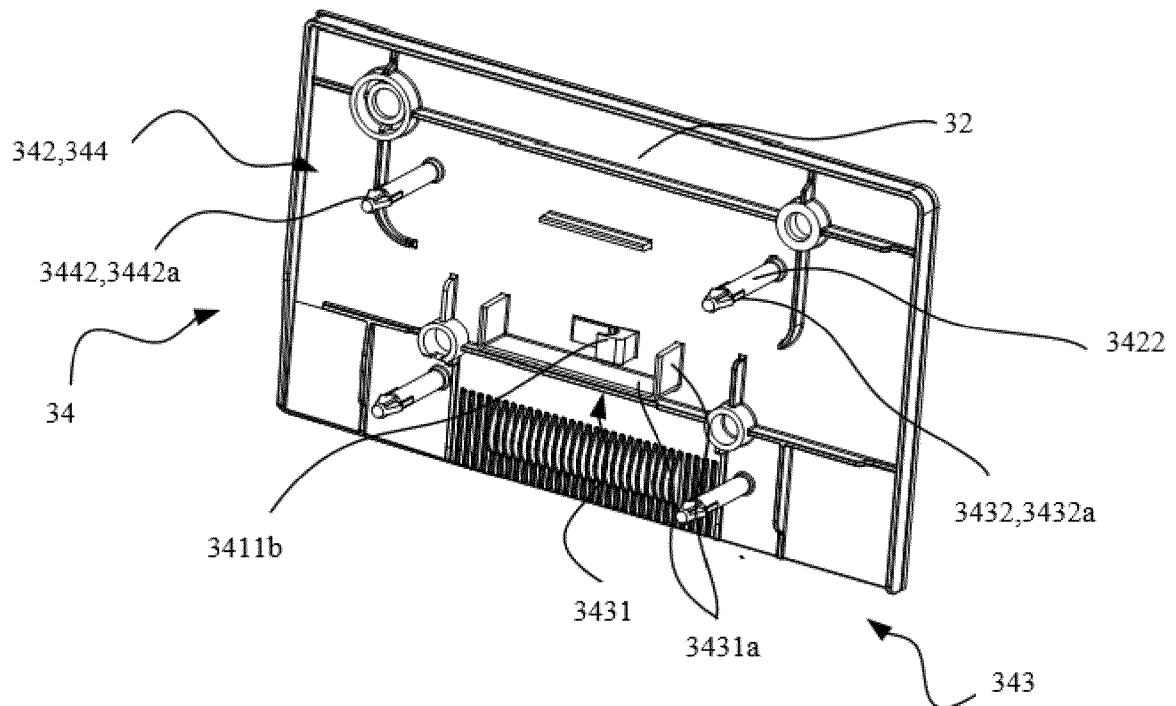


FIG. 4

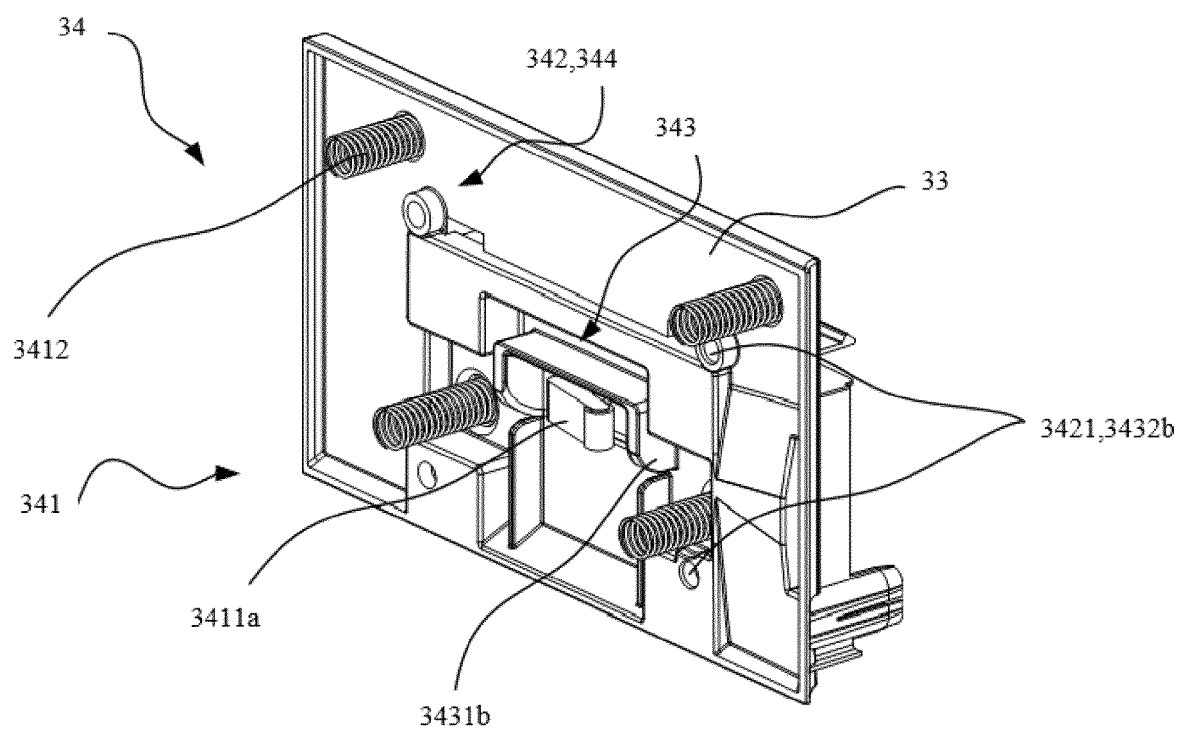


FIG. 5

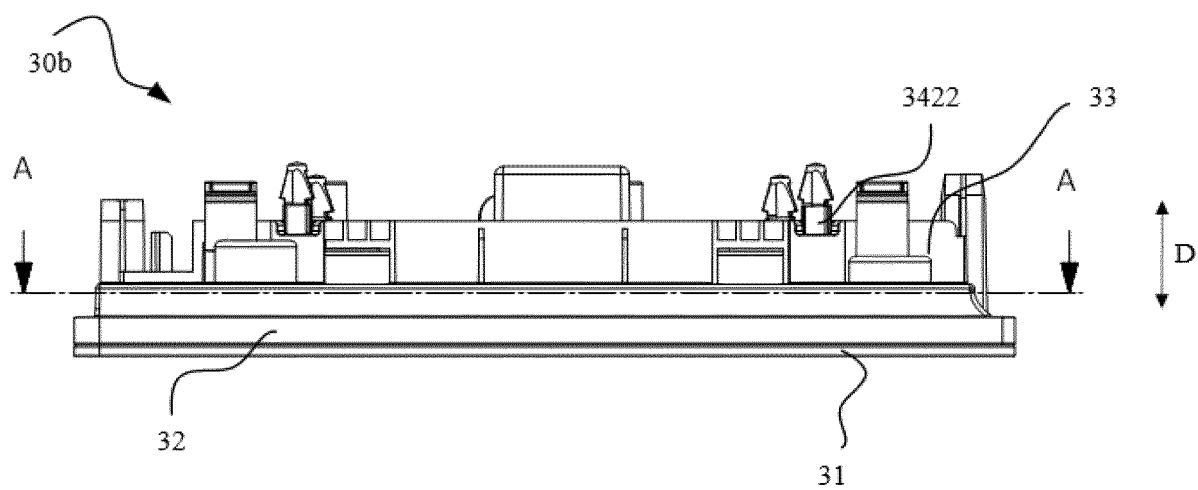


FIG. 6

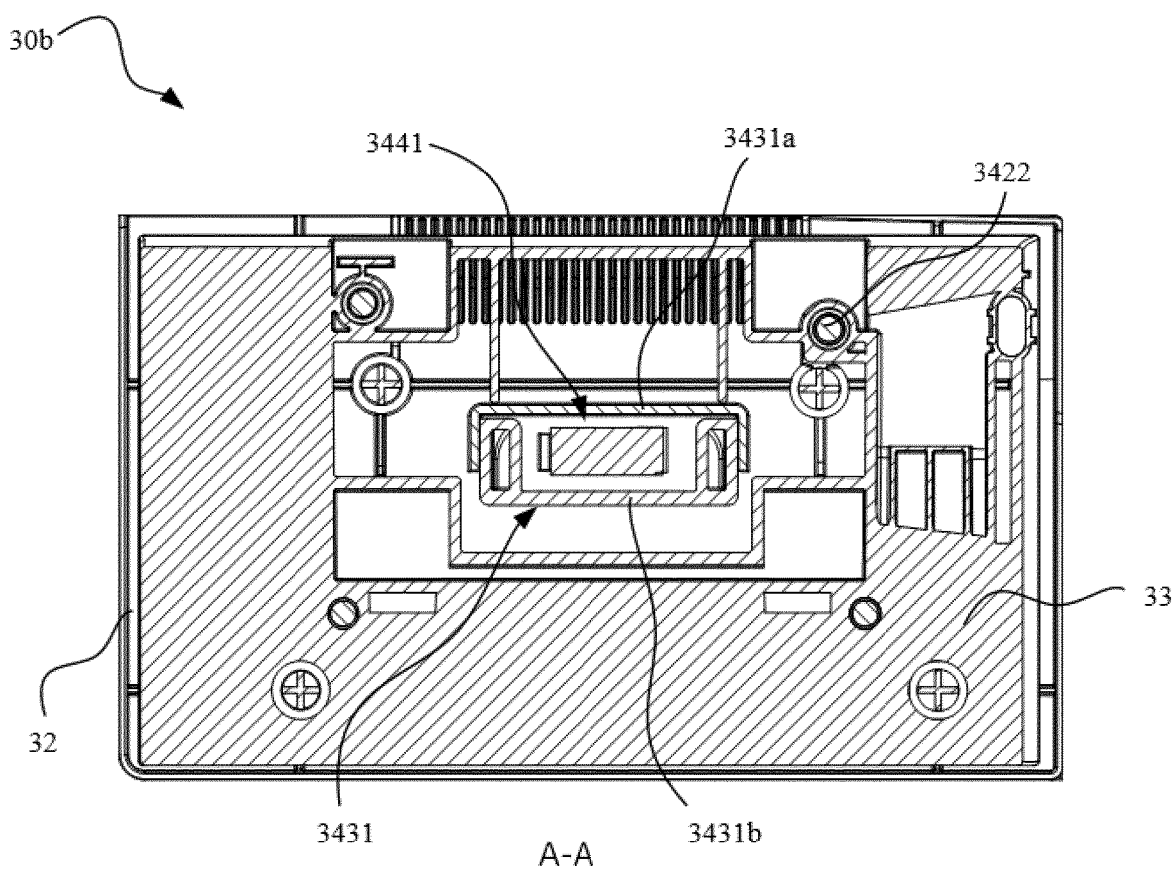


FIG. 7

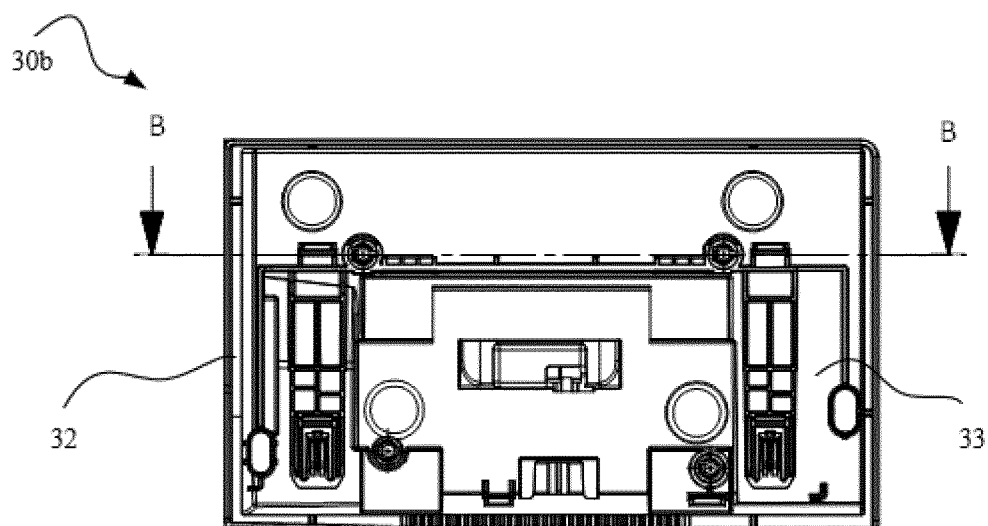


FIG. 8

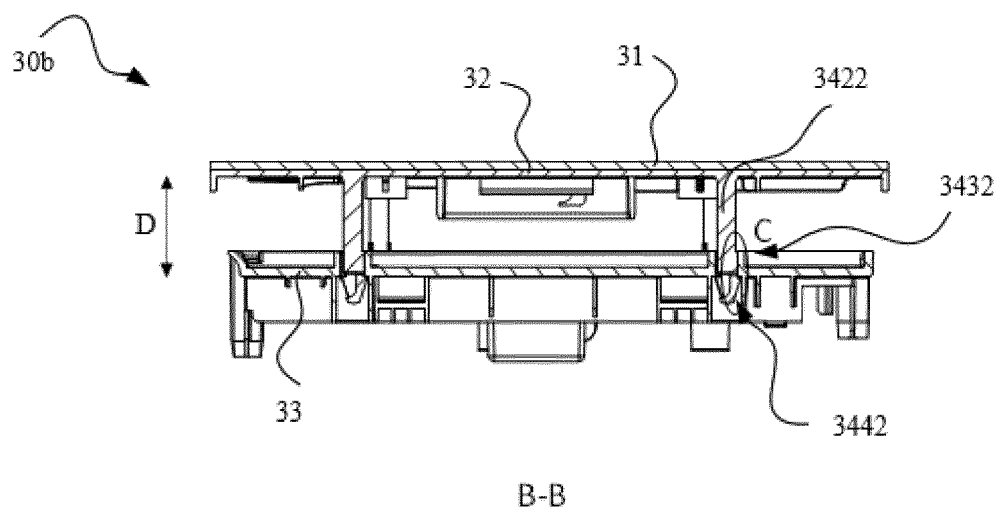


FIG. 9

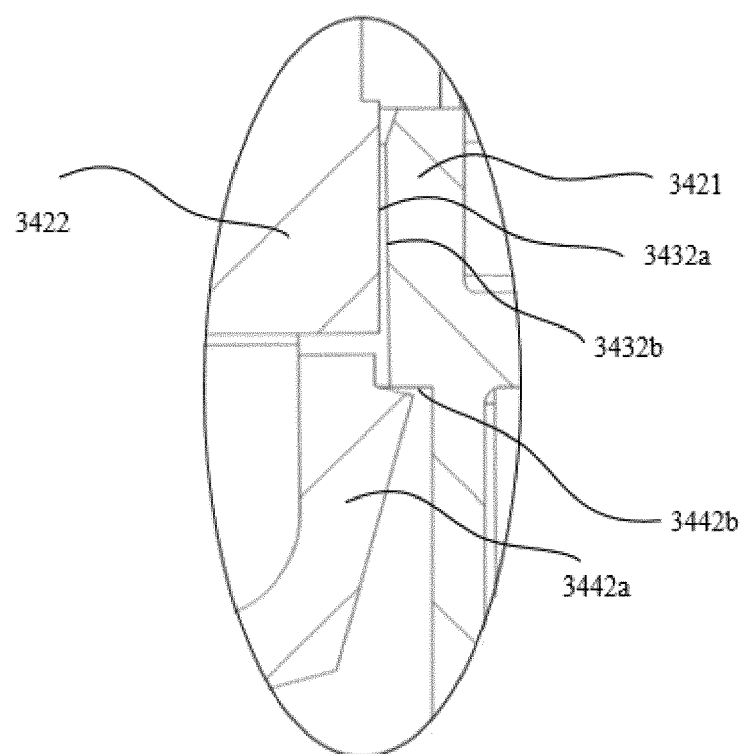


FIG. 10



EUROPEAN SEARCH REPORT

Application Number

EP 24 21 6931

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			D06F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		10 February 2025	Diaz y Diaz-Caneja
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