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(54) **CLOTHING HANDLING DEVICE**

(57) The present invention relates to a clothing handling device (10), including a box (12) and a fragrance assembly (14) arranged in the box (12). The fragrance assembly (14) includes an accommodating element (16) and an operating element (18), and the operating element (18) is configured to release or block a fragrance in the accommodating element (16). Embodiments of this application can realize convenient unblocking/blocking of the fragrance

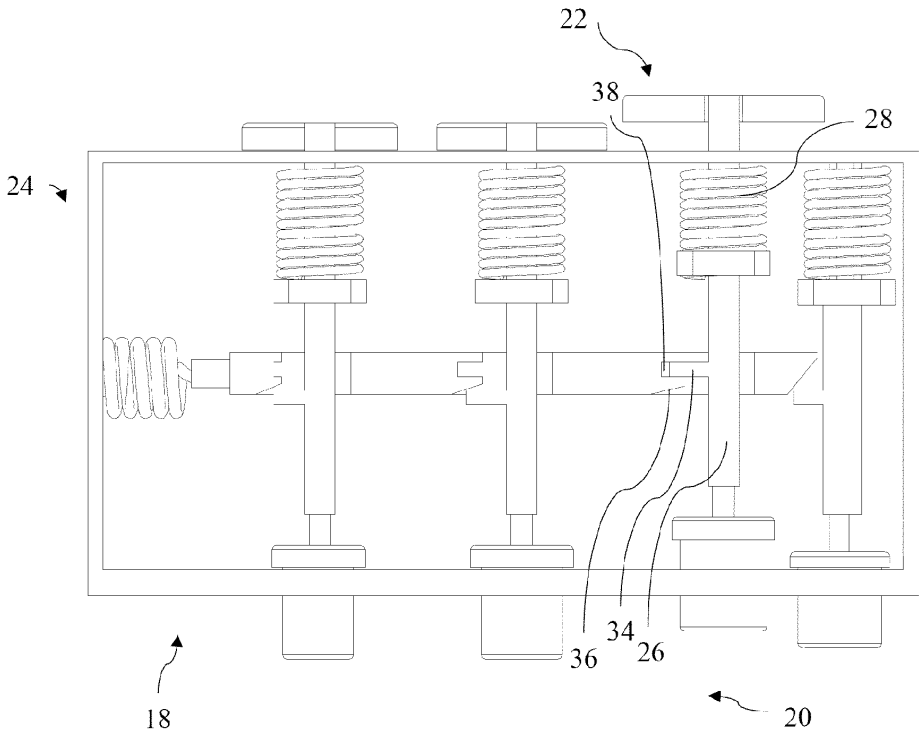

FIG. 3

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Description

[0001] The present invention relates to the field of clothing handling technologies, and in particular, to a clothing handling device.

[0002] Fragrance products of some existing clothing handling devices directly contact clothing, which may cause stains on the clothing, or a concentration cannot be well controlled and unblocking/blocking of a fragrance is inconvenient.

[0003] In addition, although fragrance products of some other clothing handling devices do not directly contact the clothing, shortcomings such as the inconvenient unblocking/blocking of a fragrance still exist.

[0004] Therefore, improvements are required.

[0005] The present invention is intended to resolve at least one of the above problems.

[0006] Embodiments of the present invention relate to a clothing handling device, including a box and a fragrance assembly arranged in the box. The fragrance assembly includes an accommodating element and an operating element, and the operating element is configured to release or block a fragrance in the accommodating element.

[0007] Embodiments of this application can realize convenient unblocking/blocking of the fragrance.

[0008] Optionally, the operating element and the accommodating element are stacked in a first direction and a second direction different from each other.

[0009] In this way, the convenient unblocking/blocking of the fragrance and effective space utilization can be realized.

[0010] Optionally, the operating element includes an operating portion and a cap portion linked with the operating portion, and the cap portion releases or blocks the fragrance with a movement of the operating portion.

[0011] In this way, the convenient unblocking/blocking of the fragrance can be realized.

[0012] Optionally, the operating portion is staggered with respect to the accommodating element in a first direction, and the cap portion and the accommodating element are movable relative to each other in a second direction different from the first direction.

[0013] In this way, the convenient unblocking/blocking of the fragrance and effective space utilization can be realized.

[0014] Optionally, the operating element includes an actuating member configured to cause the operating portion and/or the cap portion to move.

[0015] In this way, the operating portion and/or the cap portion can move to unblock/block the fragrance.

[0016] Optionally, the actuating member includes a linkage shaft connected to the operating portion and an elastic linkage member corresponding to the linkage shaft.

[0017] In this way, the elastic linkage member can drive the operating portion to move through the linkage shaft.

[0018] Optionally, the actuating member includes a stop shaft and an elastic stop member corresponding to the stop shaft, one of the stop shaft and the linkage shaft includes a bump, and the other includes a guiding surface and a groove corresponding to the bump.

[0019] In this way, the operating portion and/or the cap portion can move and stop at a specific position. Optionally, the guiding surface and the groove are arranged adjacent to and spaced apart from each other.

[0020] In this way, the operating portion and/or the cap portion can move and stop at a specific position.

[0021] Optionally, the guiding surface is an inclined surface and is configured in such a way that the bump moves along the guiding surface into the groove when the operating portion drives the linkage shaft to move axially.

[0022] In this way, the operating portion and the linkage shaft can smoothly move and reach a stop position. Optionally, a plurality of operating portions and a plurality of cap portions are respectively arranged.

[0023] In this way, a fragrance type and concentration can be adjusted.

[0024] Optionally, the operating portions and the cap portions have the same size or different sizes. In this way, the fragrance concentration and type can be adjusted.

[0025] Optionally, the operating element includes a closing portion, a closing linkage shaft linked with the closing portion, and an elastic closing member corresponding to the closing linkage shaft. One of the closing linkage shaft and the stop shaft includes a closing bump, and the other includes a closing guiding surface corresponding to the closing bump.

[0026] In this way, the fragrance can be blocked.

[0027] Optionally, the closing guiding surface is an inclined plane and is configured in such a way that the closing bump drives the stop shaft to move axially when the closing portion drives the closing linkage shaft to move axially, so that the bump is disengaged from the groove and forms contact fit with the guiding surface.

[0028] In this way, the fragrance can be smoothly blocked.

[0029] Optionally, the operating element includes a receiving portion, and the operating portion, the cap portion, and the closing portion are at least partially located outside the receiving portion.

[0030] In this way, the operating element can be operated conveniently.

[0031] Optionally, the accommodating element includes an accommodating portion and a leaking portion, and the cap portion and the leaking portion are movable relative to each other to release or block the fragrance in the accommodating portion.

[0032] In this way, the convenient unblocking/blocking of the fragrance can be realized.

[0033] Optionally, the accommodating element includes a replaceable fragrance container including the accommodating portion, the leaking portion, and a lid.

[0034] In this way, the fragrance can be conveniently

replaced and replenished.

[0035] Optionally, the accommodating element includes a cassette fixed to the box. The fragrance container is at least partially received in the cassette, the cassette includes an opening corresponding to the leaking portion, and the cap portion is configured to expose or cover the opening.

[0036] In this way, the fragrance container can be mounted and the fragrance can be released or blocked.

[0037] Optionally, the cassette includes a plurality of openings, and a plurality of operating portions and a plurality of cap portions are respectively arranged. Quantities of the operating portions and the cap portions respectively correspond to a quantity of the openings.

[0038] In this way, the fragrance can be more flexibly unblocked/blocked and adjusted.

[0039] Optionally, an air circulation area of at least one of the openings is different from those of the other openings.

[0040] In this way, the fragrance concentration can be adjusted.

[0041] Optionally, the clothing handling device includes a clothing handling chamber and an airflow passage in fluid communication with the clothing handling chamber. A part of the fragrance assembly is exposed in the airflow passage.

[0042] In this way, fragrance can be applied to clothing in the clothing handling chamber through the fragrance assembly and the airflow passage.

[0043] Optionally, the clothing handling device includes a clothing handling chamber. The leaking portion contacts circulating air passing through the clothing handling chamber after the cap portion leaves the leaking portion.

[0044] In this way, the fragrance can be released through the leaking portion and the circulating air.

[0045] Optionally, a plurality of leaking portions are arranged on the accommodating element, and a cross-sectional area of at least one of the leaking portions exposed to the circulating air is different from those of the other leaking portions.

[0046] In this way, a concentration of the fragrance released through the leaking portion can be adjusted.

[0047] Optionally, a plurality of leaking portions are arranged on the accommodating element, and a plurality of operating portions and a plurality of cap portions are respectively arranged. Quantities of the operating portions and the cap portions respectively correspond to a quantity of the leaking portions.

[0048] In this way, the fragrance released through the leaking portion can be more flexibly adjusted. Optionally, each of the leaking portions includes a plug made of a porous medium.

[0049] In this way, the fragrance can be released through the leaking portion.

[0050] The technical solutions of the above embodiments may be combined arbitrarily if allowed. The present invention is further described below in combination with the drawings. The same and similar labels may be used in the drawings to indicate same and similar components, shapes, structures, characteristics, and the like in different embodiments, and may description of the same and similar components, shapes, structures, characteristics, effects, and the like in different embodiments and existing in prior art.

FIG. 1 is a schematic front view of a clothing handling device according to an aspect of embodiments of the present invention.

FIG. 2 is a partial schematic cross-sectional view of a fragrance assembly of the clothing handling device in FIG. 1.

FIG. 3 is a schematic top view of an operating element of the fragrance assembly in FIG. 2.

FIG. 4 is another schematic top view similar to FIG. 3.

FIG. 5 is another partial schematic cross-sectional view similar to FIG. 2.

FIG. 6 is a partial schematic cross-sectional view of a cassette of the fragrance assembly in FIG. 5.

FIG. 7 is a partial schematic cross-sectional view of an accommodating element of the fragrance assembly in FIG. 5.

FIG. 8 is a schematic perspective view of the cassette in FIG. 6.

[0051] FIG. 1 is a schematic front view of a clothing handling device according to an aspect of embodiments of the present invention. A shown in FIG. 1, the aspect of the embodiments of the present invention relates to a clothing handling device 10, including a box 12 and a fragrance assembly 14 arranged in the box 12.

[0052] FIG. 2 is a partial schematic cross-sectional view of a fragrance assembly of the clothing handling device in FIG. 1. Referring to FIG. 2, the fragrance assembly 14 includes an accommodating element 16 and an operating element 18. The operating element 18 is configured to release or block a fragrance in the accommodating element 16.

[0053] Embodiments of this application can realize convenient unblocking/blocking of the fragrance.

[0054] For example, the fragrance assembly 14 is arranged in the box 12 to apply the fragrance to the clothing in the box 12. The fragrance is accommodated in the accommodating element 16 to reduce or avoid a possibility of direct contact between the fragrance and the clothing. The fragrance in the accommodating element 16 may be released or blocked through the operating element 18, which is less likely to be subjected to spatial and structural constraint compared with directly releasing or blocking the fragrance through the accommodating element 16. Therefore, the operation is more convenient.

[0055] Optionally, the operating element 18 and the accommodating element 16 are stacked in a first direction and a second direction different from each other.

[0056] In this way, the convenient unblocking/blocking of the fragrance and effective space utilization can be

realized.

[0057] The operating element 18 and the accommodating element 16 may include parts stacked in the first direction X and parts stacked in the second direction Y respectively, so that the fragrance assembly 14 is less likely to be oversized in a single direction, and the fragrance may be unblocked/blocked in a direction that facilitates operation, which is less likely to be subjected to spatial and structural constraints.

[0058] The terms "first" and "second" herein are not intended to represent a priority, a significance, and the like, but to help distinguish between directions, shapes, structures, elements, and the like modified by them.

[0059] Optionally, the operating element 18 includes an operating portion 20 and a cap portion 22 linked with the operating portion 20, and the cap portion 22 may release or block the fragrance with a movement of the operating portion 20. In this way, the convenient unblocking/blocking of the fragrance can be realized.

[0060] The operating portion 20 and the cap portion 22 may be respectively arranged at a position that facilitates operation and a position that does not facilitate operation. For example, the operating portion 20 may be arranged outside the fragrance assembly 14 and the box 12 to facilitate operation, and the cap portion 22 may be arranged inside the fragrance assembly 14 and the box 12 to facilitate the release of the fragrance inside.

[0061] For positions and relationships represented by the terms "inside", "outside", "front", "rear", "up", "down", "left", "right", "top", and "bottom" herein, refer to the drawings, or the positions and relationships may correspond to positions and relationships during actual use of the clothing handling device 10.

[0062] Optionally, the operating portion 20 is staggered with respect to the accommodating element 16 in a first direction, and the cap portion 22 and the accommodating element 16 are movable relative to each other in a second direction Y different from the first direction X.

[0063] In this way, the convenient unblocking/blocking of the fragrance and effective space utilization can be realized.

[0064] For example, the operating portion 20 may be arranged above or below the accommodating element 16, and the cap portion 22 and the accommodating element 16 are movable relative to each other in a front-rear direction. The cap portion 22 may be arranged at an upper rear position or a lower rear position of the operating portion 20.

[0065] FIG. 3 is a schematic top view of the operating element in FIG. 2. FIG. 4 is another schematic top view similar to FIG. 3. As shown in FIG. 3 and FIG. 4, optionally, the operating element 18 includes an actuating member 24 configured to cause the operating portion 20 and/or the cap portion 22 to move.

[0066] In this way, the operating portion 20 and/or the cap portion 22 can move to unblock/block the fragrance.

[0067] Referring to FIG. 3, the actuating member 24 can drive the cap portion 22 to move to release the fragrance when the operating portion 20 is driven to move by a force. As shown in FIG. 2 and FIG. 4, the actuating member 24 can further drive the operating portion 20 and the cap portion 22 to return to an initial position to block the fragrance.

[0068] Optionally, the actuating member 24 includes a linkage shaft 26 connected to the operating portion 20 and an elastic linkage member 28 corresponding to the linkage shaft 26.

[0069] In this way, the elastic linkage member 28 can drive the operating portion 20 to move through the linkage shaft 26.

[0070] When the operating portion 20 is driven to move by a force, the cap portion 22 can be driven to move through the linkage shaft 26 to release the fragrance. At the same time, the elastic linkage member 28 accumulates elastic potential energy with the movement of the linkage shaft 26. Thereafter, the elastic linkage member 28 can drive, through the elastic potential energy, the linkage shaft 26, the operating portion 20, and the cap portion 22 to return to the initial positions to block the fragrance.

[0071] Optionally, the actuating member 24 includes a stop shaft 30 and an elastic stop member 32 corresponding to the stop shaft 30, one of the stop shaft 30 and the linkage shaft 26 includes a bump 34, and the other includes a guiding surface 36 and a groove 38 corresponding to the bump 34.

[0072] In this way, the operating portion 20 and/or the cap portion 22 can move and stop at a specific position.

[0073] When the operating portion 20 is driven to move by a force, the bump 34 can move along the guiding surface 36 and then enter the groove 38, to position the operating portion 20 and the cap portion 22 at the corresponding position. The elastic stop member 32 may accumulate elastic potential energy with the movement of the stop shaft 30, and may drive, through the elastic potential energy, the stop shaft 30 to move.

[0074] The bump 34 may be arranged between the operating portion 20 and the elastic linkage member 28. The elastic linkage member 28 may be arranged between the bump 34 and the cap portion 22.

[0075] Optionally, the guiding surface 36 and the groove 38 are arranged adjacent to and spaced apart from each other.

[0076] In this way, the operating portion 20 and/or the cap portion 22 can move and stop at a specific position.

[0077] When the operating portion 20 is driven by a force, the bump 34 can move along the guiding surface 36 and stop after entering the groove 38, and the cap portion 22 moves and stops accordingly.

[0078] Optionally, the guiding surface 36 is an inclined surface and is configured in such a way that the bump 34 moves along the guiding surface 36 into the groove 38 when the operating portion 20 drives the linkage shaft 26 to move axially.

[0079] In this way, the operating portion 20 and the linkage shaft 26 can smoothly move and reach a stop

position.

[0080] The guiding surface 36 may be inclined toward the groove 38, so that the bump 34 can move along the guiding surface 36 into the groove 38.

[0081] Optionally, a plurality of operating portions 20 and cap portions 22 are respectively arranged. In this way, a fragrance type and concentration can be adjusted.

[0082] The operating portions 20 and the cap portions 22 may respectively correspond to different fragrance types and concentrations to adjust the fragrance types and concentrations correspondingly.

[0083] Optionally, the operating portions 20 and the cap portions 22 have the same size or different sizes. In this way, the fragrance concentration and type can be adjusted.

[0084] In some embodiments, the operating portions 20 and the cap portions 22 having the same size may correspond to different fragrance types and concentrations. In some embodiments, a larger operating portion 20 and a larger cap portion 22 may correspond to a higher fragrance concentration, and a smaller operating portion and a smaller cap portion may correspond to a lower fragrance concentration, or vice versa.

[0085] In some embodiments, as shown in the figure, the operating portions 20 may include a large operating portion 17, a medium operating portion 19, and a small operating portion 21, and the cap portions 22 may include a large cap portion 23, a medium cap portion 25, and a small cap portion 27, which may correspond to high, medium, and low fragrance concentrations.

[0086] Optionally, the operating element 18 includes a closing portion 40, a closing linkage shaft 42 linked with the closing portion 40, and an elastic closing member 44 corresponding to the closing linkage shaft 42, one of the closing linkage shaft 42 and the stop shaft 30 includes a closing bump 46, and the other includes a closing guiding surface 48 corresponding to the closing bump 46.

[0087] In this way, the fragrance can be blocked.

[0088] When the closing portion 40 is driven to move by a force, the closing bump 46 can move along the closing guiding surface 48, and push the stop shaft 30, the elastic stop member 32, and the elastic closing member 44 to move, so that the bump 34 can be disengaged from the groove 38 and contact the guiding surface 36, and the elastic linkage member 28 can drive, through the elastic potential energy, the operating portion 20 and the cap portion 22 to return to the initial position shown in FIG. 4 to block the fragrance. Then the elastic closing member 44 and the elastic stop member 32 can drive, through the elastic potential energy, the closing portion 40 and the stop shaft 30 to return to the initial position shown in FIG. 4.

[0089] A distance by which the closing bump 46 moves along the closing guiding surface 48 may be greater than a distance by which the bump 34 moves along the guiding surface 36.

[0090] The closing guiding surface 48 may be arranged on a free end of the stop shaft 30, and the elastic stop member 32 may be arranged on an other end of the stop shaft 30. The guiding surface 36 and the groove 38 may be arranged between the closing guiding surface 48 and the elastic stop member 32.

[0091] Optionally, the closing guiding surface 48 is an inclined plane and is configured in such a way that the closing bump 46 drives the stop shaft 30 to move axially when the closing portion 40 drives the closing linkage shaft 42 to move axially, so that the bump 34 is disengaged from the groove 38 and forms contact fit with the guiding surface 36.

[0092] In this way, the fragrance can be smoothly blocked.

[0093] The closing guiding surface 48 may be inclined toward the closing bump 46, so that the stop shaft 30 can be pushed to move leftward when the closing portion 40 is driven to be moved rearward by a force, during which the elastic closing member 44 and the elastic stop member 32 can accumulate elastic potential energy. Then the elastic closing member 44 can drive, through the elastic potential energy, the closing linkage shaft 42 and the closing portion 40 to move forward, and the stop shaft 30 may be driven to move rightward by the elastic stop member 32.

[0094] A slope of the closing guiding surface 48 may be less than a slope of the guiding surface 36.

[0095] Optionally, the operating element 18 includes a receiving portion 50, and the operating portion 20, the cap portion 22, and the closing portion 40 are at least partially located outside the receiving portion 50.

[0096] In this way, the operating element 18 can be operated conveniently.

[0097] FIG. 5 is another partial schematic cross-sectional view similar to FIG. 2. Referring to FIG. 5, the receiving portion 50 may be substantially in the shape of a cassette including a top wall 51, a bottom wall 53, a front wall 55, a rear wall 57, a left wall 59, and a right wall 61. The top wall 51 may be disassembled. The top wall 51 is omitted in FIG. 3 and FIG. 4. The operating portion 20 and the closing portion 40 may protrude from the front wall 55. The cap portion 22 may protrude from the rear wall 57. The elastic stop member 32 may abut against an inner side of the left wall 59. The stop shaft 30 may extend toward the right wall 61 from the elastic stop member 32.

[0098] The elastic linkage member 28 and the elastic closing member 44 may abut against an inner side of the rear wall 57. The linkage shaft 26 may extend through the front wall 55 and the rear wall 57, and include a linkage squeezing portion 63 that can squeeze the elastic linkage member 28 toward the rear wall 57. The closing linkage shaft 42 may extend between the front wall 55 and the rear wall 57, and include a closing squeezing portion 65 that can squeeze the elastic closing member 44 toward the rear wall 57.

[0099] Referring to FIG. 2 and FIG. 5, optionally, the accommodating element 16 includes an accommodating portion 52 and a leaking portion 54, and the cap portion

22 and the leaking portion 54 are movable relative to each other to release or block the fragrance in the accommodating portion 52.

[0100] In this way, the convenient unblocking/blocking of the fragrance can be realized.

[0101] As shown in FIG. 2, when the cap portion 22 covers the leaking portion 54, the fragrance in the accommodating portion 52 cannot be released outward. Referring to FIG. 5, when the cap portion 22 exposes the leaking portion 54, the fragrance in the accommodating portion 52 can be released through a gap 49 in fluid communication with the leaking portion 54.

[0102] Optionally, the accommodating element 16 includes a replaceable fragrance container 56 including the accommodating portion 52, the leaking portion 54, and a lid 58.

[0103] In this way, the fragrance can be conveniently replaced and replenished.

[0104] When fragrance replacement or replenishment is required, the fragrance container 56 may be taken out and another fragrance container with a fragrance may be placed, to replace or replenish the fragrance for the fragrance assembly 14, or the lid 58 may be opened, and the fragrance in the accommodating portion 52 of the fragrance container 56 is replaced or replenished and then the fragrance container 56 is replaced back.

[0105] Optionally, the accommodating element 16 includes a cassette 60 fixed to the box 12. The fragrance container 56 is at least partially received in the cassette, the cassette 60 includes an opening 62 corresponding to the leaking portion 54, and the cap portion 22 is configured to expose or cover the opening 62.

[0106] In this way, the fragrance container 56 can be mounted and the fragrance can be released or blocked.

[0107] The cassette 60 may be fixed to the box 12 through welding or the like. The leaking portion 54 and the opening 62 are arranged adjacent and opposite to each other, may protrude into the opening 62, and may extend through the opening 62. Referring to FIG. 5, when the cap portion 22 moves away to expose the opening 62, the fragrance can be released outward through the gap 49 between the leaking portion 54, the opening 62, and the cap portion 22 and the accommodating element 16. As shown in FIG. 2, when the cap portion 22 approaches to cover the opening 62, the fragrance is sealed in the fragrance assembly 14 and is in a blocked state.

[0108] FIG. 6 is a partial schematic cross-sectional view of the cassette of the fragrance assembly in FIG. 5. Referring to FIG. 4, FIG. 5, and FIG. 6, optionally, the cassette 60 includes a plurality of openings 62, and a plurality of operating portions 20 and a plurality of cap portions 22 are respectively arranged. Quantities of the operating portions and the cap portions respectively correspond to a quantity of the openings 62. In this way, the fragrance can be more flexibly unblocked/blocked and adjusted.

[0109] Each of the operating portions 20 may drive a corresponding one of the cap portions 22 to move, so that a corresponding one of the openings 62 can be exposed or covered. When it is necessary to block the fragrance and adjust the fragrance concentration and type, a corresponding operating portion 20 may be operated.

[0110] Optionally, an air circulation area of at least one of the openings 62 is different from those of the other openings 62.

[0111] In this way, the fragrance concentration can be adjusted.

[0112] The air circulation area of the opening 62 may correspond to an opening area thereof. An opening 62 having a larger air circulation area may correspond to a higher fragrance concentration, and an opening 62 having a smaller air circulation area may correspond to a lower fragrance concentration, or vice versa.

[0113] The clothing handling device 10 may be a washing and drying machine or a drying machine. Still referring to FIG. 1, optionally, the clothing handling device 10 includes a clothing handling chamber 64 and an airflow passage 66 in fluid communication with the clothing handling chamber 64. A part of the fragrance assembly 14 may be exposed in the airflow passage 66.

[0114] In this way, fragrance can be applied to clothing in the clothing handling chamber 64 through the fragrance assembly 14 and the airflow passage 66.

[0115] The fragrance assembly 14 may be arranged at a front of the box 12 and below the clothing handling chamber 64. The clothing handling device 10 may perform handling such as washing and drying on the clothing in the clothing handling chamber 64. During the drying of the clothing in the clothing handling chamber 64 in the clothing handling device 10, the fragrance in the fragrance assembly 14 can enter the clothing handling chamber 64 through the airflow passage 66, which is absorbed by the clothing. After air circulation for a specific period, the function of adding fragrance to the clothing can be realized.

[0116] Optionally, the clothing handling device 10 includes a clothing handling chamber 64. The leaking portion 54 contacts circulating air passing through the clothing handling chamber 64 after the cap portion 22 leaves the leaking portion 54.

[0117] In this way, the fragrance can be released through the leaking portion 54 and the circulating air.

[0118] When the leaking portion 54 contacts the circulating air passing through the clothing handling chamber 64, the fragrance may be mixed with the circulating air through the leaking portion 54, and then enter the clothing handling chamber 64 with the circulating air, which can be absorbed by the clothing in the clothing handling chamber 64. After air circulation for a specific period, the function of adding fragrance to the clothing can be realized.

[0119] FIG. 7 is a partial schematic cross-sectional view of the accommodating element of the fragrance assembly in FIG. 5. Referring to FIG. 7, optionally, a plurality of leaking portions 54 are arranged on the accommodating element 16, and a cross-sectional area of at least one

of the leaking portions 54 exposed to the circulating air is different from those of the other leaking portions 54.

[0120] In this way, a concentration of the fragrance released through the leaking portion 54 can be adjusted.

[0121] A leaking portion 54 with a larger cross-sectional area exposed to the circulating air may correspond to a higher fragrance concentration, a leaking portion 54 with a smaller cross-sectional area exposed to the circulating air may correspond to a lower fragrance concentration, and leaking portions 54 with the same cross-sectional area exposed to the circulating air may correspond to the same fragrance concentration.

[0122] Referring to FIG. 4, FIG. 5, and FIG. 7, optionally, a plurality of leaking portions 54 are arranged on the accommodating element 16, and a plurality of operating portions 20 and a plurality of cap portions 22 are arranged. Quantities of the operating portions and the cap portions respectively correspond to a quantity of the leaking portions 54.

[0123] In this way, the fragrance released through the leaking portion 54 can be more flexibly adjusted.

[0124] Each of the operating portions 20 may drive a corresponding one of the cap portions 22 to move, so as to unblock or block the fragrance leaking from a corresponding one of the leaking portions 54. When it is necessary to unblock a fragrance and adjust a fragrance concentration and type, a corresponding operating portion 20 may be operated.

[0125] Optionally, each of the leaking portions 54 includes a plug made of a porous medium.

[0126] In this way, the fragrance can be released through the leaking portion 54.

[0127] The leaking portion 54 can absorb a liquid fragrance through the gap. When the air contacts the leaking portion 54, the fragrance adsorbed through the gap of the leaking portion 54 can volatilize into the air.

[0128] Still referring to FIG. 1, an aspect of the embodiments of the present invention relates to a clothing handling device 10, including a box 12 and a fragrance assembly 14 arranged in the box 12. The fragrance assembly 14 includes a replaceable fragrance container 56.

[0129] The embodiments of this application can realize convenient replacement of a fragrance.

[0130] For example, the fragrance assembly 14 is arranged in the box 12 to apply the fragrance to the clothing in the box 12. When fragrance replacement or replenishment is required, the fragrance container 56 may be taken out to replace or replenish the fragrance for the fragrance container 56, and then the fragrance container is replaced back, or a replaced fragrance container 56 may be placed.

[0131] Still referring to FIG. 5, optionally, the fragrance container 56 includes an accommodating portion 52 and a leaking portion 54. In this way, a fragrance can be prevented from direct contact with the clothing and the concentration can be easily controlled.

[0132] The accommodating portion 52 can accommodate the fragrance, and the leaking portion 54 can leak the fragrance in the accommodating portion 52. A concentration of a fragrance applied may be adjusted by controlling the leaking portion 54.

[0133] Optionally, the fragrance container 56 includes a lid 58 arranged opposite to the leaking portion 54 and configured to seal the accommodating portion 52 with the leaking portion.

[0134] In this way, the fragrance can be replaced or replenished for the fragrance container 56.

[0135] When the fragrance needs to be replaced or replenished, the lid 58 may be opened to add a different fragrance and the same fragrance to the accommodating portion 52. The leaking portion 54 may be arranged in an inaccessible position such as an interior of the clothing handling device 10. The lid 58 may be located in an accessible position such as an exterior of the clothing handling device 10.

[0136] Still referring to FIG. 7, optionally, the fragrance container 56 includes a plurality of chambers 68. Each of the chambers 68 includes the accommodating portion 52 and the leaking portion 54.

[0137] In this way, the fragrance concentration and type can be flexibly adjusted.

[0138] As shown in FIG. 7, the fragrance container 56 may include three chambers 68. Each of the chambers 68 includes one accommodating portion 52 and one leaking portion 54. The accommodating portion 52 may be in the shape of a cassette with openings on two opposite walls. The leaking portion 54 may fill the opening on one of the walls, such as the rear wall of the accommodating portion 52. The lid 58 may seal the opening on the other wall, such as the front wall of the accommodating portion 52. A part of the lid 58 may protrude into the accommodating portion 52 and contact an inner wall of the accommodating portion 52, to seal the accommodating portion 52, which enhances a binding force between the lid and the accommodating portion.

[0139] Optionally, an accommodating capacity of the accommodating portion 52 of at least one of the chambers 68 is different from those of the accommodating portions 52 of the other chambers 68.

[0140] In this way, the fragrance concentration and type can be adjusted.

[0141] As shown in the figure, the three chambers 68 may be chambers 69, 71, and 73 respectively having a large accommodating capacity, a medium accommodating capacity, and a small chamber accommodating capacity, which may respectively correspond to the large operating portion 17, the medium operating portion 19, and the small operating portion 21, the large cap portion 23, the medium cap portion 25, and the small cap portion 27, and the high-concentration fragrance, the medium-concentration fragrance, and the low-concentration fragrance. When the high-concentration fragrance, the medium-concentration fragrance, or the low-concentration fragrance is required, the corresponding large cap portion 23, medium cap portion 25, or small cap portion 27 may be driven to move by the large operating portion 17,

the medium operating portion 19, or the small operating portion 21, so as to release the fragrance in the corresponding large chamber 69, medium chamber 71, or small chamber 73.

[0142] In some other embodiments, the large chamber 69, the medium chamber 71, and the small chamber 73 may respectively correspond to three different types of fragrances. When a fragrance of a specific type is required, the fragrance in the corresponding one of the chambers 69, 71, and 73 may be released.

[0143] Optionally, a fragrance type of the accommodating portion 52 of at least one of the chambers 68 is different from those of the accommodating portions 52 of the other chambers 68.

[0144] In this way, the fragrance type can be adjusted.

[0145] The fragrance in the corresponding chamber 68 may be released according to a required fragrance type to adjust the fragrance type.

[0146] Optionally, an area of the leaking portion 54 of at least one of the chambers 68 that may be exposed to the outside air is different from those of the leaking portions 54 of the other chambers 68.

[0147] In this way, the fragrance concentration can be adjusted.

[0148] As shown in the figure, the leaking portions 54 may include a large leaking portion 41, a medium leaking portion 43, and a small leaking portion 45, which respectively correspond to the large chamber 69, the medium chamber 71, and the small chamber 73.

[0149] For example, when a high-concentration fragrance is required, the large chamber 69 corresponding to the large leaking portion 41 may be selected. When a low-concentration fragrance is required, the small chamber 73 corresponding to the small leaking portion 45 may be selected. For example, when a medium-concentration fragrance is required, the medium chamber 71 corresponding to the medium leaking portion 43 may be selected.

[0150] Optionally, the leaking portion 54 is made of a material that allows a liquid or a gas to penetrate. In this way, the fragrance can be released.

[0151] For example, the leaking portion 54 can adsorb the liquid fragrance in the accommodating portion 52, so that the adsorbed liquid fragrance can volatilize and be mixed with the air, and flow with the air when the fragrance contacts the outside air.

[0152] FIG. 8 is a schematic perspective view of the cassette in FIG. 6. Referring to FIG. 8, optionally, the fragrance assembly 14 includes a cassette 60 fixed to the box 12. The cassette includes a receiving cavity 70 that receives at least part of the fragrance container 56 and an entry/exit portion 72 in communication with the receiving cavity 70. The fragrance container 56 may enter and exit the receiving cavity 70 through the entry/exit portion 72.

[0153] In this way, the fragrance container 56 can be mounted.

[0154] The cassette 60 may be in the shape of a cuboid. The receiving cavity 70 may correspond to a shape, a structure, and a size of the fragrance container 56 to receive the fragrance container 56. The entry/exit portion 72 may be an opening allowing the fragrance container 56 to pass through.

[0155] Still referring to FIG. 7, optionally, the fragrance container 56 includes a lid 58, which may seal the entry/exit portion 72.

[0156] In this way, the clothing handling device 10 can realize a compact structure and a beautiful appearance.

[0157] The lid 58 may partially protrude into the entry/exit portion 72, abuts against an inner wall of the fragrance container 56, and covers an outer end surface of the entry/exit portion 72, so as to seal the entry/exit portion 72. In this way, a separate lid is omitted for the cassette 60, and the opening of the entry/exit portion 72 is covered, so that the clothing handling device 10 realizes a compact structure and a beautiful appearance.

[0158] Optionally, the fragrance container 56 includes a lid 58, which includes a handle portion 74 protruding from the cassette 60.

[0159] In this way, the fragrance container 56 can be conveniently placed into the cassette 60 and taken out from the cassette 60.

[0160] The handle portion 74 may be an edge portion of the lid 58 protruding from the cassette 60. When the fragrance container 56 needs to be placed into the cassette 60 or taken out from the cassette 60, a force may be applied to the handle portion 74.

[0161] Optionally, the cassette 60 includes an opening 62 arranged opposite to the entry/exit portion 72.

[0162] In this way, the fragrance can be released inside the clothing handling device 10.

[0163] The opening 62 may be in communication with the inside of the clothing handling device 10, to release the fragrance inside the clothing handling device 10. The entry/exit portion 72 may be in communication with the outside of the clothing handling device 10, to mount and replace the fragrance container 56.

[0164] Optionally, the fragrance container 56 includes a leaking portion 54, which may leak the fragrance through the opening 62.

[0165] In this way, the release of a fragrance can be controlled.

[0166] The leaking portion 54 may be exposed in the opening 62 and/or outside the opening 62. The fragrance leaking through the leaking portion 54 may be released to the outside of the cassette 60 through the opening 62.

[0167] Still referring FIG. 2 and FIG. 5, optionally, the fragrance assembly 14 includes an operating element 18, which includes an operating portion 20 and a cap portion 22. The cap portion 22 may expose or cover the opening 62 with a movement of the operating portion 20 to release or block the fragrance leaking through the leaking portion 54. In this way, the fragrance can be conveniently unblocked/blocked.

[0168] When the cap portion 22 exposes the opening 62, a gap 49 in fluid communication with the leaking por-

tion 54 and the outside of the fragrance assembly 14 may be formed between the cap portion 22 and the cassette 60, and the fragrance can be released to the outside of the fragrance assembly 14 through the gap 49. When the cap portion 22 covers the opening 62, the fragrance may be sealed in the fragrance assembly 14. The operating portion 20 may be arranged at a position that facilitates operation, to unblock/block the fragrance.

[0169] Optionally, the fragrance assembly 14 includes an operating element 18 arranged outside the cassette 60.

[0170] In this way, a fragrance storage position and a control operation position are spaced apart from each other, so that a control operation is less likely to be subjected to spatial and directional constraints.

[0171] The operating element 18 may be controlled to operate outside the cassette 60 where the fragrance is stored, so that the control operation is less likely to be subjected to spatial and directional constraints.

[0172] Optionally, the fragrance assembly 14 includes an operating element 18 staggered with respect to the fragrance container 56 to release or block the fragrance in the fragrance container 56.

[0173] In this way, the operating element 18 and the fragrance container 56 are less likely to interfere with each other.

[0174] The operating element 18 and the fragrance container 56 may be staggered with respect to each other in an up-down, front-rear, or left-right direction.

[0175] The fragrance container 56 is less likely to be interfered by an operating element 18 that is mistakenly arranged during mounting and replacement. The operating element 18 is less likely to be interfered by a fragrance container 56 that is mistakenly arranged during operation.

[0176] Optionally, the fragrance assembly 14 includes an operating element 18 arranged separately from the fragrance container 56 to release or block the fragrance in the fragrance container 56.

[0177] In this way, the fragrance container 56 can be replaced.

[0178] The operating element 18 may be fixed to the box 12 through welding or the like. When fragrance replacement or replenishment is required, only the fragrance container 56 instead of the entire fragrance assembly 14 needs to be taken out, and the operation is relatively simple. In addition, the operating element 18 is not disassembled a plurality of times, so that a possibility of damage is low.

[0179] The specific implementations described above and shown in the drawings are merely used for describing the present invention, and are not the entirety of the present invention. Any form of changes made by a person of ordinary skill in the art to the present invention within the scope of the basic technical ideas of the present invention fall within the protection scope of the present invention.

Claims

1. A clothing handling device (10), **characterized by** comprising:

   a box (12); and
   a fragrance assembly (14), arranged in the box (12), wherein the fragrance assembly (14) comprises an accommodating element (16) and an operating element (18), and the operating element (18) is configured to release or block a fragrance in the accommodating element (16).

2. The clothing handling device (10) according to claim 1, **characterized in that** the operating element (18) and the accommodating element (16) are stacked in a first direction (X) and a second direction (Y) different from each other.

3. The clothing handling device (10) according to claim 1, **characterized in that** the operating element (18) comprises an operating portion (20) and a cap portion (22) linked with the operating portion (20), wherein the cap portion (22) releases or blocks the fragrance with a movement of the operating portion (20).

4. The clothing handling device (10) according to claim 3, **characterized in that** the operating portion (20) is staggered with respect to the accommodating element (16) in a first direction (X), and the cap portion (22) and the accommodating element (16) are movable relative to each other in a second direction (Y) different from the first direction (X).

5. The clothing handling device (10) according to claim 3, **characterized in that** the operating element (18) comprises an actuating member (24) configured to cause the operating portion (20) and/or the cap portion (22) to move.

6. The clothing handling device (10) according to claim 5, **characterized in that** the actuating member (24) comprises a linkage shaft (26) connected to the operating portion (20) and an elastic linkage member (28) corresponding to the linkage shaft (26).

7. The clothing handling device (10) according to claim 6, **characterized in that** the actuating member (24) comprises a stop shaft (30) and an elastic stop member (32) corresponding to the stop shaft (30), wherein one of the stop shaft (30) and the linkage shaft (26) comprises a bump (34), and the other comprises a guiding surface (36) and a groove (38) corresponding to the bump (34).

8. The clothing handling device (10) according to claim 7, **characterized in that** the guiding surface (36)

and the groove (38) are arranged adjacent to and spaced apart from each other.

9. The clothing handling device (10) according to claim 8, **characterized in that** the guiding surface (36) is an inclined surface and is configured in such a way that the bump (34) moves along the guiding surface (36) into the groove (38) when the operating portion (20) drives the linkage shaft (26) to move axially.

10. The clothing handling device (10) according to claim 7, **characterized in that** a plurality of operating portions (20) and a plurality of cap portions (22) are respectively arranged.

11. The clothing handling device (10) according to claim 10, **characterized in that** the operating portions (20) and the cap portions (22) have the same size or different sizes.

12. The clothing handling device (10) according to claim 7, **characterized in that** the operating element (18) comprises a closing portion (40), a closing linkage shaft (42) linked with the closing portion (40), and an elastic closing member (44) corresponding to the closing linkage shaft (42), wherein one of the closing linkage shaft (42) and the stop shaft (30) comprises a closing bump (46), and the other comprises a closing guiding surface (48) corresponding to the closing bump (46).

13. The clothing handling device (10) according to claim 12, **characterized in that** the closing guiding surface (48) is an inclined plane and is configured in such a way that the closing bump (46) drives the stop shaft (30) to move axially when the closing portion (40) drives the closing linkage shaft (42) to move axially, so that the bump (34) is disengaged from the groove (38) and forms contact fit with the guiding surface (36).

14. The clothing handling device (10) according to claim 12, **characterized in that** the operating element (18) comprises a receiving portion (50), wherein the operating portion (20), the cap portion (22), and the closing portion (40) are at least partially located outside the receiving portion (50).

15. The clothing handling device (10) according to claim 3, **characterized in that** the accommodating element (16) comprises an accommodating portion (52) and a leaking portion (54), wherein the cap portion (22) and the leaking portion (54) are movable relative to each other to release or block the fragrance in the accommodating portion (52).

16. The clothing handling device (10) according to claim 15, **characterized in that** the accommodating element (16) comprises a replaceable fragrance container (56) comprising the accommodating portion (52), the leaking portion (54), and a lid (58).

17. The clothing handling device (10) according to claim 16, **characterized in that** the accommodating element (16) comprises a cassette (60) fixed to the box (12), wherein the fragrance container (56) is at least partially received in the cassette, the cassette (60) comprises an opening (62) corresponding to the leaking portion (54), and the cap portion (22) is configured to expose or cover the opening (62).

18. The clothing handling device (10) according to claim 17. **characterized in that** the cassette (60) comprises a plurality of openings (62), and a plurality of operating portions (20) and a plurality of cap portions (22) are respectively arranged, wherein quantities of the operating portions and the cap portions respectively correspond to a quantity of the openings (62).

19. The clothing handling device (10) according to claim 18, **characterized in that** an air circulation area of at least one of the openings (62) is different from those of the other openings (62).

20. The clothing handling device (10) according to claim 15, **characterized by** comprising a clothing handling chamber (64) and an airflow passage (66) in fluid communication with the clothing handling chamber (64), wherein a part of the fragrance assembly (14) is exposed in the airflow passage (66).

21. The clothing handling device (10) according to claim 15, **characterized by** comprising a clothing handling chamber (64), wherein the leaking portion (54) contacts circulating air passing through the clothing handling chamber (64) after the cap portion (22) leaves the leaking portion (54).

22. The clothing handling device (10) according to claim 21, **characterized in that** a plurality of leaking portions (54) are arranged on the accommodating element (16), and a cross-sectional area of at least one of the leaking portions (54) exposed to the circulating air is different from those of the other leaking portions (54).

23. The clothing handling device (10) according to claim 15, **characterized in that** a plurality of leaking portions (54) are arranged on the accommodating element (16), and a plurality of operating portions (20) and a plurality of cap portions (22) are respectively arranged, wherein quantities of the operating portions and the cap portions respectively correspond to a quantity of the leaking portions (54).

24. The clothing handling device (10) according to claim

15, **characterized in that** the leaking portion (54) comprises a plug made of a porous medium.

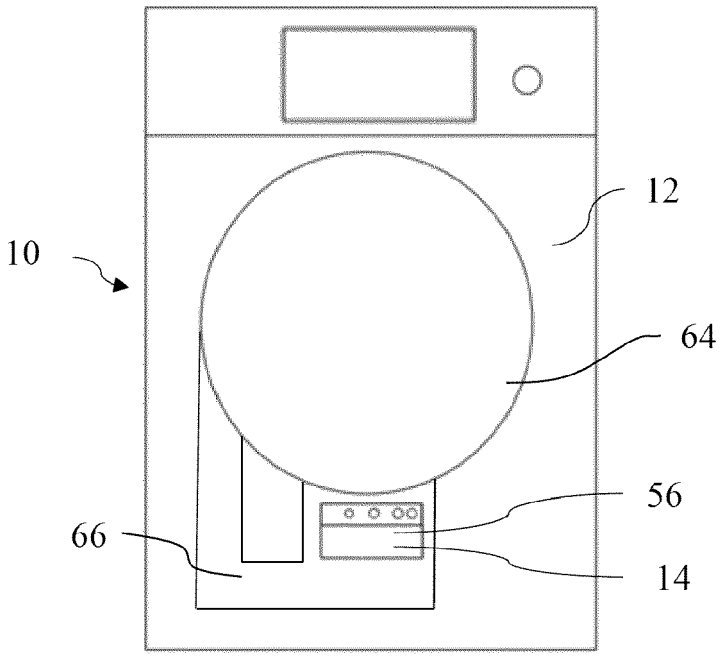

FIG. 1

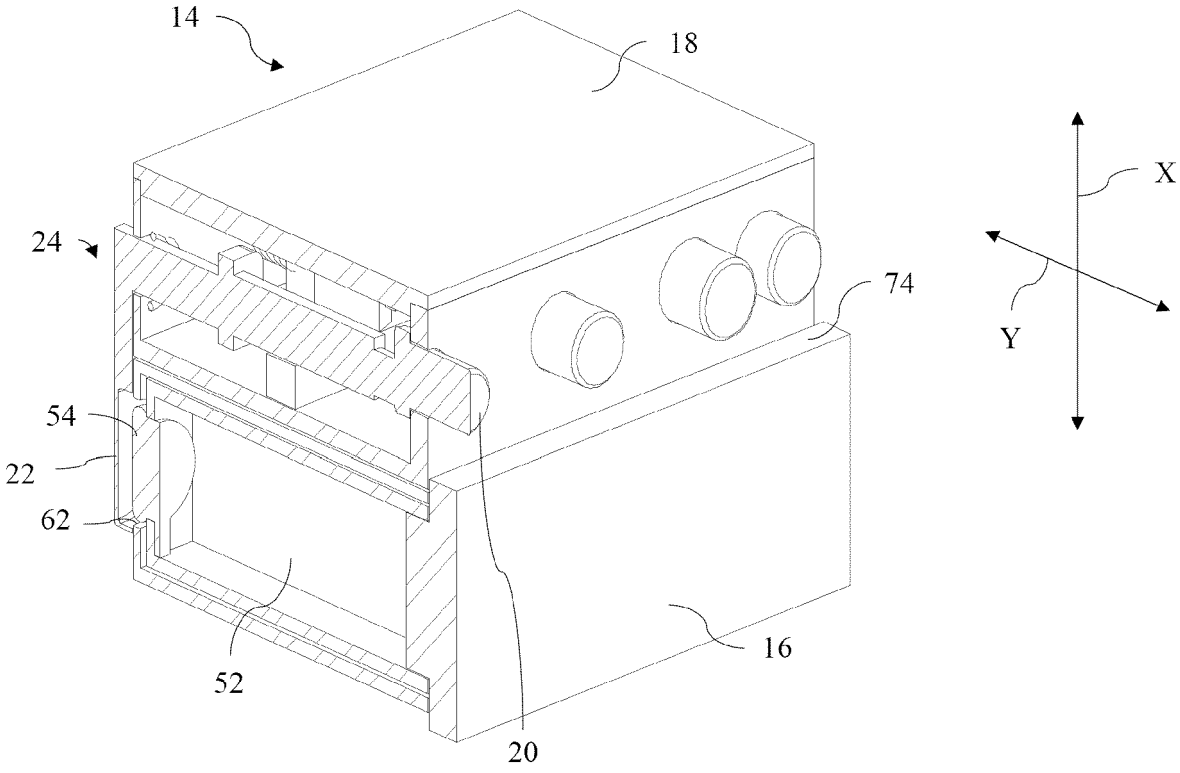

FIG. 2

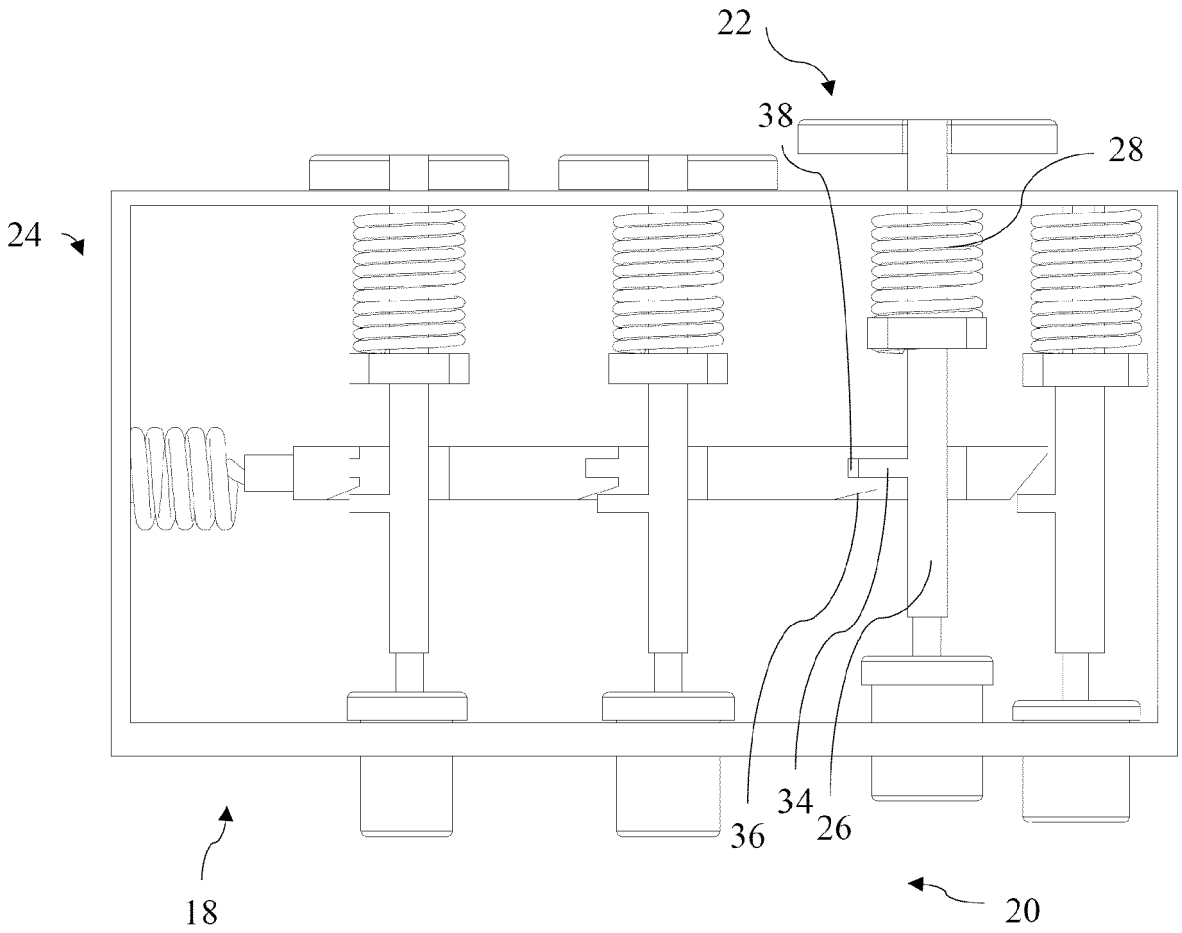

FIG. 3

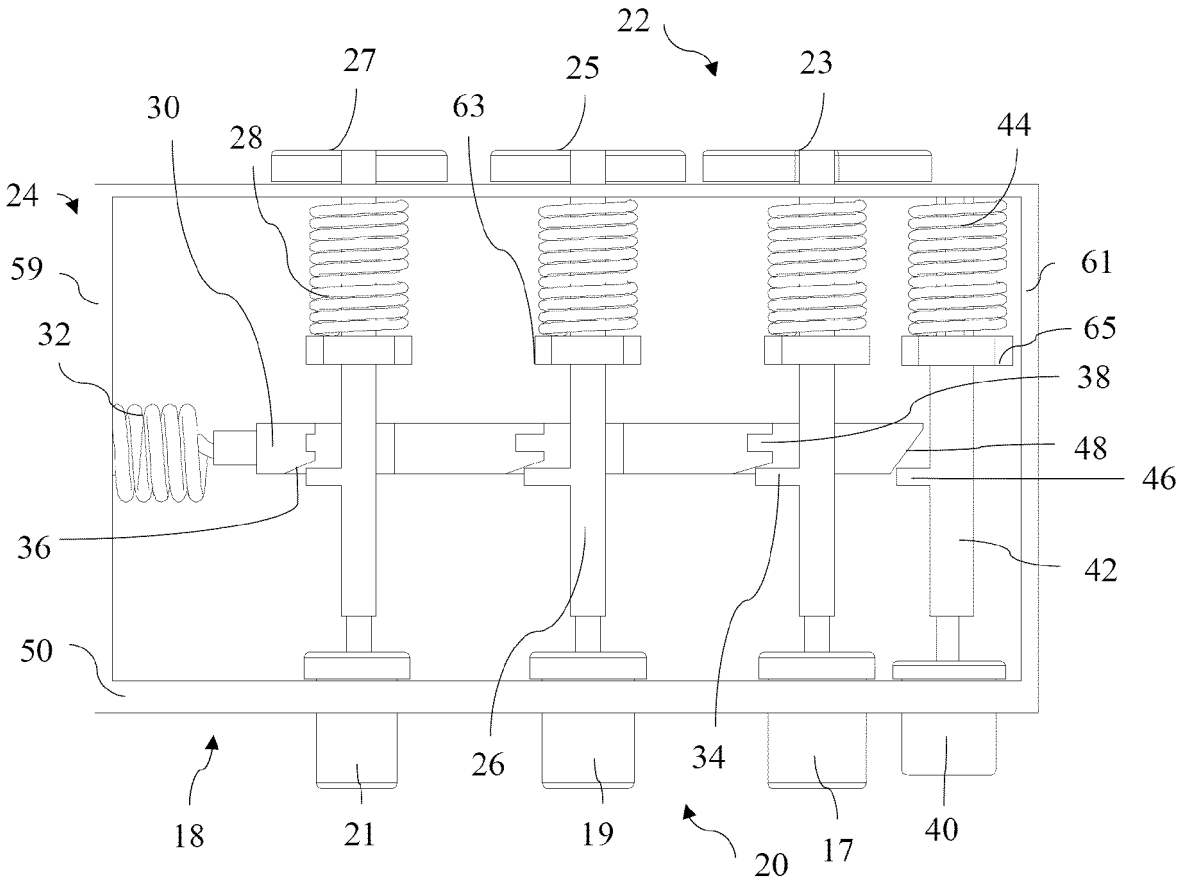
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FIG. 4

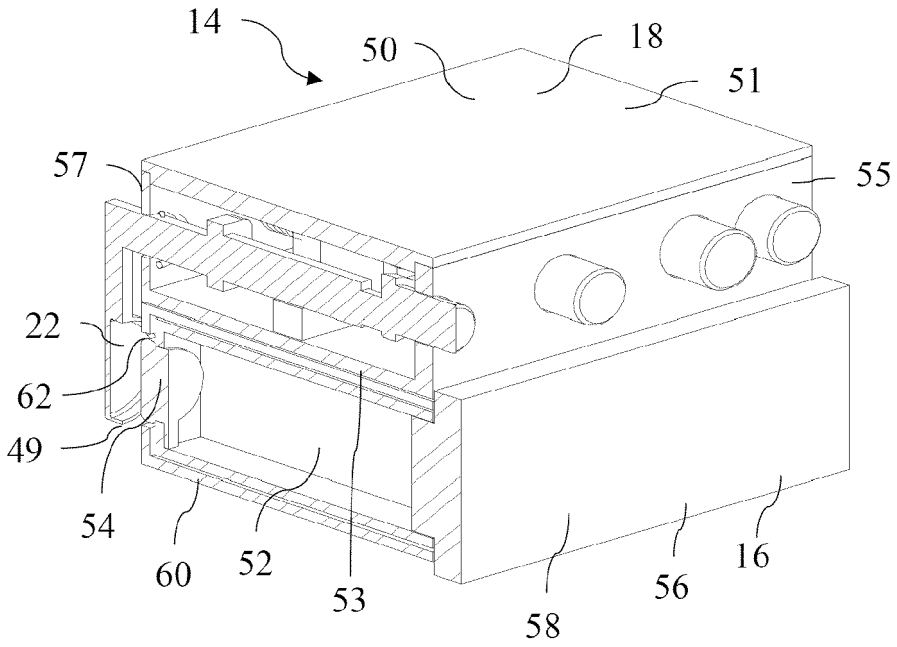

FIG. 5

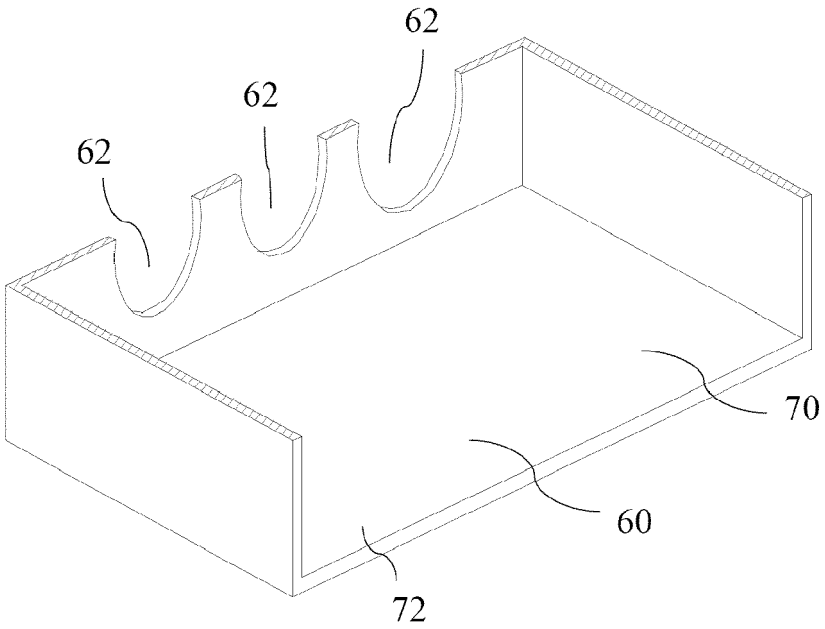

FIG. 6

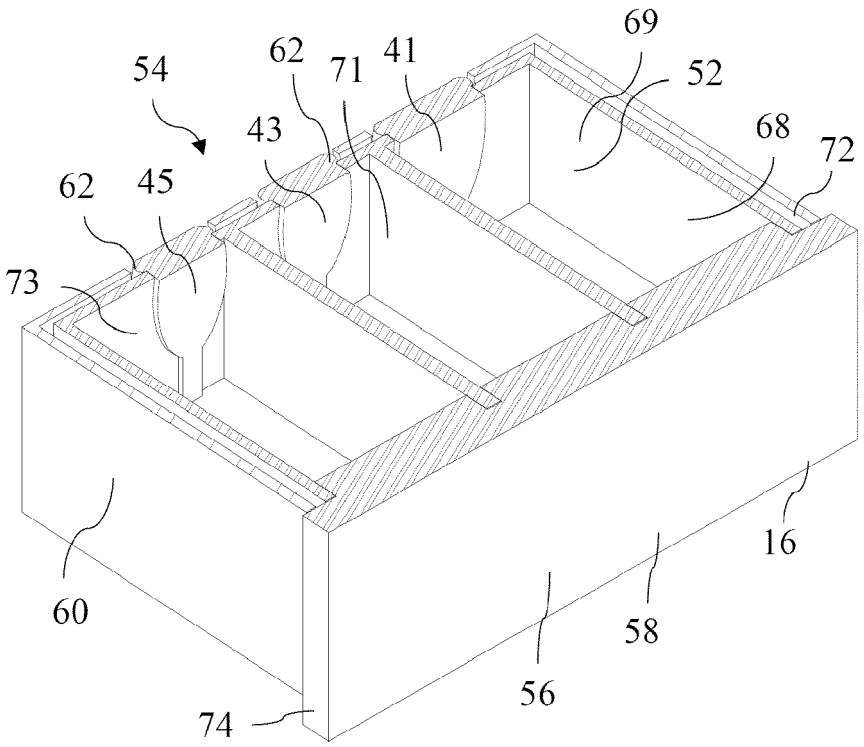

FIG. 7

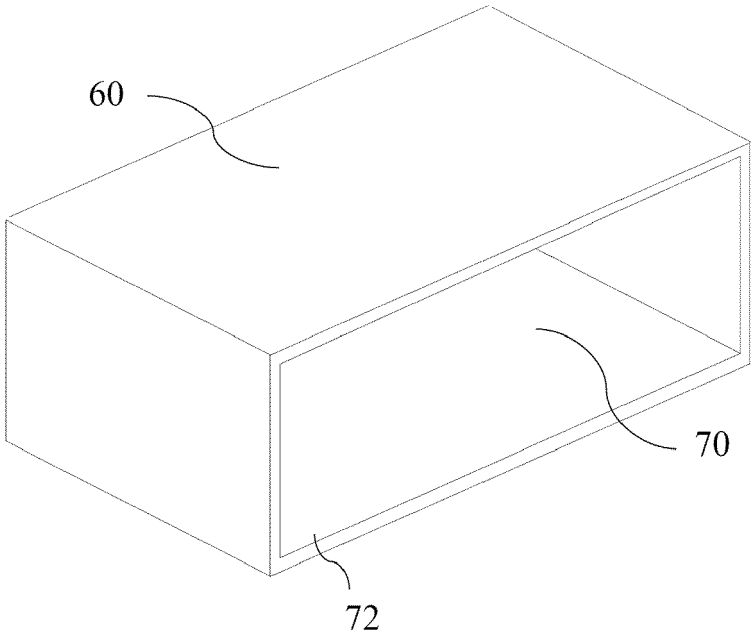

FIG. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 23 16 2725

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2011/138863 A1 (KIM KYEONG-HWAN [KR] ET AL) 16 June 2011 (2011-06-16) * figures 1, 3-4, 6 * * paragraph [0054] * * paragraph [0059] - paragraph [0060] *	1-5,15, 16,20,21	INV. D06F58/20 ADD. D06F25/00
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TECHNICAL FIELDS SEARCHED (IPC)

D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	9 August 2023	Werner, Christopher

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09-08-2023

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82