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(54) **WASHING MACHINE**

WASCHMASCHINE

MACHINE À LAVER

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(73) Proprietor: **Wuxi Little Swan Co., Ltd.**
New District
Wuxi
Jiangsu 214028 (CN)

(72) Inventors:
• **YAO, Jiawang**
214028 Jiangsu (CN)
• **YU, Detao**
214028 Jiangsu (CN)
• **XU, Pengcheng**
214028 Jiangsu (CN)

(74) Representative: **Maiwald Patentanwalts GmbH**
Elisenhof
Elisenstrasse 3
80335 München (DE)

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Description

FIELD

[0001] The present invention relates to a washing machine.

BACKGROUND

[0002] For the first time, a brief electric door driven by a motor is provided by the present applicant in Chinese application No. 201520365984.3. Compared with manual door opening, electric door opening driven by the motor is an improvement which more meets the needs of the users.

[0003] In the brief electric door, a driving motor is mounted close to the center of the worktable and connected to a frame at a center of a window, a motor output shaft is fitted into a groove of the frame at the center of the window, and one damper is disposed at each of two ends of the window. In this solution, the driving motor is disposed at the center of the worktable, which affects arrangement efficiency of other electric devices in the worktable, such as a detergent dispenser.

[0004] US patent number 5, 724, 837 provides a clothes washer including a lid formed by a first member hinged to a housing of the clothes washer, and a second member hinged to the first member. The first and second members are folded together when the lid is opened, and are unfolded when the lid is closed. A motor-driven lid opening/closing mechanism is provided for opening and closing the lid. That mechanism includes a motor-driven rotary cam member mounted on the housing, and a following member fixed to the first member of the lid. During rotation in one direction, the cam member engages the following member to open the lid, and during rotation in the opposite direction, the cam member engages the following member to close the lid. When the lid is in the closed and open states, the cam member is disengaged from the following member to enable the lid to be manually opened and closed.

SUMMARY

[0005] Embodiments of the present invention seek to solve at least one of the problems existing in the related art to at least some extent.

[0006] Accordingly, an object of the present invention is to provide a washing machine. An improved electric door opening structure is provided by the washing machine, which may at least solve the problem of effectively arranging the worktable space to some extent.

[0007] The washing machine according to embodiments of the present invention includes a cabinet having a worktable, the worktable defining a port for putting into and taking out of laundry and having a work surface; a cover disposed on a top of the cabinet and having a cover frame with a cover frame edge, the cover being config-

ured to be pivotable about the cover frame edge for covering the port; and a driving assembly including a driving motor having a motor portion and a reducer portion, the driving motor being configured to drive the cover to pivot about the cover frame edge. The worktable defines a receiving space in at least one corner thereof for receiving the driving motor, and the reducer portion of the driving motor has an upwardly-extending ear adapted to protrude from the work surface of the worktable.

[0008] With the washing machine according to embodiments of the present invention, it is possible to realize a function of the electric door opening and improve an automation degree of the washing machine, and further improve experiences of users. Moreover, by disposing the driving motor at the corner of the worktable and extending the ear upwardly beyond the work surface of the worktable, the problem of the arrangement of the driving motor can be solved, and it is possible to further make the space arrangement of the worktable appropriate, and to reduce occupied space of the driving motor to facilitate the arrangement of other components (e.g., a detergent dispenser).

[0009] In addition, the washing machine according to embodiments of the present invention may further have additional characteristics. According to the present invention, the driving motor defines a driving shaft hole formed in the ear.

[0010] In some embodiments of the present invention, the ear is adapted to abut against an end surface of the cover frame edge.

[0011] In some embodiments of the present invention, the driving motor is a reduction motor.

[0012] In some embodiments of the present invention, the driving assembly further includes a one-way bearing, the cover frame has a bearing mounting portion at an end thereof, the one-way bearing defines a first end fixedly mounted within the bearing mounting portion of the cover and a second end opposite to the first end, the second end is adapted to connect with the driving motor, the driving motor is configured to drive the cover via the one-way bearing to pivot about the cover frame edge.

[0013] In some embodiments of the present invention, the one-way bearing includes an inner shaft portion connected to the driving motor and an outer ring portion fixedly mounted within the bearing mounting portion of the cover.

[0014] In some embodiments of the present invention, the one-way bearing is received in the bearing mounting portion and the inner shaft portion of the one-way bearing is extended out from an open end of the bearing mounting portion.

[0015] In some embodiments of the present invention, the driving motor defines a driving shaft hole, at least a part of the inner shaft portion is inserted into the driving shaft hole.

[0016] Additional aspects and advantages of embodiments of present invention will be given in part in the following descriptions, become apparent in part from the

following descriptions, or be learned from the practice of the embodiments of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] These and other aspects and advantages of embodiments of the present invention will become apparent and more readily appreciated from the following descriptions made with reference to the accompanying drawings, in which:

Fig. 1 is a schematic view of a washing machine according to an embodiment of the present invention, in which a port is closed by a cover;

Fig. 2 is a perspective view of a washing machine according to an embodiment of the present invention, in which a cover closes a port;

Fig. 3 is a perspective view of a washing machine according to an embodiment of the present invention, in which a cover opens a port;

Fig. 4 is a schematic assembly view of a cover, a driving motor and a bearing assembly of a washing machine according to an embodiment of the present invention;

Fig. 5 is an exploded view of a cover, a driving motor and a bearing assembly of a washing machine according to an embodiment of the present invention;

Fig. 6 is a schematic view of a driving motor and a bearing assembly of a washing machine according to an embodiment of the present invention;

Fig. 7 is a partial enlarged view of A region of Fig. 3.

DETAILED DESCRIPTION

[0018] Reference will be made in detail to embodiments of the present invention. The same or similar elements and the elements having same or similar functions are denoted by like reference numerals throughout the descriptions. The embodiments described herein with reference to drawings are explanatory, illustrative, and used to generally understand the present invention. The embodiments shall not be construed to limit the present invention.

[0019] In the specification, unless specified or limited otherwise, relative terms such as "central", "longitudinal", "lateral", "front", "rear", "right", "left", "inner", "outer", "lower", "upper", "horizontal", "vertical", "above", "below", "up", "top", "bottom", "inner", "outer", "clockwise", "anticlockwise" as well as derivative thereof (e.g., "horizontally", "downwardly", "upwardly", etc.) 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 invention be constructed or operated in a particular orientation. 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. Thus, features limited

by "first" and "second" are intended to indicate or imply including one or more than one these features. In the description of the present invention, "a plurality of" relates to two or more than two.

[0020] In the description of the present invention, unless specified or limited otherwise, it should be noted that, terms "mounted," "connected" "coupled" and "fastened" may be understood broadly, such as permanent connection or detachable connection, electronic connection or mechanical connection, direct connection or indirect connection via intermediary, inner communication or inter reaction between two elements. These having ordinary skills in the art should understand the specific meanings in the present invention according to specific situations.

[0021] In the description of the present invention, a structure in which a first feature is "on" a second feature may include an embodiment in which the first feature directly contacts the second feature, and may also include an embodiment in which an additional feature is formed between the first feature and the second feature so that the first feature does not directly contact the second feature, unless otherwise specified. Furthermore, a first feature "on," "above," or "above" a second feature may include an embodiment in which the first feature is right "on," "above," or "above" the second feature, and may also include an embodiment in which the first feature is not right "on," "above," or "above" the second feature, or just means that the first feature has a sea level elevation larger than the sea level elevation of the second feature. While first feature "beneath," "below," or "on bottom of" a second feature may include an embodiment in which the first feature is right "beneath," "below," or "on bottom of" the second feature, and may also include an embodiment in which the first feature is not right "beneath," "below," or "on bottom of" the second feature, or just means that the first feature has a sea level elevation smaller than the sea level elevation of the second feature.

[0022] A washing machine 100 according to embodiments of the present invention will be described below with reference to Fig. 1 to Fig. 7.

[0023] The washing machine 100 according to embodiments of the present invention may include: a cabinet 10, a cover 20 and a driving assembly 50. As shown in Fig. 3, the cabinet 10 has a worktable 13 which defines a port 11 for putting into and taking out of laundry. Specifically, as shown in Fig. 1 to Fig. 3, the worktable 13 has a work surface 14, and a button for controlling the washing machine 100 may be disposed at a periphery of the work surface 14. The cover 20 is disposed on a top of the cabinet 10 and has a cover frame 21 with a cover frame edge. The cover 20 is configured to be pivotable about the cover frame edge for covering the port 11. The driving assembly 50 includes a driving motor 30, and configured to drive the cover 20 to pivot about the cover frame edge. That is, the driving assembly 50 may drive the cover 20 to rotate around the cover frame edge to open or close the port 11. It should be understood that,

by providing the driving assembly 50, the washing machine 100 may realize a function of the electric cover opening, so as to improve an automation degree of the washing machine 100, and further improve experiences of users. Alternatively, the driving motor 30 may be a reduction motor.

[0024] As shown in Fig. 1 and Fig. 2, the cover 20 can close the port 11. When the washing machine 100 is working, the cover 20 closes the port 11 to ensure that the washing machine works normally. Alternatively, when the washing machine 100 is not working, the cover 20 closes the port 11 to prevent foreign objects from entering into the interior of the washing machine 100 via the port 11, so as to protect the washing machine 100 to at least some extent. As shown in Fig. 3, the cover 20 can open the port 11, after clothes have been washed by the washing machine 100, the cover 20 may open the port 11, so as to take out the clothes for drying.

[0025] As shown in Fig. 7, a receiving space for receiving the driving motor 30 is formed in at least one corner of the worktable 13. It should be understood that, by disposing the driving motor 30 at the corner of the worktable 13, the problem of the arrangement of the driving motor 30 can be solved, and it is possible to further make the space arrangement of the worktable 13 appropriate, and to reduce occupied space of the driving motor 30 to facilitate the arrangement of other components (e.g., a detergent dispenser).

[0026] Specifically, the driving motor 30 has a motor portion 33 and a reducer portion 32, the reducer portion 32 of the driving motor 30 has an upwardly-extending ear 31 adapted to protrude from said work surface of the worktable 13, i.e. the ear 31 being extended upwardly beyond the work surface 14 of the worktable 13. It should be understood that the ear 31 is not disposed in or under the worktable 13, so that the space of the worktable 13 occupied by the driving motor 30 may be effectively reduced, which may further make the space arrangement of the worktable 13 appropriate to improve the utilization rate of the space of the worktable 13.

[0027] Therefore, with the washing machine 100 according to the present invention, it is possible to realize a function of the electric cover opening and improve an automation degree of the washing machine 100, and further improve experiences of users. Moreover, by disposing the driving motor 30 at the corner of the worktable 13 and extending the ear 31 upwardly beyond the work surface 14 of the worktable 13, the problem of the arrangement of the driving motor 30 can be solved, and it is possible to further make the space arrangement of the worktable 13 appropriate, and to reduce occupied space of the driving motor 30 to facilitate the arrangement of other components (e.g., a detergent dispenser). The driving motor 30 defines a driving shaft hole (not shown), and the driving shaft hole is formed in the ear 31. The driving motor 30 is connected to a component of the cover 20 at the driving shaft hole, so that the driving motor 30 may be configured to drive the cover 20 to pivot about

the cover frame edge.

[0028] In some embodiments of the present invention, as shown in Fig. 6, the driving assembly 50 further includes an one-way bearing 40, the cover frame 21 has a bearing mounting portion 22 at an end thereof, the one-way bearing 40 has a first end fixedly mounted within the bearing mounting portion 22 of the cover 20 and a second end opposite to the first end and connected to the driving motor 30, the driving motor 30 is configured to drive the cover 20 via the one-way bearing 40 to pivot about the cover frame edge.

[0029] It should be understood that when the driving motor 30 is working, it may drive the one-way bearing 40 to move. Because the one-way bearing 40 is fixed on the bearing mounting portion 22, the cover 20 and the one-way bearing 40 move synchronously, that is, the driving motor 30 may make the cover 20 open the port 11 by driving the one-way bearing 40. As shown in Fig. 3 to Fig. 5, the bearing mounting portion 22 is disposed at the cover frame 21 at the rear end of the cover 20, so as to rotate the cover 20 around the cover frame 21 as the pivotal axis. By providing the driving motor 30 and the one-way bearing 40, the cover 20 is easy to rotate, which further simplifies the structure of the washing machine 100. Alternatively, the driving motor 30 may be a reduction motor. It should be understood that, the reduction motor may reduce the output rotation rate to keep the opening rate of the cover 20 driven by the driving motor 30 to be moderate.

[0030] Specifically, when the cover 20 needs to close the port 11, the driving motor 30 may drive the cover 20 to rotate around the cover frame 21 via the one-way bearing 40 to close the port 11.

[0031] In some embodiments, the cabinet 10 of the washing machine 100 may be provided with a control button for opening or closing the cover 20. The control button is connected with the driving motor 30, and the user only needs to press the control button to realize the motion of opening or closing the cover 20, thus further improving an automation degree of the washing machine 100 and experiences of users.

[0032] In addition, in the closing process of the washing machine 100, it is possible to further complete the process of closing the cover 20 by pressing with manpower, and the details are described as follows. Alternatively, as shown in Fig. 6, the one-way bearing 40 includes an inner shaft portion 41 connected to the driving motor 30 and an outer ring portion 42 fixedly mounted within the bearing mounting portion 22 of the cover 20. When the driving motor 30 drives the one-way bearing 40 to open the cover 20, the inner shaft portion 41 and the outer ring portion 42 move in the same direction, so that the outer ring portion 42 may drive the cover 20 to rotate around the cover frame 21, so as to enable the cover 20 to open the port 11. When the driving motor 30 drives the one-way bearing 40 to close the cover 20, the driving motor 30 drives the inner shaft portion 41 to rotate, and the cover 20 associated with the outer ring portion 42 moves

downwardly under the effect of its own gravity to close the port 11. The difference between the technical effect achieved using the one-way bearing in the electric cover of the present invention and the technical effect achieved without using the one-way bearing in the related art will be described in detail as follows.

[0033] In the related art, when the cover is only driven by the driving motor without any one-way bearing, if the driving motor is driven to rotate to a first direction, the cover rotates to the first direction and the first direction is set to be a direction of opening the cover; if the driving motor is driven to rotate to a second direction, the cover rotates to the second direction and the second direction is set to be a direction of closing the cover.

[0034] However, when the driving motor 30 according to embodiments of the present invention drives the cover 20 via the one-way bearing 40, if the driving motor 30 is driven to rotate to a first direction, the cover 20 rotates to the first direction and the first direction is set to be a direction of opening the cover; if the driving motor 30 is driven to rotate to a second direction, the one-way bearing 40 and the inner shaft portion 41 connected to the driving motor 30 rotate to the second direction, the one-way bearing 40 and the outer ring portion 42 connected to the cover 20 will not rotate if the cover 20 is not mounted. However, the cover 20 is mounted to the outer ring portion 42, under the gravity of the cover 20, the outer ring portion 42 following the inner shaft portion 41 rotates to the second direction, so that the cover 20 connected to the outer ring portion 42 falls down or becomes closed under the gravity of the cover 20. If there is an obstacle such as human hand or foreign object during the process of closing the cover 20, despite the inner shaft portion 41 of the one-way bearing 40 rotates under the drive of the driving motor 30, the outer ring portion 42 may stop rotating because of the effect of the one-way bearing 40, and thus the cover 20 connected to the outer ring portion 42 may stop falling or be stopped, which prevents the problem of clamping hand of the user by the cover 20, thus improving use safety of the washing machine 100. When the cover 20 is no more obstructed by the hand and foreign object, it will continue to fall down under the gravity effect to complete the motion of closing the cover. Therefore, the use of the one-way bearing 40 on the driving motor 30 can prevent the problem of clamping hands.

[0035] Obviously, during the process of closing the cover 20, if human hand presses further, the cover 20 will be closed faster under pressure.

[0036] It should be understood that, the one-way bearing 40 and the driving motor 30 are connected to be used, which is used for the electric cover of the washing machine for the first time, and solves the problem of clamping hands by the electric cover.

[0037] Alternatively, because of an open end of the bearing mounting portion 22, the driving motor 30 and the inner shaft portion 41 of the one-way bearing 40 are easily connected. The one-way bearing 40 is entirely received in the bearing mounting portion 22 and the inner

shaft portion 41 of the one-way bearing 40 is extended out from an open end of the bearing mounting portion 22. By receiving the entire one-way bearing 40 in the bearing mounting portion 22, it is possible to improve the reliability of mounting the one-way bearing 40 on the cover 20. A part of the inner shaft portion 41 extending out from the bearing mounting portion 22 may be connected to the driving motor 30.

[0038] Alternatively, as shown in Fig. 6, the outer ring portion 42 of the one-way bearing 40 may be provided with a positioning step 43 for locating a position with the bearing mounting portion 22 and an elastic boss 44 for elastically pressing an inner wall surface of the bearing mounting portion 22. By providing the positioning step 43 and the elastic boss 44, the one-way bearing 40 may be detachably mounted on the bearing mounting portion 22, so as to facilitate the mounting and dismounting of the one-way bearing 40, and to maintain and replace the one-way bearing 40 in the later period. Moreover, by providing the elastic boss 44, the mounting difficulty of mounting the one-way bearing 40 onto the bearing mounting portion 22 may be reduced, and the mounting stability of the one-way bearing 40 at the bearing mounting portion 22 may be improved. Specifically, the positioning step 43 and the elastic boss 44 can be spaced apart in an axial direction of the outer ring portion 42 (that is, a left-right direction shown in Fig. 6), in which each bearing mounting portion 22 is provided with a groove engaged with the positioning step 43 and another groove engaged with the elastic boss 44.

[0039] Alternatively, the driving motor 30 defines a driving shaft hole (not shown), and at least a part of the inner shaft portion 41 is inserted into the driving shaft hole. The driving motor 30 is provided with a ear 31 extended upwardly in a radial direction of the driving motor 30, and the driving shaft hole is formed in the ear 31. That is, the inner shaft portion 41 is extended into the ear 31 to cooperate with the driving shaft hole, so that the driving motor 30 is connected to the inner shaft portion 41. As shown in Fig. 4, the ear 31 can be abutted against an end surface of the end of the bearing mounting portion 22. Specifically, the ear 31 can be abutted against an end surface of an end of the bearing mounting portion 22 extending out from a part of the inner shaft portion 41, and by attaching the ear 31 to the end surface of the end of the bearing mounting portion 22, the driving motor 30 may cooperate with the one-way bearing 40 steadily, and the structure may be compact, which may further save space and improve the space utilization efficiency of the washing machine 100.

[0040] 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 invention. 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 invention. Furthermore, the particular features, structures, materials, or characteristics may be combined in any suitable manner in one or more embodiments or examples.

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 invention, and changes, alternatives, and modifications can be made in the embodiments without departing from principles and scope of the present invention.

Claims

1. A washing machine (100), comprising:

a cabinet (10) having a worktable (13), said worktable (13) defining a port (11) for putting into and taking out of laundry and having a work surface (14);

a cover (20) disposed on a top of the cabinet (10) and having a cover frame (21) with a cover frame edge, said cover being configured to be pivotable about said cover frame edge for covering the port; and

a driving assembly (50) comprising a driving motor (30) having a motor portion (33) and a reducer portion (32), said driving motor (30) being configured to drive the cover (20) to pivot about the cover frame edge, the worktable (13) defines a receiving space in at least one corner thereof for receiving the driving motor (30);

wherein the reducer portion of the driving motor (30) has an upwardly-extending ear (31) adapted to protrude from said work surface (14) of the worktable (13), and the driving motor (30) defines a driving shaft hole formed in the ear (31), wherein the driving motor (30) may be connected to a component of the cover (20) at the driving shaft hole, so that the driving motor (30) may be configured to drive the cover (20) to pivot about the cover frame edge.

2. The washing machine (100) according to claim 1, wherein the ear (31) is adapted to abut against an end surface of the cover frame edge.

3. The washing machine (100) according to claim 1, wherein the driving motor (30) is a reduction motor.

4. The washing machine (100) according to any one of claims 1-3, wherein the driving assembly (50) further

comprises an one-way bearing (40), the cover frame (21) has a bearing mounting portion (22) at an end thereof, the one-way bearing (40) defines a first end fixedly mounted within the bearing mounting portion (22) of the cover (20) and a second end opposite to the first end, said second end is adapted to connect with the driving motor (30), the driving motor (30) is configured to drive the cover (20) via the one-way bearing (40) to pivot about the cover frame edge.

5. The washing machine (100) according to claim 4, wherein the one-way bearing (40) comprises an inner shaft portion (41) connected to the driving motor (30) and an outer ring portion (42) fixedly mounted within the bearing mounting portion (22) of the cover (20).

6. The washing machine (100) according to claim 5, wherein the one-way bearing (40) is received in the bearing mounting portion (22) and the inner shaft portion (41) of the one-way bearing (40) is extended out from an open end of the bearing mounting portion (22).

7. The washing machine (100) according to claim 5, wherein the driving motor (30) defines a driving shaft hole, at least a part of the inner shaft portion (41) is inserted into the driving shaft hole.

Patentansprüche

1. Waschmaschine (100), aufweisend:

ein Gehäuse (10) mit einem Arbeitstisch (13), wobei der Arbeitstisch (13) eine Öffnung (11) zum Hineinlegen und Herausnehmen von Wäsche definiert und eine Arbeitsfläche (14) aufweist;

eine Abdeckung (20), welche auf einer Oberseite des Gehäuses (10) angeordnet ist und einen Abdeckrahmen (21) mit einer Abdeckrahmenkante aufweist, wobei die Abdeckung dazu eingerichtet ist, drehbar um die Abdeckrahmenkante zu sein, um die Öffnung abzudecken; und

eine Antriebsanordnung (50), einem Antriebsmotor (30) aufweisend, welcher einem Motorabschnitt (33) und einen Reduzierabschnitt (32) aufweist, wobei der Antriebsmotor (30) eingerichtet ist, die Abdeckung (20) anzutreiben, sich um die Abdeckrahmenkante zu drehen, wobei der Arbeitstisch (13) einen Aufnahmeraum, in wenigstens einer Ecke hiervon, zum Aufnehmen des Antriebsmotors (30) definiert; wobei der Reduzierabschnitt des Antriebsmotors (30) eine aufwärts gerichtete Öse (31) aufweist, welche geeignet ist, aus der Arbeitsfläche

- (14) des Arbeitstisches (13) vorzustehen, und der Antriebsmotor (30) ein in der Öse (31) ausgebildetes Antriebswellenloch definiert, wobei der Antriebsmotor (30) über das Antriebswellenloch mit einer Komponente der Abdeckung (20) verbunden sein kann, sodass der Antriebsmotor (30) dazu eingerichtet sein kann, die Abdeckung (20) anzutreiben, sich um die Abdeckrahmenkante zu drehen.
2. Waschmaschine (100) gemäß Anspruch 1, wobei die Öse (31) dazu geeignet ist, an einer Endfläche der Abdeckrahmenkante anzuschlagen.
3. Waschmaschine (100) gemäß Anspruch 1, wobei der Antriebsmotor (30) ein Reduktionsmotor ist.
4. Waschmaschine (100) gemäß einem der Ansprüche 1-3, wobei die Antriebsanordnung (50) ferner ein Einweglager (40) aufweist, der Abdeckrahmen (21), an einem Ende hiervon, einen Lagerbefestigungsabschnitt (22) aufweist, das Einweglager (40) ein erstes Ende definiert, welches fest innerhalb des Lagerbefestigungsabschnitts (22) der Abdeckung (20) montiert ist, und ein zweites Ende gegenüber dem ersten Ende, wobei das zweite Ende dazu geeignet ist, sich mit dem Antriebsmotor (30) zu verbinden, wobei der Antriebsmotor (30) dazu eingerichtet ist, die Abdeckung (20) über das Einweglager (40) anzutreiben, sich um die Abdeckrahmenkante zu drehen.
5. Waschmaschine (100) gemäß Anspruch 4, wobei das Einweglager (40) einen inneren Wellenabschnitt (41), welcher mit dem Antriebsmotor (30) verbunden ist, und einen äußeren Ringabschnitt (42), welcher fest innerhalb des Lagerbefestigungsabschnitts (22) der Abdeckung (20) montiert ist, aufweist.
6. Waschmaschine (100) gemäß Anspruch 5, wobei der Einweglager (40) durch den Lagerbefestigungsabschnitt (22) aufgenommen wird, und wobei sich der innere Wellenabschnitt (41) des Einweglagers (40) von einem offenen Ende des Lagerbefestigungsabschnitts (22) erstreckt.
7. Waschmaschine (100) gemäß Anspruch 5, wobei der Antriebsmotor (30) ein Antriebswellenloch definiert, wobei zumindest einen Teil des inneren Wellenabschnitts (41) in das Antriebswellenloch eingeführt ist.
- Revendications**
1. Une machine à laver (100) comprenant :
- une enveloppe (10) comportant une table de travail (13), ladite table de travail (13) définissant un orifice (11) mettre et sortir du linge et ayant une surface de travail (14) ;
- un couvercle (20) disposé sur une partie supérieure de l'enveloppe (10) et ayant un châssis de couverture (21) avec un bord de châssis de couverture, ledit couvercle étant configuré pour pivoter autour dudit bord de châssis de couverture de façon à recouvrir l'orifice ; et
- un ensemble d'entraînement (50) comprenant un moteur d'entraînement (30) ayant une partie moteur (33) et une partie réducteur (32), ledit moteur d'entraînement (30) étant configuré pour entraîner le couvercle (20) à pivoter autour du bord du châssis de de couverture, la table de travail (13) définissant un espace de réception dans au moins un coin d'elle-même pour recevoir le moteur d'entraînement (30) ;
- la partie réductrice du moteur d'entraînement (30) comportant une oreille (31) s'étendant vers le haut, adaptée pour faire saillie de ladite surface de travail (14) de la table de travail (13), et le moteur d'entraînement (30) définissant un trou pour arbre d'entraînement formé dans l'oreille (31), le moteur d'entraînement (30) étant apte à être relié à un composant du couvercle (20) au niveau du trou pour arbre d'entraînement, de sorte que le moteur d'entraînement (30) est apte à être configuré pour entraîner le couvercle (20) à pivoter autour du bord du châssis de couvercle.
2. La machine à laver (100) selon la revendication 1, dans laquelle l'oreille (31) est adaptée pour venir en butée contre une surface d'extrémité du bord du châssis de couvercle.
3. La machine à laver (100) selon la revendication 1, dans laquelle le moteur d'entraînement (30) est un moteur de réduction.
4. La machine à laver (100) selon l'une quelconque des revendications 1 à 3, dans laquelle l'ensemble d'entraînement (50) comprend en outre un palier unidirectionnel (40), le châssis de couverture (21) comporte une partie (22) de montage de palier à une extrémité de lui-même, le palier unidirectionnel (40) définit une première extrémité montée fixement à l'intérieur de la partie (22) de support de palier que comprend le couvercle (20) et une deuxième extrémité opposée à la première extrémité, ladite deuxième extrémité est adaptée pour être reliée au moteur d'entraînement (30), le moteur d'entraînement (30) est configuré pour entraîner le couvercle (20) par l'intermédiaire du palier unidirectionnel (40) de façon qu'il pivote autour du bord du châssis de couvercle.
5. La machine à laver (100) selon la revendication 4,

dans laquelle le palier unidirectionnel (40) comprend une partie d'arbre interne (41) reliée au moteur d'entraînement (30) et une partie (42) formant un anneau externe montée de façon fixe dans la partie (22) de montage de palier que comprend le couvercle (20). 5

6. La machine à laver (100) selon la revendication 5, dans laquelle le palier unidirectionnel (40) est reçu dans la partie (22) de montage de palier et la partie d'arbre interne (41) du palier unidirectionnel (40) s'étend depuis une extrémité ouverte de la partie (22) de montage de palier. 10

7. La machine à laver (100) selon la revendication 5, dans laquelle le moteur d'entraînement (30) définit un trou d'arbre d'entraînement, au moins une partie de la partie d'arbre interne (41) étant insérée dans le trou d'arbre d'entraînement. 15

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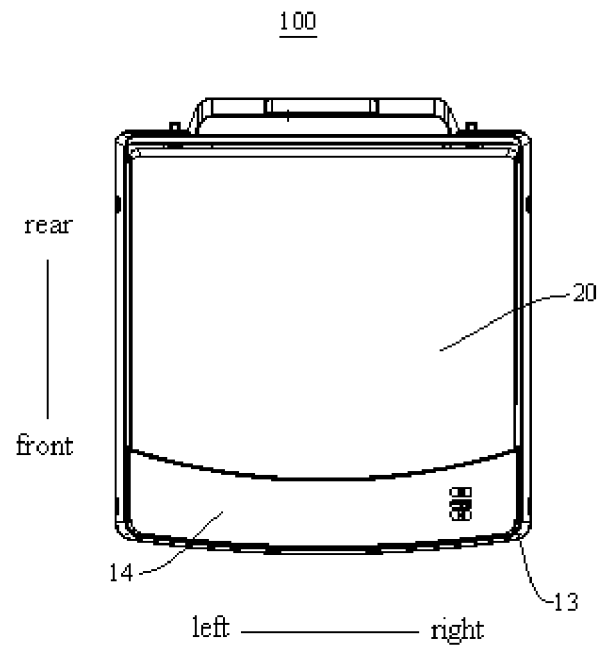


Fig. 1

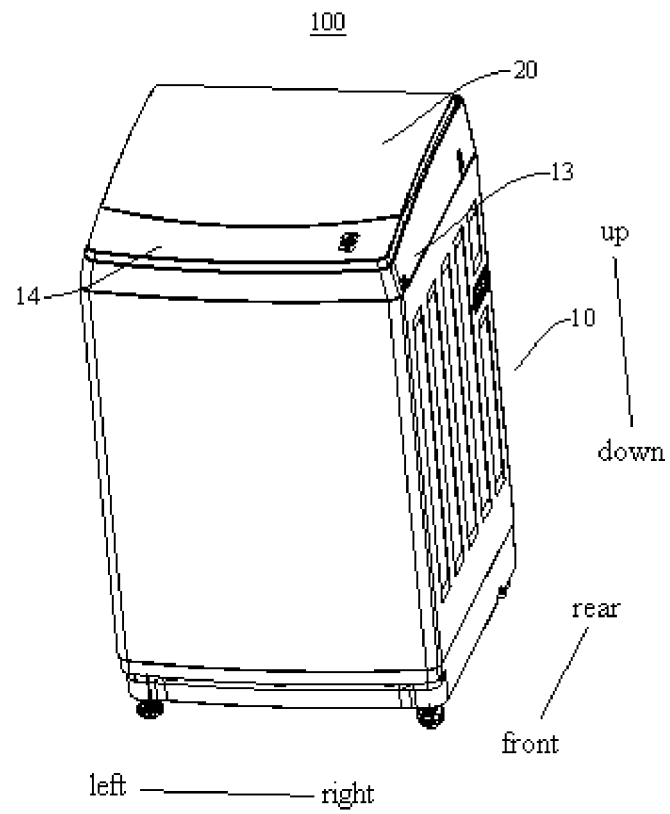


Fig. 2

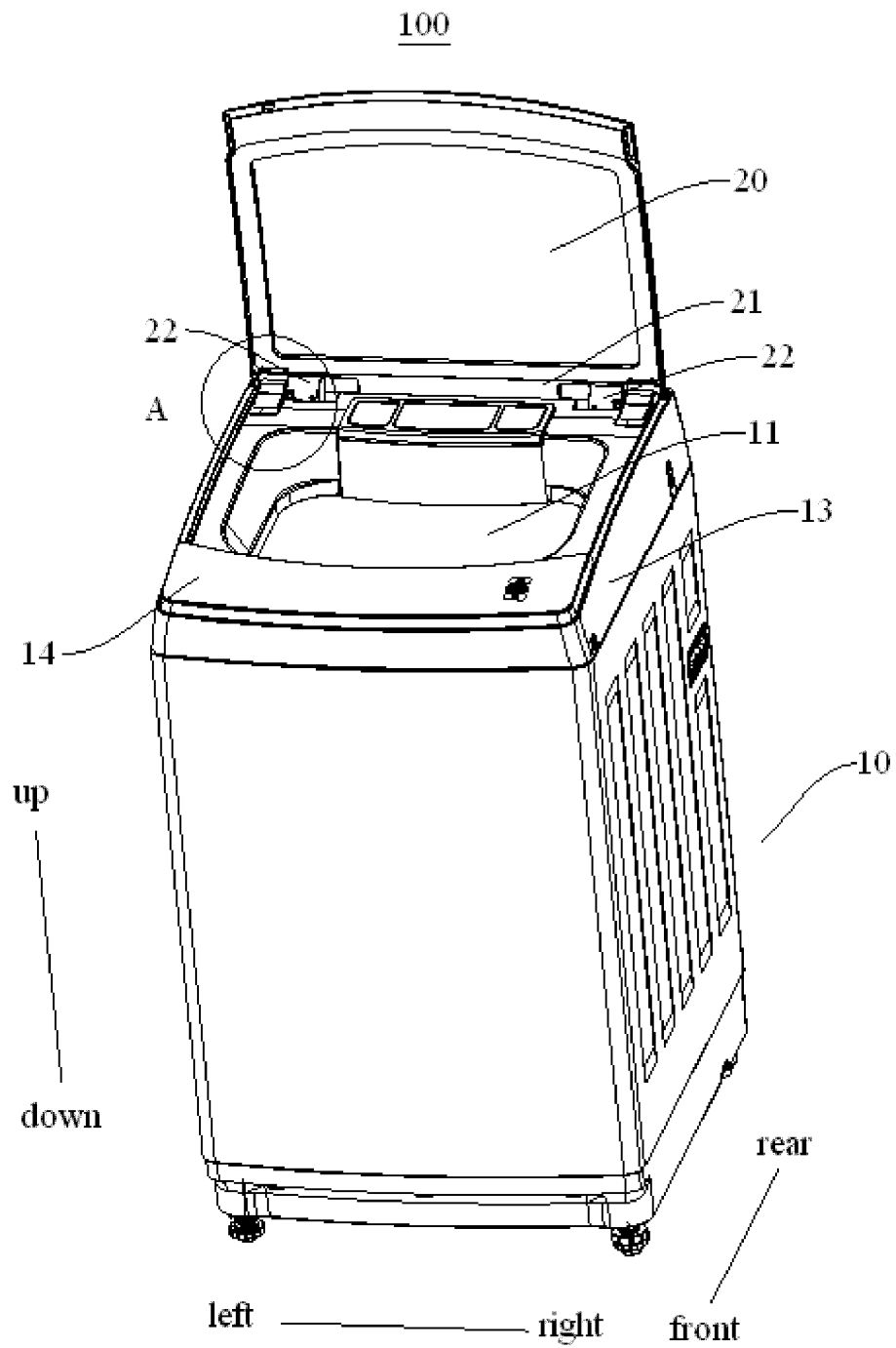


Fig. 3

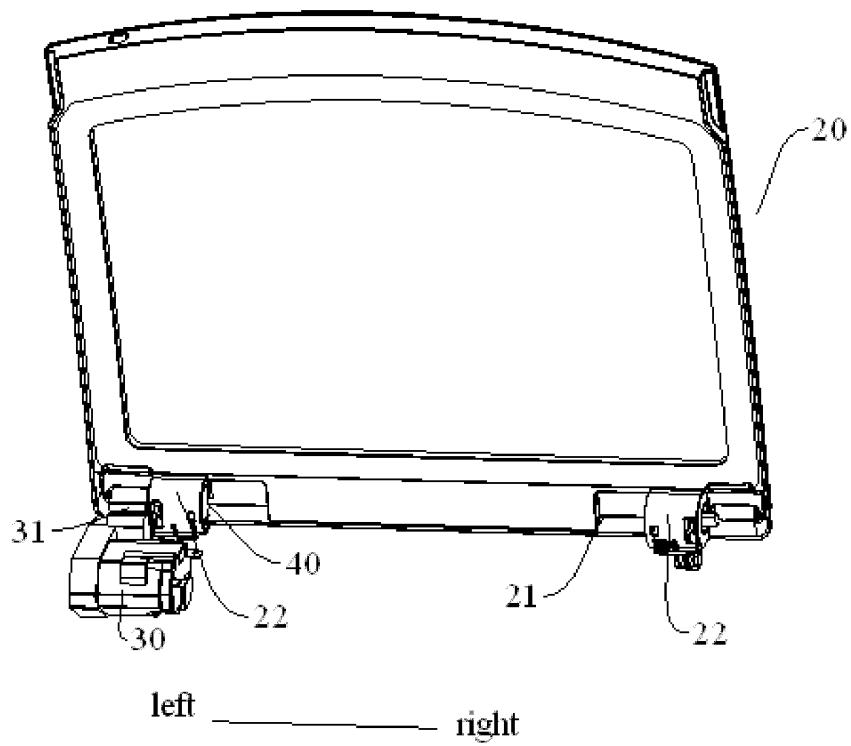


Fig. 4

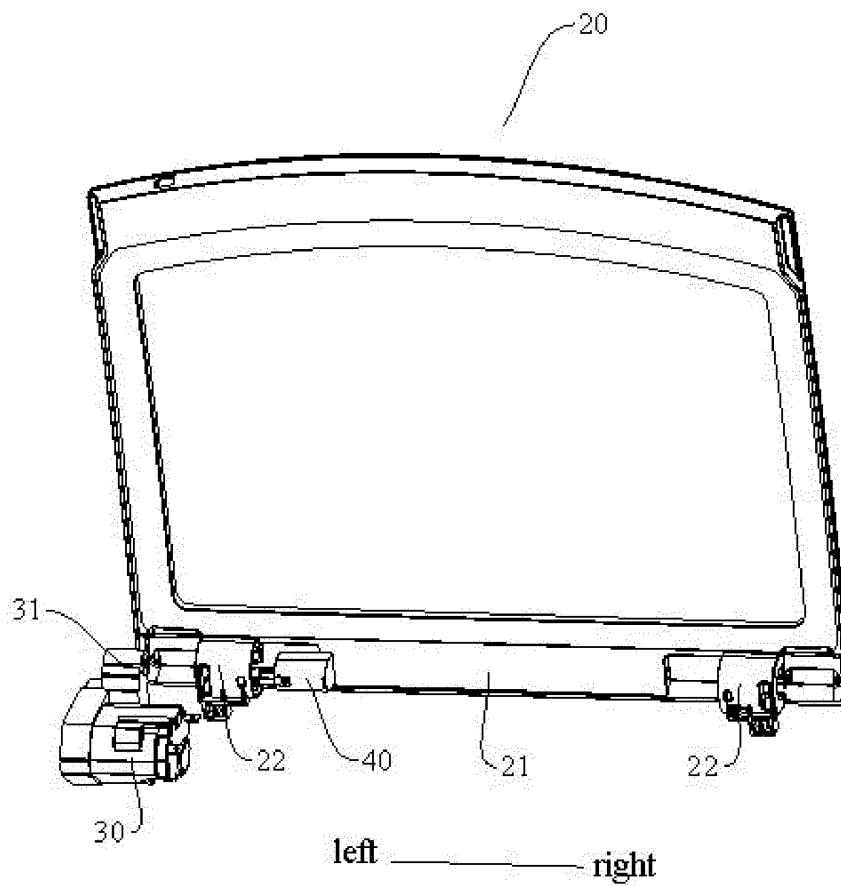


Fig. 5

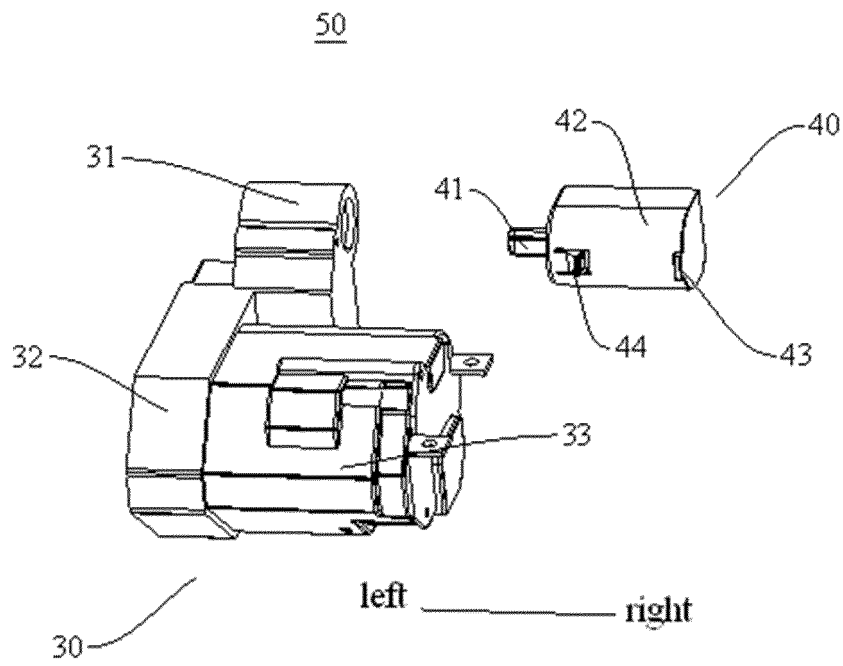


Fig. 6

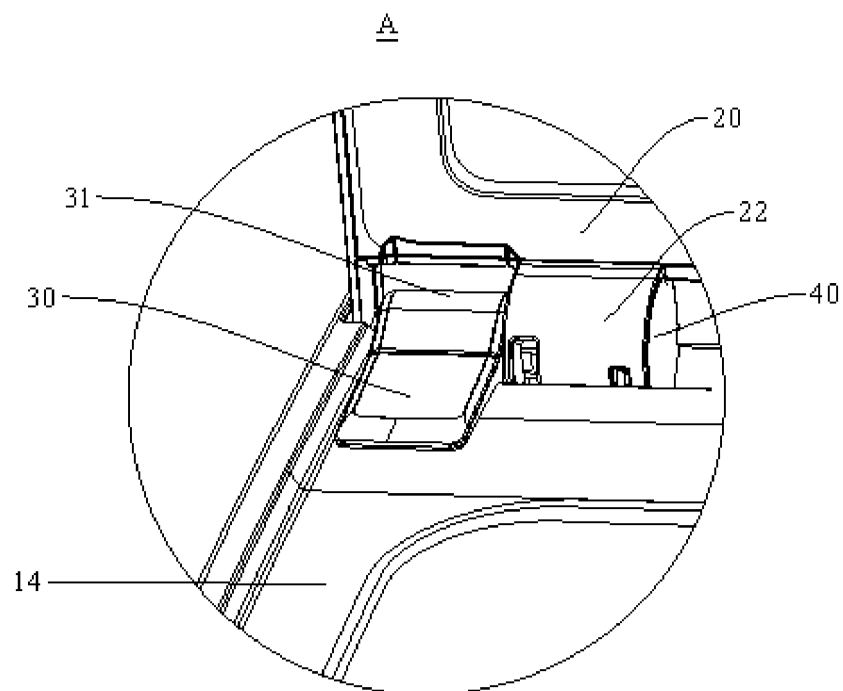


Fig. 7

REFERENCES CITED IN THE DESCRIPTION

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