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(54) FRONT-LOADING WASHING MACHINE

(57) Front-loading washing machine ((100) including a cabinet (10) having a front panel (11) provided with an opening (111), a tub (20) having an access port (21) for loading and unloading laundry, whereby the tub (20) is disposed in the cabinet (10) and is connected to a horizontal rotating transverse shaft (52) in such a manner that the access port (21) is capable of being moved up and down in the opening, a rotatable drum (30) disposed in the tub (20), a door unit (40) mounted to the tub (20) and configured to cover the access port (21) and a driving mechanism (50) provided in the cabinet (10), coupled to the tub (20) and configured to drive the tub (20) to rotate such that said access port (21) moves up and down, the washing machine further comprises a flexible folded cover (12), connected with the front panel (11) and the door unit (40) and configured to cover a gap between the door unit (40) and an edge of the opening (111).

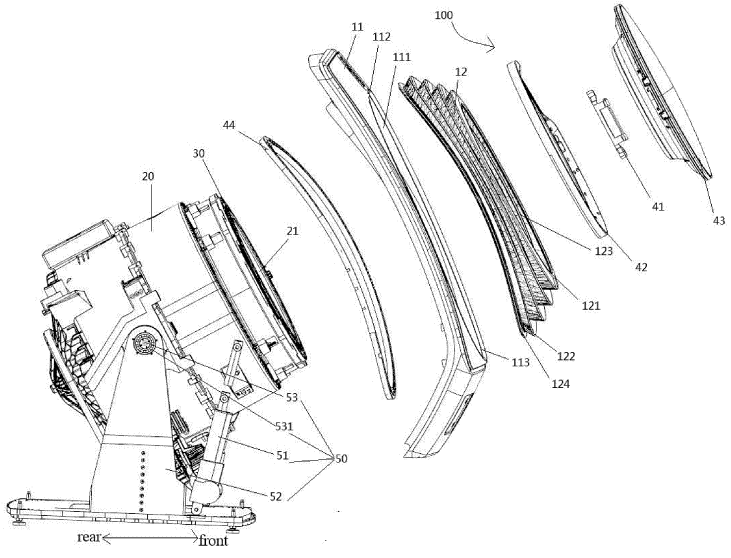

Fig. 3

EP 3 199 698 A1

Description

FIELD

[0001] The present disclosure relates to a technology field household appliances, and more particularly to a front-loading washing machine.

BACKGROUND

[0002] In the related art, the washing machine includes a front-loading washing machine and a pulsator washing machine. When the pulsator washing machine operates, the laundry needs to be completely immersed in water, so that the water saving effect is poor. Moreover, when loading or unloading the laundry with the front-loading washing machine, a user needs to bend and squat down, and thus it is much inconvenient for use and is particularly difficult for operations of special populations, such as the aged.

SUMMARY

[0003] The present disclosure seeks to solve at least one of the problems existing in the related art to at least some extent.

[0004] Thus, embodiments of the present disclosure provides a front-loading washing machine, the front-loading washing machine is easy to be used.

[0005] The front-loading washing machine according to embodiments of the present disclosure includes: a cabinet having a front panel, in which the front panel is provided with an opening; a tub having an access port for loading and unloading laundry, in which the tub is disposed in the cabinet and configured in such a manner that the access port is capable of being moved up and down in the opening; a rotatable drum disposed in the tub; a door unit mounted to the tub and configured to cover the access port; and a driving mechanism provided in the cabinet, coupled with the tub and configured to drive the tub to rotate.

[0006] In the front-loading washing machine according to embodiments of the present disclosure, by providing the driving mechanism to drive the tub to move up and down in the opening, so as to change a position of the access port, it is convenient for a user to load and unload the laundry. Moreover, the front-loading washing machine further has advantages of an easy usage, a low laundry abrasion and a less water cost.

[0007] In addition, the front-loading washing machine according to embodiments of the present disclosure may further include following additional features.

[0008] According to an embodiment of the present disclosure, the driving mechanism is configured to drive the access port to move up and down between a washing position and a non-washing position in the opening.

[0009] According to an embodiment of the present disclosure, when the access port is located at the non-washing position, the access port is driven to move close to an upper edge of the front panel, and when the access port located is at the washing position, the access port is driven to move close to an lower edge of the front panel.

[0010] According to an embodiment of the present disclosure, the driving mechanism is configured to drive the access port to move upwards to close to an upper edge of the front panel and move downwards to close to a lower edge of the front panel.

[0011] According to an embodiment of the present disclosure, a motion range of the access port in the opening is configured in such a manner that an angle between a central axis of the access port and a horizontal plane ranges from 0° to 90°.

[0012] According to an embodiment of the present disclosure, the driving mechanism includes a longitudinal pushrod disposed at a front side of the tub, a transverse shaft disposed at a rear side of and coupled to the tub, and a support frame disposed in the cabinet and having a hole, in which the transverse shaft is configured to rotate in the hole of the support frame.

[0013] According to an embodiment of the present disclosure, the front-loading washing machine further includes a flexible folded cover, connected with the front panel and the door unit and configured to cover clearance gap between the door unit and an edge of the opening.

[0014] According to an embodiment of the present disclosure, the flexible folded cover has an annular shape and includes at least one annular folded portion extending along a circumferential direction of the flexible folded cover, an inner circumferential edge of the flexible folded cover is fixed with the door unit and an outer circumferential edge thereof is fixed with the front panel.

[0015] According to an embodiment of the present disclosure, the inner circumferential edge of the flexible folded cover is matched with an outer circumferential edge of the door unit in shape, and the outer circumferential edge of the flexible folded cover is matched with an inner circumferential edge of the opening in shape.

[0016] According to an embodiment of the present disclosure, the door unit includes a door base and a door body hinged to the door base, and the inner circumferential edge of the flexible folded cover is fixed with the door base.

[0017] According to an embodiment of the present disclosure, the inner circumferential edge of the flexible folded cover is fixed with the door base by a clamp.

[0018] According to an embodiment of the present disclosure, the outer circumferential edge of the flexible folded cover is fixed to the front panel by a fixing ring mounted on an inner surface of the front panel.

[0019] According to an embodiment of the present disclosure, the flexible folded cover is configured as a rubber part.

[0020] The additional aspects and advantages of embodiments of the present disclosure will be given in the following descriptions, parts of which will become apparent from the following descriptions or known through the

practice of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] These and other aspects and advantages of embodiments of the present disclosure will become apparent and more readily appreciated from the following descriptions made with reference to the drawings, in which:

Fig. 1 is a partial schematic view of a front-loading washing machine according to embodiments of the present disclosure;
Fig. 2 is a partial schematic view of a front-loading washing machine according to embodiments of the present disclosure, in which a door unit, a front panel, a flexible folded cover and a tub are assembled together;
Fig. 3 is a partially exploded view of a front-loading washing machine according to embodiments of the present disclosure;
Fig. 4 is a front view of a front-loading washing machine according to embodiments of the present disclosure;
Fig. 5 is a perspective view of a front-loading washing machine according to embodiments of the present disclosure, in which the front-loading washing machine is in a non-washing state; and
Fig. 6 is a perspective view of a front-loading washing machine according to embodiments of the present disclosure, in which the front-loading washing machine is in a washing state.

Reference numerals:

[0022]

front-loading washing machine 1;
cabinet 10; front panel 11; opening 111; upper edge 112; lower edge 113; flexible folded cover 12; inner circumferential edge 121; outer circumferential edge 122; through hole 123; positioning flange 124;
tub 20; access port 21; drum 30;
door unit 40; door hinge 41; door base 42; door body 43; fixing ring 44;
driving mechanism 50; longitudinal pushrod 51; transverse shaft 52; support frame 53; hole 531.

DETAILED DESCRIPTION

[0023] Reference will be made in detail to embodiments of the present disclosure. The embodiments described herein with reference to drawings are explanatory, illustrative, and used to generally understand the present disclosure. The embodiments shall not be construed to limit the present disclosure. The same or similar elements and the elements having same or similar functions are denoted by like reference numerals throughout the descriptions.

[0024] A front-loading washing machine 100 will be described with reference to accompanying drawings in the following.

[0025] As shown in Figs. 1-6, the front-loading washing machine 100 according to embodiments of the present disclosure includes a cabinet 10, a tub 20, a rotatable drum 30, a door unit 40 and a driving mechanism 50.

[0026] The cabinet 10 includes a front panel 11, and an opening 111 is formed in the front panel 11. The tub 20 has an access port 21 for loading and unloading laundry, and the tub 20 is disposed in the cabinet 10 and configured in such a manner that the access port 21 is capable of being moved up and down in the opening 111 (an up-and-down direction is shown in Figs. 2-4). The drum 30 is disposed in the tub 20. The door unit 40 is mounted to the tub 20 and configured to cover the access port 21. The driving mechanism 50 is provided in the cabinet 10, coupled to the tub 20, and further used to drive the tub 20 to move.

[0027] In the front-loading washing machine 100 according to embodiments of the present disclosure, the tub 200 is configured in such a manner that the access port 21 is capable of being moved up and down in the opening 111, and thus the front-loading washing machine 100 can move the access port 21 to a position suitable for a user to load and unload laundry when the user needs to load or unload the laundry, compared with a front-loading washing machine having the access port disposed in a front surface thereof in the related art. In this way, when loading or unloading laundry through the access port 21, the user does not need to squat down or bend, and thus the front-loading washing machine 1 according to embodiments of the present disclosure has high practicability, especially for the user inconvenient to bend or squat down.

[0028] Moreover, since the access port 21 can be moved up and down in the opening 111, the access port 21 may be moved to a position suitable for washing laundry after the laundry has been loaded. For example, the access port 21 may be moved downwards. In this way, when washing laundry, the drum may roll to tumble the laundry up and down so as to achieve the washing of laundry, thus reducing abrasion of the laundry during washing thereof. Moreover, because the laundry needs not to be completely immersed in water when being washed, but only a small amount of water is needed to accomplish the washing thereof, a corresponding water cost is reduced, which is more environmentally friendly.

[0029] In addition, by disposing the driving mechanism 50, the tub 20 may be driven by using the driving mechanism 50. In this way, when the user needs to adjust a position of the access port 21, the driving mechanism 50 may be used to drive the tub 20 so as to adjust the position of the access port 21. Thereby, the user can adjust the position of the tub 20 with less effort, so that it is convenient for the user to adjust the position of the access port 21, thus further improving using convenience of the front-

loading washing machine 1.

[0030] That is to say, by providing the tub 20 configured in such a manner that the access port 21 is capable of being moved up and down in the opening 111 and providing the driving mechanism 50 configured to drive the tub 20 to move, the front-loading washing machine 1 can achieve a desired effect of an ordinary front-loading washing machine when washing the laundry, and the access port 21 can be adjusted to the position suitable for loading and unloading laundry when the laundry needs to be loaded or unloaded or additional laundry needs to be loaded during the washing, so that a problem that it is inconvenient to load and unload laundry for the traditional front-loading washing machine in the related art is overcome.

[0031] Therefore, with the front-loading washing machine 100 according to embodiments of the present disclosure, by providing the drive mechanism 50 to dive the tub 20 to move up and down in the opening 111 so as to change the position of the access port 21, it is convenient for the user to load and unload laundry. Furthermore, the front-loading washing machine 100 according to embodiments of the present disclosure has advantages of the convenient use, the low laundry abrasion and the reduced water cost.

[0032] The front-loading washing machine 100 according to embodiments of the present disclosure will be described with reference to accompanying drawings in the following.

[0033] In some specific embodiments of the present disclosure, as shown in Figs. 1-6, the front-loading washing machine 100 according to embodiments of the present disclosure includes a cabinet 10, a tub 20, a rotatable drum 30, a door unit 40 and a driving mechanism 50.

[0034] The driving mechanism 50 drives the access port 21 to move up and down between a washing position and a non-washing position in the opening 111. In this way, when the laundry needs washing, the driving mechanism 50 may be used to drive the tub 20, so that the access port 21 can be moved to the washing position, thus facilitating washing the laundry. When the laundry does not need washing, the driving mechanism 50 may be used to drive the tub 20, so that the access port 21 can be moved to the non-washing position, thus facilitating loading and unloading the laundry by the user.

[0035] Specifically, as shown in Figs. 1-3, when the access port 21 is located at the non-washing position (as shown in Fig. 5), the access port 21 is driven to move close to an upper edge 112 of the front panel 11. When the access port 21 is located at the washing position (as shown in Fig. 6), the access port 21 is driven to move close to a lower edge 113 of the front panel 11. Thereby, when the user needs to load or unload the laundry, the access port 21 may be moved close to the upper edge 112 of the front panel 11, to facilitate loading and unloading laundry from top by the user, when the user needs to wash laundry, the access port 21 may be moved close to the lower edge 113 of the front panel 11, to facilitate washing laundry through the rolling of the drum 30.

[0036] Specifically, as shown in Fig. 2, the front panel 11 may be inclined backwards from bottom to top. Thereby, it may be further convenient for the user to load and unload laundry when the access port 21 is moved to the non-washing position.

[0037] Advantageously, as shown in Figs. 1 and 2, the driving mechanism 50 is configured to drive the access port 21 to move upwards to close to the upper edge 112 of the front panel 11 and to move downwards to close to the lower edge 113 of the front panel 11. In this way, when the laundry needs to be loaded or unloaded, the driving mechanism 50 may be operated, so that the access port 21 can be moved upwards to close to the upper edge 112 of the front panel 11, thereby facilitating loading or unloading the laundry; and when the laundry needs to be washed, the driving mechanism 50 may be operated, so that the access port 21 can be moved downwards to close to the lower edge 113 of the front panel 11, thereby facilitating washing the laundry by the rolling of the drum 30.

[0038] Optionally, a motion range of the access port 21 in the opening 111 is configured in such a manner that an included angle between a central axis of the access port 21and a horizontal plane ranges from 0° to 90°. In other words, the access port 21 may be moved between a horizontal position and a vertical position of the central axis thereof. Specifically, when the access port 21 is located at the non-washing position suitable for loading and unloading laundry, the central axis of the access port 21 may be oriented in a vertical direction; and when the access port 21 is located at the washing position suitable for washing laundry, the central axis of the access port 21 may be oriented in a horizontal direction. Thereby, it is convenient for the user to load and unload the laundry through the access port 21 from top, and also to wash the laundry by the rolling of the drum.

[0039] It can be understood by those skilled in the art that, the motion range of the access port 21 may be adjusted according to the actual conditions. For example, when the access port 21 is located at the non-washing position (as shown in Fig. 2), the central axis of the access port 21 may be inclined forwards from bottom to top, and thus it is convenient for the user to load and unload the laundry as well. When the access port 21 is located at the washing position (as shown in Fig. 4), the central axis of the access port 21 may be oriented at a predetermined angle with respect to the horizontal direction, in condition of ensuring the laundry in the drum to be washed in a rolling manner.

[0040] The front-loading washing machine 100 according to a specific example of the present disclosure is shown in Figs. 1-4. As shown in Figs. 1-5, the driving mechanism 50 includes a longitudinal pushrod 51 disposed at a front side of the tub 20, a transverse shaft 52 disposed at a rear side of and coupled to the tub 20, and a support frame 53 disposed in the cabinet 10 and having

a hole 531, in which the transverse shaft 52 may rotate in the hole 531 of the support frame 53. In this way, the tub 20 may be disposed rotatably to the support frame 53 by the transverse shaft 52, so that the access port 21 can be moved up and down in the opening 111; moreover, the tub 20 may be driven to move by the longitudinal pushrod 51, so as to achieve a position adjustment of the access port 21.

[0041] It could be understood that, a clearance fit between an outer circumferential surface of the tub 20 and the opening 111 is needed, so that the tub 20 can move up and down in the opening 111, and thus a position adjustment of the access port 21 in the up-and-down direction can be achieved. But, when the tub 20 moves up and down in the opening 111 or during the washing of the laundry, the tub 20 collides with the front panel 11 due to the clearance fit between the tub 20 and the front panel 11, thus bringing about an unpleasant sound. In addition, a fitting clearance between the tub 20 and the front panel 11 may influence an overall appearance of the front-loading washing machine 100, and also dust or some other objects may fall into the machine through the fitting clearance, thus affecting a normal operation of the front-loading washing machine 100. Furthermore, children may extend their hands into the fitting clearance, thus bringing about some potential security hazards.

[0042] Thus, in some embodiments of the present disclosure, the front-loading washing machine 100 may further include a flexible folded cover 12, and the flexible folded cover 12 is connected with the front panel 11 and the door unit 40 and configured to cover a gap between the door unit 40 and an edge of the opening 111. As shown in Fig. 2, the flexible folded cover 12 is disposed between the door unit 40 and the front panel 11, and an outer circumferential edge 122 of the flexible folded cover 12 is jointed with an inner circumferential wall of the opening 111. A through hole 123 is formed in the middle of the flexible folded cover 12, and the outer circumferential surface of the tub 20 is fitted with an inner circumferential wall of the through hole 123. In this way, when the tub 20 moves up and down, the tub 20 touches and is fitted with the flexible folded cover 12 directly. That is, when the tub 20 moves upwards, the tub 20 presses an upper part of the flexible folded cover 12 to make the upper part contract slowly, and a lower part of the flexible folded cover 12 gradually spreads out; when the tub 20 moves downwards, the tub 20 presses the lower part of the flexible folded cover 12 to makes the lower part contract slowly, and the upper part of the flexible folded cover 12 gradually spreads out.

[0043] Thus, in the front-loading washing machine 100 according to embodiments of the present disclosure, by providing the flexible folded cover 12 between the front panel 11 and the door unit 40, a seamless connection between the tub 20 and the front panel 11 is obtained, so as to prevent the tub 20 from directly touching the front panel 11 while the tub 20 is moving up and down, thus reducing the unpleasant sound generated during an operation of the front-loading washing machine 100 and improving the security and the appearance quality of the front-loading washing machine 100.

[0044] In some examples of the present disclosure, the flexible folded cover 12 has an annular shape and includes at least one annular folded portion extending along a circumferential direction of the flexible folded cover 12. An inner circumferential edge 121 of the flexible folded cover 12 is fixed with the door unit 40, and an outer circumferential edge 122 thereof is fixed with the front panel 11. As shown in Figs. 2 and 3, a radial dimension of the outer circumferential edge 122 of the flexible folded cover 12 is larger than a radial dimension of the inner circumferential edge 121 thereof. The inner circumferential edge 121 extends out from a front surface of the outer circumferential edge 122 so as to form a stepped structure. It should be noted that, "inner" and "outer" are defined in terms of a center of the flexible folded cover 12, in which "inner" means being close to the center of the flexible folded cover 12 and "outer" means being away from the center of the flexible folded cover 12.

[0045] Furthermore, the inner circumferential edge 121 of the flexible folded cover 12 is matched with an outer circumferential edge of the door unit 40 in shape, and the outer circumferential edge 122 of the flexible folded cover 12 is matched with an inner circumferential edge of the opening 111 in shape. Thus, the flexible folded cover 12 can be closely fitted with the door unit 40 and the opening 111 of the front panel 11 respectively, and it is ensured that the flexible folded cover 12 and the door unit 40 can move up and down along with the tub 20 synchronously.

[0046] In some embodiments of the present disclosure, as shown in Fig. 2, the door unit 40 may include a door base 42 and a door body 43 hinged to the door base 42, and the inner circumferential edge 121 of the flexible folded cover 12 is fixed with the door base 42. As shown in Fig. 3, a door hinge 41 is provided between the door base 42 and the door body 43, and the door body 43 may rotate about a central shaft of the door hinge 41. The inner circumferential edge 121 of the flexible folded cover 12 is fixed with the door base 42 by a clamp.

[0047] Furthermore, the outer circumferential edge 122 of the flexible folded cover 12 is fixed to the front panel 11 by a fixing ring 44 mounted on an inner surface of the front panel 11. The flexible folded cover 12 may be configured a rubber part. The rubber part has a relatively good elastic deformation capability. As shown in Fig. 3, a positioning flange 124 is provided at a rear end surface of the outer circumferential edge 122 of the flexible folded cover 12, and the positioning flange 124 is configured to be fitted with the fixing ring 44, so as to fix the flexible folded cover 12 to the front panel 11.

[0048] Other components and operations of the front-loading washing machine 100 according to embodiments of the present disclosure are known to those skilled in the related art, and thus will not be described in detail herein.

[0049] In the specification, it is to be understood that terms such as "central," "longitudinal," "lateral," "length," "width," "thickness," "upper," "lower," "front," "rear," "left," "right," "vertical," "horizontal," "top," "bottom," "inner," "outer," "clockwise," and "counterclockwise" should be construed to refer to the orientation as then described or as shown in the drawings under discussion. These relative terms are for convenience of description and do not require that the present disclosure be constructed or operated in a particular orientation.

[0050] In addition, terms such as "first" and "second" are used herein for purposes of description and are not intended to indicate or imply relative importance or significance or to imply the number of indicated technical features. Thus, the feature defined with "first" and "second" may comprise one or more of this feature. In the description of the present disclosure, "a plurality of" means two or more than two, unless specified otherwise.

[0051] In the present disclosure, unless specified or limited otherwise, the terms "mounted," "connected," "coupled," "fixed" and the like are used broadly, and may be, for example, fixed connections, detachable connections, or integral connections; may also be mechanical or electrical connections; may also be direct connections or indirect connections via intervening structures; may also be inner communications of two elements, which can be understood by those skilled in the art according to specific situations.

[0052] In the present disclosure, unless specified or limited otherwise, a structure in which a first feature is "on" or "below" a second feature may include an embodiment in which the first feature is in direct contact with the second feature, and may also include an embodiment in which the first feature and the second feature are not in direct contact with each other, but are contacted via an additional feature formed therebetween. Furthermore, a first feature "on," "above," or "on top of" a second feature may include an embodiment in which the first feature is right or obliquely "on," "above," or "on top of" the second feature, or just means that the first feature is at a height higher than that of the second feature; while a first feature "below," "under," or "on bottom of" a second feature may include an embodiment in which the first feature is right or obliquely "below," "under," or "on bottom of" the second feature, or just means that the first feature is at a height lower than that of the second feature.

[0053] Reference throughout this specification to "an embodiment," "some embodiments," "one embodiment", "another example," "an example," "a specific example," or "some examples," means that a particular feature, structure, material, or characteristic described in connection with the embodiment or example is included in at least one embodiment or example of the present disclosure. Thus, the appearances of the phrases such as "in some embodiments," "in one embodiment", "in an embodiment", "in another example," "in an example," "in a specific example," or "in some examples," in various places throughout this specification are not necessarily referring to the same embodiment or example of the present disclosure. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

[0054] Although explanatory embodiments have been shown and described, it would be appreciated by those skilled in the art that the above embodiments cannot be construed to limit the present disclosure, and changes, alternatives, and modifications can be made in the embodiments without departing from spirit, principles and scope of the present disclosure.

Claims

1. A front-loading washing machine (100), comprising:

a cabinet (10) having a front panel (11), wherein the front panel (11) is provided with an opening (111);
a tub (20) having an access port (21) for loading and unloading laundry, wherein the tub (20) is disposed in the cabinet (10) and configured in such a manner that the access port (21) is capable of being moved up and down in the opening (111);
a rotatable drum (30) disposed in the tub (20);
a door unit (40) mounted to the tub (20) and configured to cover the access port (21); and
a driving mechanism (50) provided in the cabinet (10), coupled with the tub (20) and configured to drive the tub (20) to rotate.

2. The front-loading washing machine (100) according to claim 1, wherein the driving mechanism (50) is configured to drive the access port (21) to move up and down between a washing position and a non-washing position in the opening (111).

3. The front-loading washing machine (100) according to claim 2, wherein when the access port (21) is located at the non-washing position, the access port (21) is driven to move close to an upper edge (112) of the front panel (11), and when the access port (21) is located at the washing position, the access port (21) is driven to move close to a lower edge (113) of the front panel (11).

4. The front-loading washing machine (100) according to claim 1, wherein the driving mechanism (50) is configured to drive the access port (21) to move upwards to close to an upper edge (112) of the front panel (11) and move downwards to close to a lower edge (113) of the front panel (11).

5. The front-loading washing machine (100) according to claim 1, wherein a motion range of the access port

(21) in the opening (111) is configured in such a manner that an included angle between a central axis of the access port (21) and a horizontal plane ranges from 0° to 90°.

6. The front-loading washing machine (100) according to claim 1 or 2, wherein the driving mechanism (50) includes:

a longitudinal pushrod (51) disposed at a front side of the tub (20);
a transverse shaft (52) disposed at a rear side of the tub (20) and coupled to the tub (20); and
a support frame (53) disposed in the cabinet (10) and having a hole (531), wherein the transverse shaft (52) is configured to rotate in the hole of the support frame (53).

7. The front-loading washing machine (100) according to claim 1, further comprising a flexible folded cover (12), connected with the front panel (11) and the door unit (40) and configured to cover a gap between the door unit (40) and an edge of the opening (111).

8. The front-loading washing machine (100) according to claim 7, wherein the flexible folded cover (12) has an annular shape and comprises at least one annular folded portion extending along a circumferential direction of the flexible folded cover (12), an inner circumferential edge (121) of the flexible folded cover (12) is fixed with the door unit (40) and an outer circumferential edge (122) thereof is fixed with the front panel (11).

9. The front-loading washing machine (100) according to claim 8, wherein the inner circumferential edge (121) of the flexible folded cover (12) is matched with an outer circumferential edge (122) of the door unit (40) in shape, and the outer circumferential edge (122) of the flexible folded cover (12) is matched with an inner circumferential edge (121) of the opening (111) in shape.

10. The front-loading washing machine (100) according to claim 8, wherein the door unit (40) comprises a door base (42) and a door body (43) hinged to the door base (42), and the inner circumferential edge (121) of the flexible folded cover (12) is fixed with the door base (42).

11. The front-loading washing machine (100) according to claim 10, wherein the inner circumferential edge (121) of the flexible folded cover (12) is fixed with the door base (42) by a clamp.

12. The front-loading washing machine (100) according to claim 8, wherein the outer circumferential edge (122) of the flexible folded cover (12) is fixed to the front panel (11) by a fixing ring (44) mounted on an inner surface of the front panel (11).

13. The front-loading washing machine (100) according to any one of claims 7-12, wherein the flexible folded cover (12) is configured as a rubber part.

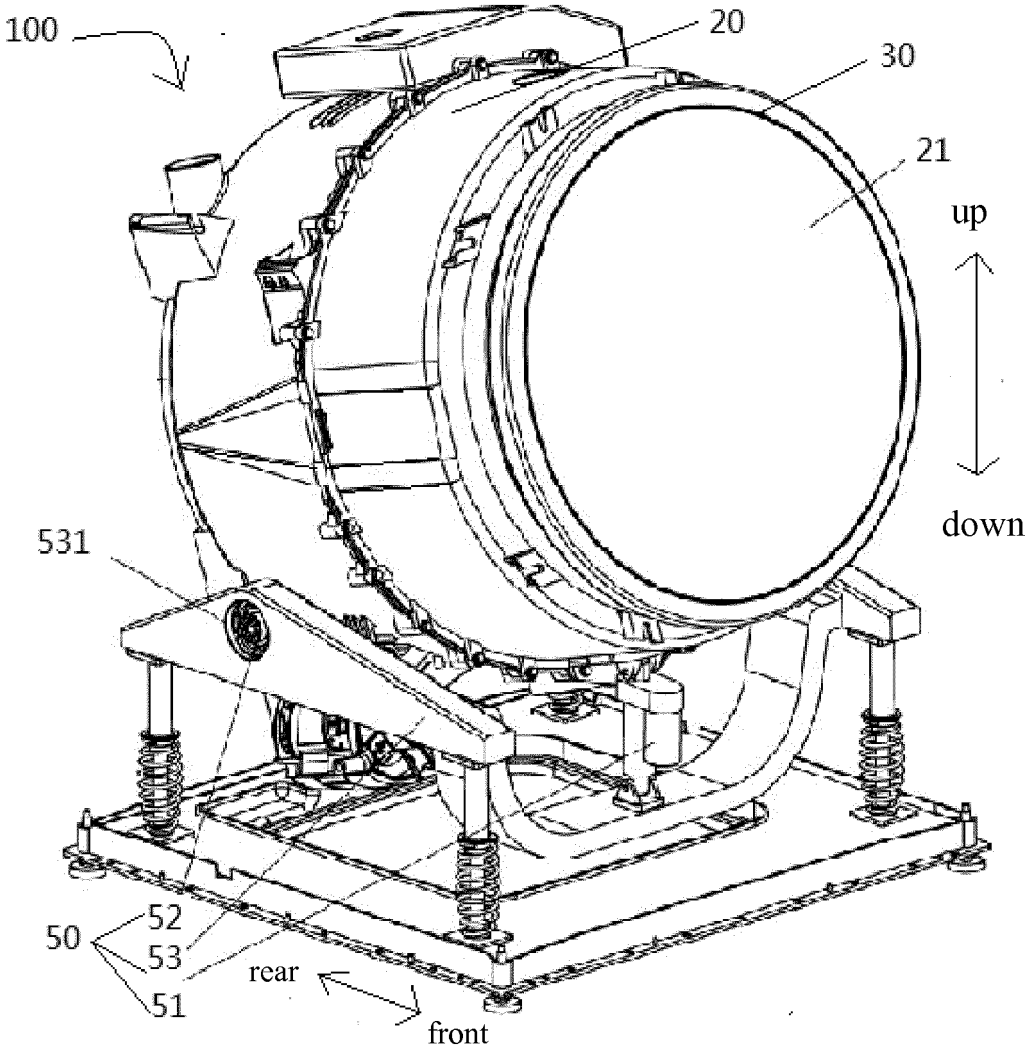

Fig. 1

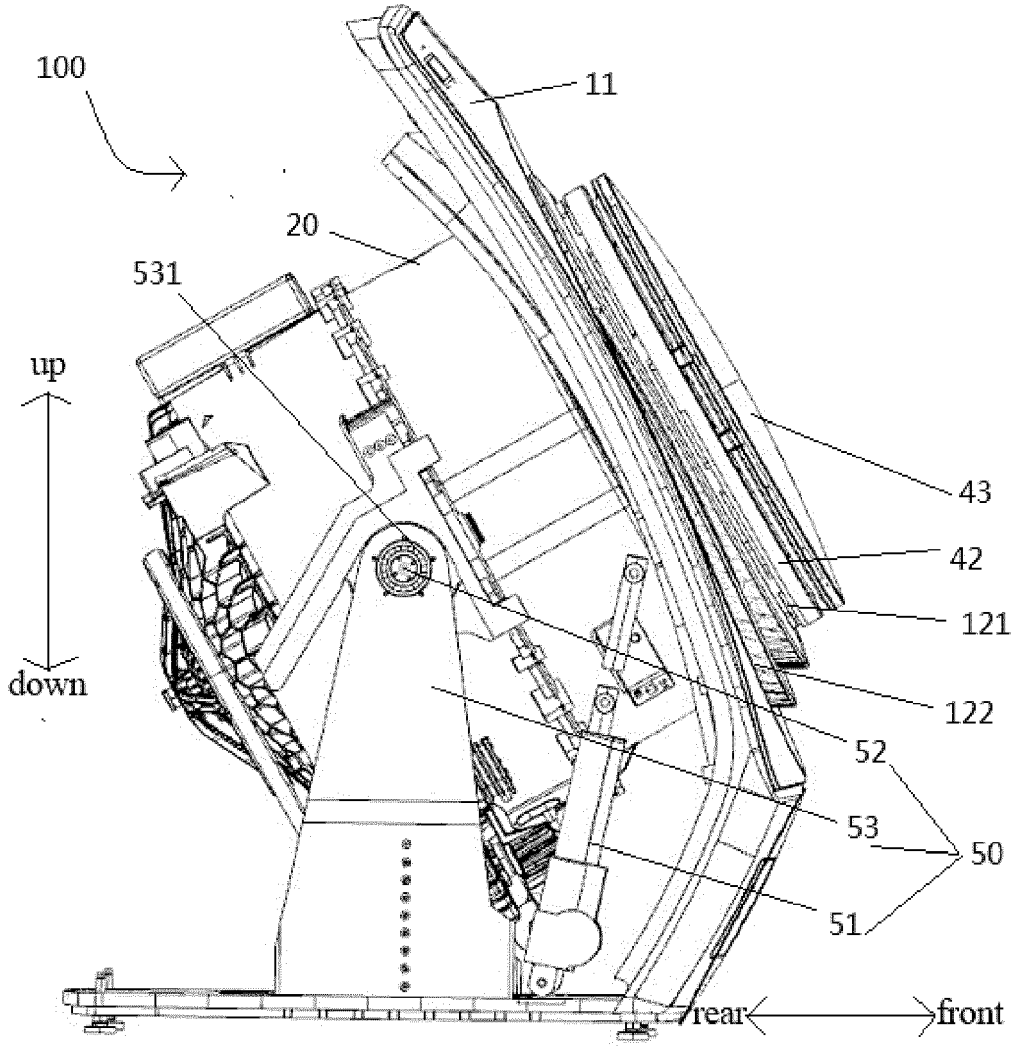

Fig. 2

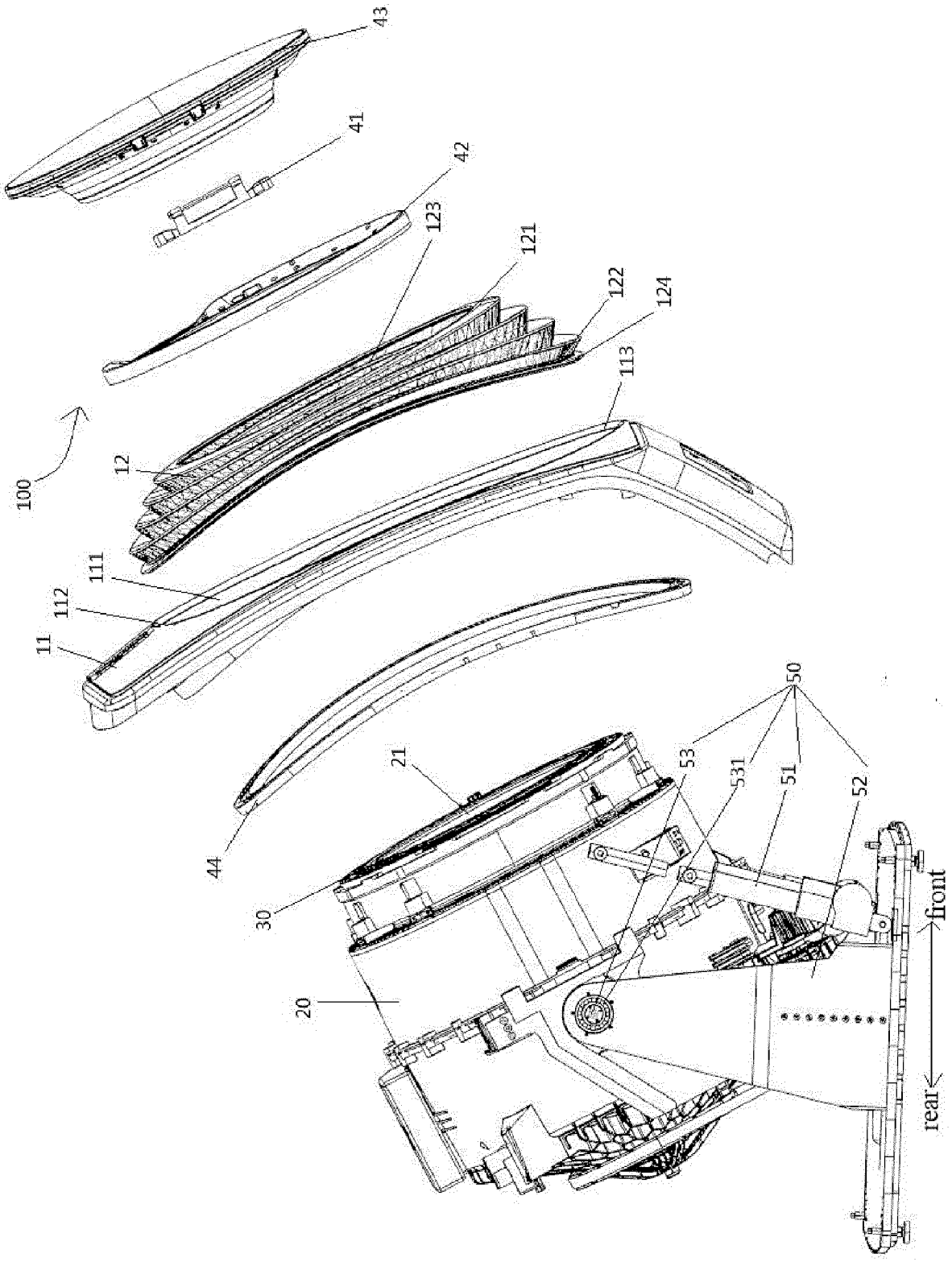
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Fig. 3

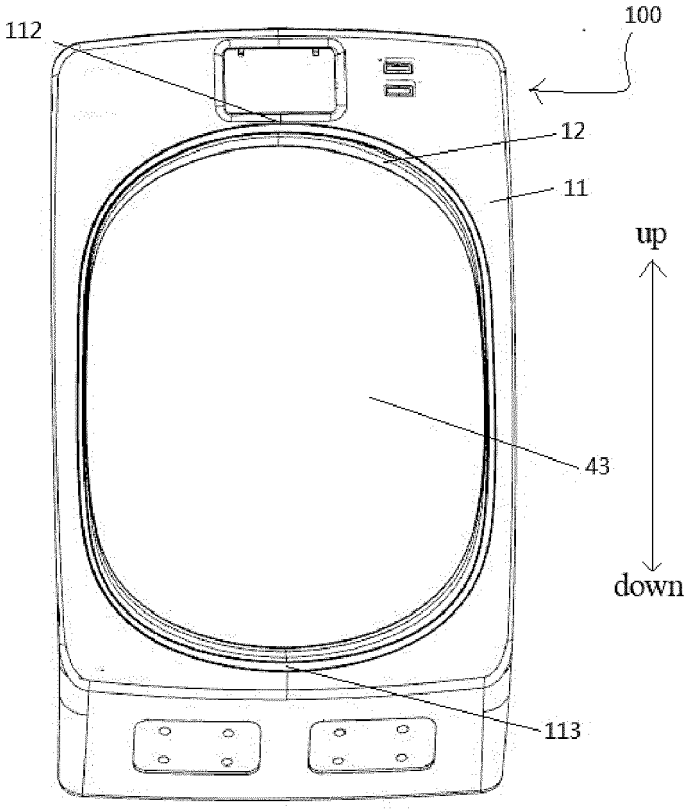

Fig. 4

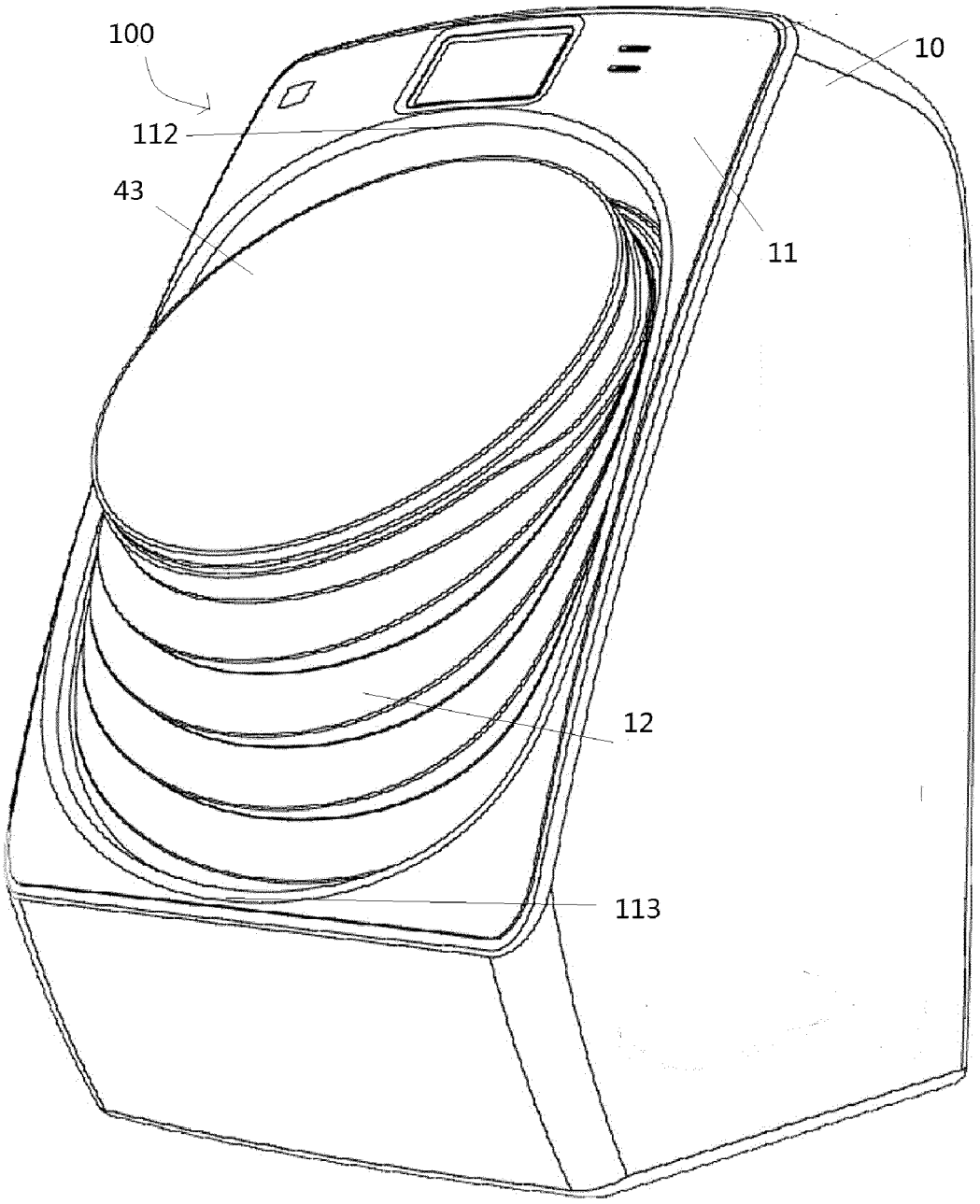

Fig. 5

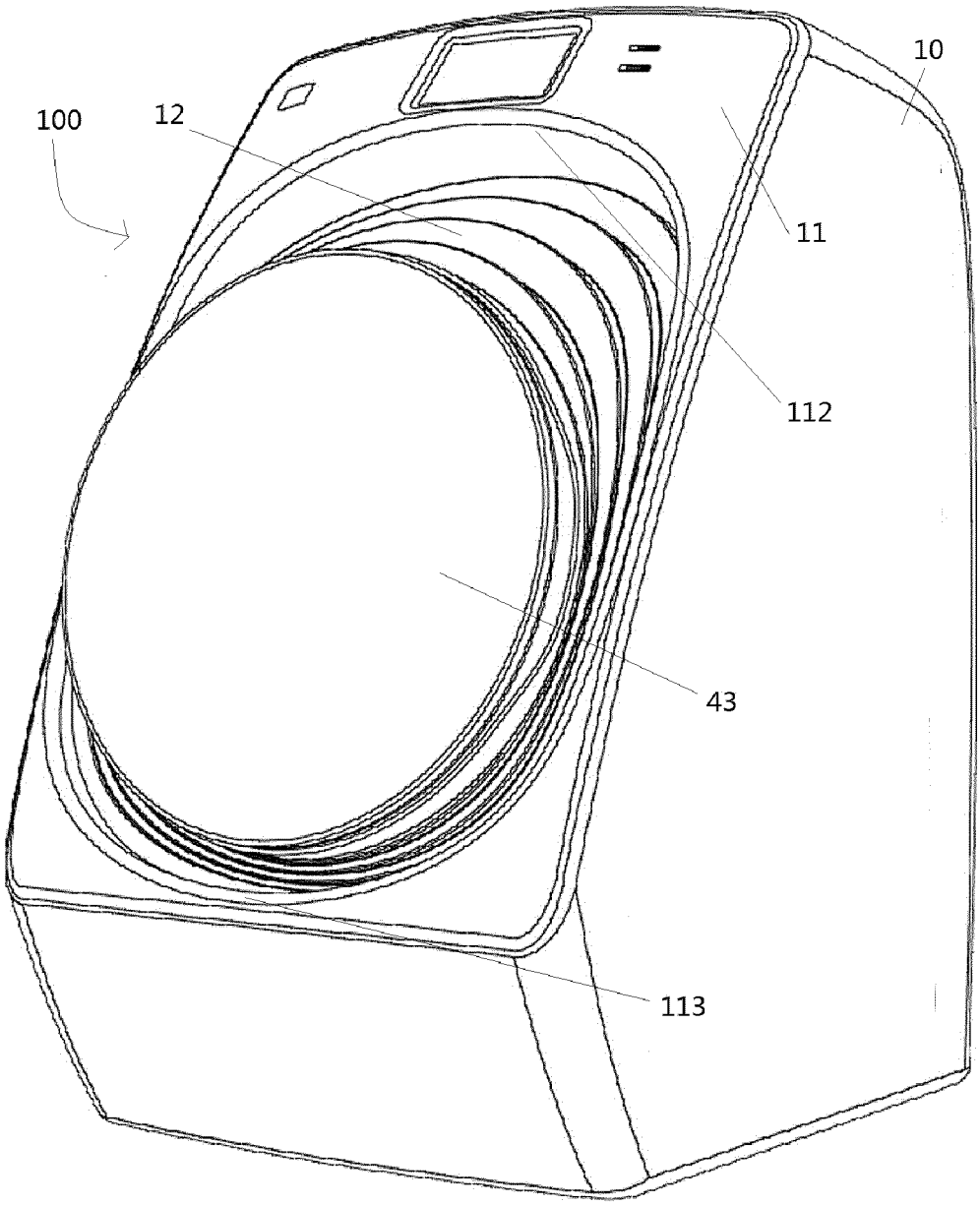

Fig. 6

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Application Number
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Place of search	Date of completion of the search	Examiner
Munich	25 January 2017	Clivio, Eugenio

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