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(54) **CLOTHES TREATMENT DEVICE AND CABINET COMPONENT THEREFOR**

(57) The present disclosure discloses a clothes treatment device and a cabinet component (100) therefor. The cabinet component (100) includes a first side plate (10) and a second side plate (20) arranged opposite each other; an upper connection reinforcement plate (30), arranged between the first side plate (10) and the second side plate (20), and having two ends connected to an upper end of the first side plate and an upper end of the second side plate respectively; and a control panel (40), arranged in front of the first side plate, the second side plate and the upper connection reinforcement plate. The control panel (40) has a rear surface with a control panel snapping portion, the upper connection reinforcement plate has an upper connection reinforcement plate snap-

ping portion, and the control panel snapping portion is connected to the upper connection reinforcement plate snapping portion by snapping. With the cabinet component for a clothes treatment device according to embodiments of the present disclosure, the control panel can be connected to the upper connection reinforcement plate by snapping by means of cooperation between the control panel snapping portion and the upper connection reinforcement plate snapping portion. Connecting parts such as screws are omitted, structure is simplified, the manufacturing cost is reduced, and the assembling efficiency of the cabinet component can be improved.

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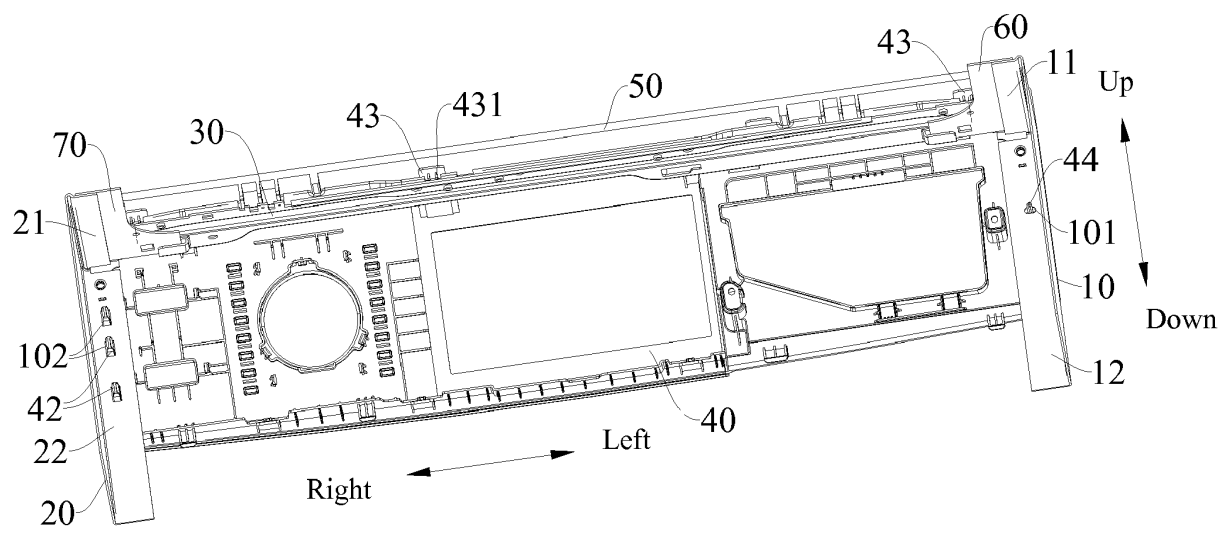


Fig. 1

Description

FIELD

[0001] The present disclosure relates to the technical field of clothes treatment equipment, and more particularly to a clothes treatment device and a cabinet component therefor.

BACKGROUND

[0002] During assembling of a washing machine in the related art, usually first an upper connection reinforcement plate is fixed to a cabinet by means of screws, and then, an upper end of a control panel is connected to the upper connection reinforcement plate by means of screws. While a top plate is mounted to a boss screw on the upper connection reinforcement plate by means of catches. The assembling steps are complex with lots of screws, which consumes time and increases manufacturing cost. Improvements are needed.

SUMMARY

[0003] Embodiments of the present disclosure seek to solve at least one of the problems existing in the related art to at least some extent. Therefore, the present disclosure provides a cabinet component for a clothes treatment device. The cabinet component is high in assembling efficiency and low in manufacturing cost.

[0004] The present disclosure further provides a clothes treatment device having the above cabinet component.

[0005] The cabinet component for a clothes treatment device according to embodiments of a first aspect of the present disclosure, includes a first side plate and a second side plate arranged opposite each other; an upper connection reinforcement plate, arranged between the first side plate and the second side plate, and having two ends connected to an upper end of the first side plate and an upper end of the second side plate respectively; and a control panel, arranged in front of the first side plate, the second side plate and the upper connection reinforcement plate. The control panel has a rear surface with a control panel snapping portion, the upper connection reinforcement plate has an upper connection reinforcement plate snapping portion, and the control panel snapping portion is connected to the upper connection reinforcement plate snapping portion by snapping.

[0006] With the cabinet component for a clothes treatment device according to embodiments of the present disclosure, the control panel snapping portion is arranged on the rear surface of the control panel, and the upper connection reinforcement plate snapping portion is arranged on the upper connection reinforcement plate, therefore the control panel can be connected to the upper connection reinforcement plate by snapping by means of cooperation between the control panel snapping por-

tion and the upper connection reinforcement plate snapping portion. Connecting parts such as screws are omitted, structure is simplified, the manufacturing cost is reduced, and the assembling efficiency of the cabinet component can be improved.

[0007] According to an embodiment of the present disclosure, the control panel snapping portion includes a plurality of first control panel catches, and the plurality of first control panel catches are arranged along a length direction of the control panel at intervals and extend backward. The upper connection reinforcement plate snapping portion includes a plurality of first snapping holes. The plurality of first control panel catches are snapped into the plurality of first snapping holes one to one.

[0008] In some embodiments, the upper connection reinforcement plate has a side facing the control panel, the side is provide with a connecting flanging, the connecting flanging is bent upward and extends along a length direction of the upper connection reinforcement plate, and the plurality of first snapping holes are all defined in the connecting flanging.

[0009] According to an embodiment of the present disclosure, the rear surface of the control panel has a positioning column extending backward, one of the first side plate and the second side plate has a side, facing the control panel, with a positioning hole matching the positioning column.

[0010] In some embodiments, the rear surface of the control panel has a plurality of second control panel catches, the plurality of second control panel catches are arranged along a width direction of the control panel at intervals and extend backward, the other one of the first side plate and the second side plate has a side, facing the control panel, with a plurality of side plate snapping grooves matching the second control panel catches.

[0011] According to an embodiment of the present disclosure, the rear surface of the control panel has an upper portion with a plurality of tongues, the tongues are arranged along the length direction of the control panel at intervals and extend backward, the upper connection reinforcement plate defines a plurality of second snapping holes, and the plurality of tongues are snapped into the plurality of second snapping holes one to one.

[0012] Optionally, each tongue has an end away from the control panel, the end has a lower surface with a snapping projection, and the snapping projection is snapped into a corresponding second snapping hole.

[0013] Optionally, the cabinet component further includes a top plate. The top plate is mounted above the upper connection reinforcement plate and pressed against the plurality of tongues, and each tongue is clamped between the top plate and the upper reinforcement plate.

[0014] According to a further embodiment of the present disclosure, the top plate has a lower surface with at least two top plate catches arranged at an interval, the upper connection reinforcement plate defines at least two third snapping holes, and the top plate catches are

snapped into the third snapping holes.

[0015] Optionally, a portion of the top plate catch is fixedly connected to the lower surface of the top plate, other portion of the top plate catch is spaced apart from the lower surface of the top plate such that clearance gaps can be defined, the top plate catches are inserted into the third snapping holes, and at least a portion of the upper connection reinforcement plate is snapped into the clearance gaps.

[0016] Optionally, the lower surface of the top plate further has a top plate limiting rib extending downward, the upper connection reinforcement plate defines a limiting groove matching the top plate limiting rib, and the top plate limiting ribs are arranged in a supposed line connecting the at least two top plate catches.

[0017] Furthermore, the upper connection reinforcement plate has an upper surface with a mounting projection projecting upward, the second snapping holes and the third snapping holes are defined in a top wall and/or side wall of the mounting projection, and the limiting groove is defined in the top wall of the mounting projection.

[0018] According to an embodiment of the present disclosure, the first side plate has an upper end with a first side connection reinforcement plate extending toward the second side plate, the second side plate has an upper end with a second side connection reinforcement plate extending toward the first side plate, the upper connection reinforcement plate has an end connected with the first side plate by means of the first side connection reinforcement plate, and another end connected with the second side plate by means of the second side connection reinforcement plate.

[0019] Optionally, the upper ends of the first side plate and the second side plate are bent toward each other to form upper flangings, the first side connection reinforcement plate and the second side connection reinforcement plate are riveted to the corresponding upper flangings respectively.

[0020] Optionally, two ends of the upper connection reinforcement plate are connected to the first side connection reinforcement plate and the second side connection reinforcement plate by means of threaded connectors respectively.

[0021] Optionally, the first side connection reinforcement plate and the second side connection reinforcement plate have sides facing each other, the sides are provided with projecting corners, the two ends of the upper connection reinforcement plate define inserting grooves, and the projecting corner are inserted in the corresponding inserting grooves respectively.

[0022] Optionally, the upper surface of the upper connection reinforcement plate has two recess portions extending downward, the recess portions have side walls with openings, the recess portions define the inserting grooves, and the projecting corner are inserted in the recess portions through the openings.

[0023] The clothes treatment device according to em-

bodiments of the second aspect includes the cabinet component for a clothes treatment device according to the above embodiments.

[0024] Additional aspects and advantages of embodiments of present disclosure 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 disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] 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 schematic view of a part of a cabinet component for a clothes treatment device according to embodiments of the present disclosure.

Fig. 2 is a schematic view of another part of a cabinet component for a clothes treatment device according to embodiments of the present disclosure.

Fig. 3 is an assembly view of a first side plate, a second side plate, a first side connection reinforcement plate and a second side connection reinforcement plate of the cabinet component shown in Fig. 1.

Fig. 4 is a schematic view of an upper connection reinforcement plate of the cabinet component shown in Fig. 1.

Fig. 5 is an assembly view of a structure shown in Fig. 3 and the upper connection reinforcement plate. Fig. 6 is schematic view of a control panel of the cabinet component shown in Fig. 1.

Fig. 7 is a schematic view of a top plate of the cabinet component shown in Fig. 1.

Fig. 8 is an assembly view of the upper connection reinforcement plate and the top plate of the cabinet component shown in Fig. 1.

Reference numerals:

[0026]

Cabinet component 100,
First side plate 10, positioning hole 101, upper flanging 11(21), side flanging 12(22),
Second side plate 20, side plate snapping groove 202,
Upper connection reinforcement plate 30, first snapping hole 301, second snapping hole 302, third snapping hole 303, limiting groove 304, connecting flanging 31, mounting projection 32, recess portion 33, inserting groove 331,
Control panel 40, first control panel catch 41, second control panel catch 42, tongue 43, snapping projection 431, positioning column 44,
Top plate 50, top plate catch 51, clearance gap 511,

top plate limiting rib 52,
 First side connection reinforcement plate 60, project-
 ing corner 61(71), threaded hole 62(72),
 Second side connection reinforcement plate 70.

DETAILED DESCRIPTION

[0027] Embodiments of the present disclosure are described in detail hereinafter, and examples of the embodiments are illustrated in drawings. 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 the drawings are explanatory, and used to illustrate the present disclosure. The embodiments shall not be construed to limit the present disclosure.

[0028] In the description of the present disclosure, it is to be understood that terms such as "length," "width," "thickness," "upper," "lower," "front," "rear," "left," "right," "horizontal," "top," "inner," and "outer," 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 indicate or imply that the present invention be constructed or operated in a particular orientation. Therefore, the above terms should not be construed to limit the present disclosure. In addition, features defined with "first" and "second" can indicate or imply that one or more such features are included. In the description of the present invention, the term "a plurality of" means two or more than two, unless specified otherwise.

[0029] In the description of the present disclosure, it should be understood that, unless specified or limited otherwise, the terms "mounted," "connected," and "coupled" and variations thereof are used broadly and encompass such as mechanical or electrical mountings, connections and couplings, also can be inner mountings, connections and couplings of two components, and further can be direct and indirect mountings, connections, and couplings, which can be understood by those skilled in the art according to the detail embodiment of the present disclosure.

[0030] A cabinet component 100 for a clothes treatment device according to embodiments of the present disclosure is described with reference to Fig. 1 to Fig. 8.

[0031] As shown in Fig. 1 to Fig. 8, a cabinet component 100 for a clothes treatment device according to an embodiment of the present disclosure includes a first side plate 10, a second side plate 20, an upper connection reinforcement plate 30 and a control panel 40.

[0032] The first side plate 10 and the second side plate 20 are arranged opposite each other. The upper connection reinforcement plate 30 is arranged between the first side plate 10 and the second side plate 20. Two ends of the upper connection reinforcement plate 30 are connected to an upper end of the first side plate 10 and an upper end of the second side plate 20 respectively. The control panel 40 is arranged in front of the first side plate

10, the second side plate 20 and the upper connection reinforcement plate 30. The control panel 40 has a rear surface with a control panel snapping portion, the upper connection reinforcement plate 30 has an upper connection reinforcement plate snapping portion, and the control panel snapping portion is connected to the upper connection reinforcement plate snapping portion by snapping.

[0033] As for the cabinet component 100 for a clothes treatment device according to the present disclosure, with the control panel snapping portion on the rear surface of the control panel 40 and with the upper connection reinforcement plate snapping portion on the upper connection reinforcement plate 30, the control panel 40 and the upper connection reinforcement plate 30 can be connected via snapping by means of cooperation of the control panel snapping portion and the upper connection reinforcement plate snapping portion. Therefore, connecting parts, such as screws are omitted, the structure is simplified, the manufacture cost is reduced, and further it is beneficial to efficiency of assembling the cabinet component 100.

[0034] As shown in Fig. 1 and Fig. 2 and combined with Fig. 4 and Fig. 6, according to an embodiment of the present disclosure, the control panel snapping portion has a plurality of first control panel catches 41, and the plurality of first control panel catches 41 are arranged along a length direction (a left-right direction shown in Fig. 6) of the control panel 40 at intervals and extend backward. The upper connection reinforcement plate snapping portion has a plurality of first snapping holes 301, and the plurality of first snapping holes 301 are arranged along a length direction (a left-right direction shown in Fig. 6) of the upper connection reinforcement plate 30 at intervals. Positions of the plurality of the first snapping holes 301 correspond to positions of the plurality of first control panel catches 41 one to one, such that the plurality of first control panel catches 41 are snapped into the plurality of first snapping holes 301 one to one.

[0035] The control panel 40 and the upper connection reinforcement plate 30 not only can be positioned in the left-right direction, but also can be connected reliably without redundant screws, thereby improving efficiency of connection between the control panel 40 and the upper connection reinforcement plate 30.

[0036] As shown in Fig. 4 and Fig. 5, in some examples, the upper connection reinforcement plate 30 has a side (such as a front side shown in Fig. 5), facing the control panel 40, with a connecting flanging 31 which is bent upward. That is the front side of the upper connection reinforcement plate 30 is bent upward to form the connecting flanging 31 extending along a length direction of the upper connection reinforcement plate 30. The plurality of first snapping holes 301 are all defined in the connecting flanging 31.

[0037] Correspondingly, as shown in Fig. 6, the control panel 40 has a rear surface with an upper portion, and

the plurality of first control panel catches 41 are arranged on the upper portion. Each first control panel catch 41 extends backward, such that the first control panel catches 41 are over against the first snapping holes 301, and the first control panel catches 41 can be inserted into the first snapping holes 301, thereby an upper portion of the control panel 40 can be fastened to the front side of the upper connection reinforcement plate 30.

[0038] According to an embodiment of the present disclosure, the rear surface of the control panel 40 has a positioning column 44 extending backward, one of the first side plate 10 and the second side plate 20 has a side, facing the control panel 40, with a positioning hole 101 matching the positioning column 44.

[0039] Further, the rear surface of the control panel 40 has a plurality of second control panel catches 42, and the plurality of second control panel catches 42 are arranged along a width direction (an up-down direction shown in Fig. 6) of the control panel 40 at intervals and extend backward. The other one of the first side plate 10 and the second side plate 20 has a side, facing the control panel 40, with a plurality of side plate snapping grooves 202 matching the second control panel catches 42.

[0040] As shown in Fig. 3 and Fig. 6, the first side plate 10 and the second side plate 20 are arranged opposite each other and at an interval along the left-right direction. The first side plate 10 is arranged at the left side of the second side plate 20. The first side plate 10 has a front side bent toward the second side plate 20 to form a side flanging 12. The second side plate 20 has a front side bent toward the first side plate 10 to form a side flanging 22. The side flanging 12 defines the positioning hole 101, and the side flanging 22 defines the plurality of side plate snapping grooves 202 which are arranged at intervals along a height direction of the second side plate 20.

[0041] Correspondingly, the positioning column 44 matching the positioning hole 101 is arranged on a left portion of the rear surface of the control panel 40. The plurality of second control panel catches 42 are arranged on a right portion of the rear surface of the control panel 40. Positions of the plurality of side plate snapping grooves 202 correspond to positions of the plurality of second control panel catches one to one, and the plurality of second control panel catches are snapped into the plurality of side plate snapping grooves 202 one to one. Therefore, the left portion of the control panel 40 is positioned and mounted to the first side plate, and the right portion of the control panel 40 is fixedly connected to the second side plate 20. Connection between the control panel and the first side plate 10 and connection between the control panel and the second side plate 20 need no connection parts such as screws, which is beneficial to efficiency of assembling.

[0042] As shown in Fig. 4 to Fig. 6, according to an embodiment of the present disclosure, the upper portion of the rear surface of the control panel 40 has a plurality of tongues 43, and the tongues 43 are arranged at intervals along the length direction of the control panel 40.

Each tongue extends along the front-rear direction, and the tongue 43 has a front end fixed to the rear surface of the control panel 40. The upper connection reinforcement plate 30 has a plurality of second snapping holes 302, and the plurality of tongues 43 are snapped into the plurality of second snapping holes 302 one to one. With the plurality of tongues 43 on the control panel 40, and with the plurality of second snapping holes 302 in the upper connection reinforcement plate 30, the reliability of connection between the control panel 40 and the upper connection reinforcement plate 30 can be further improved by means of the plurality of tongues 43 and the plurality of snapping holes 302.

[0043] In some examples, each tongue 43 has an end (a rear end of the tongue 43 shown in Fig. 6) away from the control panel 40, the end has a lower surface with a snapping projection 431. The snapping projection 431 is snapped into a corresponding second snapping hole 302, thus connecting the control panel 40 with the upper connection reinforcement plate 30, and omitting connecting parts such as screws.

[0044] As shown in Fig. 1 and Fig. 5 with reference to Fig. 7 and Fig. 8, a cabinet component according to a further embodiment of the present disclosure further includes a top plate 50. The top plate 50 is mounted above the upper connection reinforcement plate 30 and pressed against the plurality of tongues 43, thereby clamping each tongue between the top plate 50 and the upper reinforcement plate 30. The top plate 50 can further limit the tongue, thus fully fixing the control panel 40.

[0045] In some examples, the top plate 50 has a lower surface with at least two top plate catches 51 arranged at an interval. The upper connection reinforcement plate 30 has at least two third snapping holes 303, the top plate catches 51 are snapped into the third snapping holes 303. The third snapping holes 303 may be long holes, and the top plate catches 51 has a plurality of claw portions arranged along a length direction of the long holes. By snapping the at least two top plate catches 51 into the at least two third snapping holes 303, the top plate 50 can be connected to the upper reinforcement plate 30 via snapping. Connecting parts such as screws can be omitted, which not only improve efficiency of assembly but also reduce manufacture cost.

[0046] As shown in Fig. 7, in some specific examples, a portion of the top plate catch 51 is fixedly connected to the lower surface of the top plate 50, and other portion of the top plate catch 51 is spaced apart from the lower surface of the top plate 50 such that clearance gaps 511 can be defined. The top plate catches 51 are inserted into the third snapping holes 303, and at least a portion of the upper connection reinforcement plate 30 is snapped into the clearance gaps 511. With the clearance gaps 511 defined between the top plate catches 51 and the lower surface of the top plate 50, connection between the top plate 50 and the upper reinforcement plate 30 can be more reliable and stable by snapping the top plate catches 51 into the third snapping holes 30 and snapping

edges of the third snapping holes 30 into the clearance gaps 511.

[0047] In other specific examples, the lower surface of the top plate 50 is also provided with a top plate limiting rib 52 extending downward, and the upper connection reinforcement plate 30 defines a limiting groove 304 matching the top plate limiting rib 52. The top plate 50 and the upper connection reinforcement plate 30 can be positioned before assembling via cooperation between the top plate limiting 52 and the limiting groove 304, thereby improving efficiency of assembling the top plate 50 and the upper connection reinforcement plate 30.

[0048] Optionally, the lower surface of the top plate is also provided with a plurality of top plate limiting ribs 52, and the plurality of top plate limiting ribs 52 are arranged at intervals along a length direction of the top plate 50. The top plate limiting ribs 52 are arranged in a supposed line connecting the at least two top plate catches 51, thereby facilitating assembling the top plate 50 and the upper connection reinforcement plate 30.

[0049] In some examples, the upper connection reinforcement plate 30 has an upper surface with a mounting projection 32 projecting upward. The second snapping holes 302 and the third snapping holes 303 are defined in a top wall or side wall of the mounting projection 32. Of course, the second snapping holes 302 and the third snapping holes 303 can also be defined in the top wall or the side wall. Specifically, the first snapping holes 301 extend from the top wall of the mounting projection 32 to the side wall of the mounting projection 32, and the second snapping holes 302 also extend from the top wall of the mounting projection 32 to the side wall of the mounting projection 32, which is beneficial to snapping connection between the second snapping holes 302 and the snapping projections 431 of the tongues 43 and snapping connection between the third snapping holes 303 and the top plate catches 51.

[0050] Further, the limiting groove 304 is defined in the top wall of the mounting projection 32, the top plate limiting rib 52 projects from the lower surface of the top plate 50, such that the top plate limiting rib 52 can be inserted into the limiting groove 304, and the top plate 50 and the upper connection reinforcement plate 30 can be positioned in advance before mounting.

[0051] As shown in Fig. 3 and Fig. 5, according to an embodiment of the present disclosure, the first side plate 10 has an upper end with a first side connection reinforcement plate 60 extending toward the second side plate 20. The second side plate 20 has an upper end with a second side connection reinforcement plate 70 extending toward the first side plate 10. The upper connection reinforcement plate 30 has an end connected with the first side plate 10 by means of the first side connection reinforcement plate 60, and another end connected with the second side plate 20 by means of the second side connection reinforcement plate 70.

[0052] In some examples, the upper ends of the first side plate 10 and the second side plate 20 are bent toward

each other to form upper flangings 11 (21). That is, the upper end of the first side plate 10 is bent toward the second side plate 20 to form an upper flanging 11 of the first side plate 10, and the upper end of the second side plate 20 is bent toward the first side plate 10 to form an upper flanging 21 of the second side plate 20. The first side connection reinforcement plate 60 is riveted to the upper flanging 11 of the first side plate 10, and the second side connection reinforcement plate 70 is riveted to the upper flanging 21 of the second side plate 20.

[0053] Therefore, not only the upper connection reinforcement plate 30 can be easily connected to the first side plate 10 and the second side plate 20, but also the strength and the stability of a structure of the assembled first side plate 10, second side plate 20 and upper connection reinforcement plate 30.

[0054] As shown in Fig. 3, in some examples, two ends of the upper connection reinforcement plate 30 are connected to the first side connection reinforcement plate 60 and the second side connection reinforcement plate 70 by means of threaded connectors respectively.

[0055] Specifically, the first side connection reinforcement plate 60 defines a threaded hole 62, and the upper connection reinforcement plate 30 has a left end defining a connecting hole which corresponds to the threaded hole 62 in position. The left end of the upper connection reinforcement plate 30 is arranged on the upper surface of the upper connection reinforcement plate 30 and connected to the upper connection reinforcement plate 30 by means of a threaded connector. Similarly, the second side connection reinforcement plate 70 defines a threaded hole 72, and the upper connection reinforcement plate 30 has a right end defining a connecting hole which corresponds to the threaded hole 72 in position. The right end of the upper connection reinforcement plate 30 is arranged on the upper surface of the upper connection reinforcement plate 30 and connected to the upper connection reinforcement plate 30 by means of threaded connector. Connections are convenient and reliable.

[0056] With reference to Fig. 3 and Fig. 5, the first side connection reinforcement plate 60 has a right side with a projecting corner 61, and the projecting corner 61 extends toward the second side connection reinforcement plate 70. The second side connection reinforcement plate 70 has a left side with a projecting corner 71, and the projecting corner 71 extends toward the first side connection reinforcement plate 60. Further, the left end of the upper connection reinforcement plate 30 defines an inserting groove 331, and the inserting groove 331 has an opening toward the first side connection reinforcement plate 60. The projecting corner 61 of the first side connection reinforcement plate 60 is inserted in the inserting groove 331 in the left end of the upper connection reinforcement plate 30. The right end of the upper connection reinforcement plate 30 defines an inserting groove 331, and the inserting groove 331 has an opening toward the second side connection reinforcement plate 70. The projecting corner 71 of the second side connection reinforcement

ment plate 70 is inserted in the inserting groove 331 in the right end of the upper connection reinforcement plate 30. Therefore, reliability of connection between the upper connection reinforcement plate 30 and the first side connection reinforcement plate 60 and the second side connection reinforcement plate 70 can be further ensured.

[0057] In some specific examples, the upper surface of the upper connection reinforcement plate 30 has a left portion with a recess portion 33 extending downward, and the recess portion 33 has an side (facing the first side reinforcement plate 60) with an opening, thereby defining the inserting groove 331. Similarly, the upper surface of the upper connection reinforcement plate 30 has a right portion with a recess portion 33 extending downward, and the recess portion 33 has a side (facing the second side reinforcement plate 70) with an opening, thereby defining the inserting groove 331. The projecting corner 61 of the first side connection reinforcement plate 60 and the projecting corner 71 of the second side connection reinforcement plate 70 are inserted in the corresponding inserting grooves 331 respectively. The upper connection reinforcement plate 30 is simple in structure, and reliability of connection between two ends of the upper connection reinforcement plate 30 and the first side connection reinforcement plate 60 and the second side connection reinforcement plate 70 can be conveniently improved.

[0058] A specific embodiment of a cabinet component 100 for a clothes treatment device according to the present disclosure is described hereafter with reference to Fig. 1 to Fig. 8.

[0059] The cabinet component 100 includes a first side plate 10, a second side plate 20, an upper connection reinforcement plate 30, a control panel 40, a top plate, a first side connection reinforcement plate 60 and a second side connection reinforcement plate 70.

[0060] The first side plate has a side flanging 12 with a positioning hole 101. The second side plate 20 has a side flanging with three side plate snapping grooves 202. The first side connection reinforcement plate 60 is riveted to an upper flanging 11 of the first side plate 10. The first side connection reinforcement plate 60 has a projecting corner 61 and a threaded hole 62. The second side connection reinforcement plate 70 is riveted to an upper flanging 21 of the second side plate 10. The second side connection reinforcement plate 70 has a projecting corner 71 and a threaded hole 72.

[0061] The upper connection reinforcement plate 30 has a front side with a connecting flanging 31 which is bent upward. The connecting flanging 31 defines a plurality of first snapping holes 301, and the plurality of first snapping holes 301 are arranged at intervals. The upper connection reinforcement plate 30 has an upper surface with a mounting projection 32, and the mounting projection 32 extends along a length direction of the upper connection reinforcement plate 30. The mounting projection 32 defines a plurality of second snapping holes 302, a plurality of third snapping holes 303 and a plurality of

limiting grooves 304. The upper connection reinforcement plate 30 has two ends with inserting grooves.

[0062] The control panel 40 has a rear surface with an upper portion, and the upper portion is provided with a plurality of first control panel catches 41 extending backward and a plurality of tongues 43 extending backward. Each tongue 43 has a lower surface with a snapping projection 431. The length of the tongue 43 is greater than that of the first control panel catch 41. The control panel 40 has a rear surface, the rear surface has a left portion with a positioning column 44 extending backward and a right portion with a plurality of second control panel catches 42.

[0063] The top plate 50 has a lower surface with a plurality of top plate catches 51 arranged at intervals along a length direction of the top plate 50. Each top plate catch 51 and the lower surface of the top plate 50 define a clearance gap 511. The lower surface of the top plate 50 is further provided with a plurality of top plate limiting ribs 52.

[0064] During assembling, connecting holes of the upper connection reinforcement plate 30 is aligned with the threaded hole 62 of the first side connection reinforcement plate 60 and the threaded hole 72 of the second side connection reinforcement plate 70 respectively, and threaded connectors are used for fixing. At the same time, the projecting corner 61 of the first side connection reinforcement plate 60 is snapped into the inserting groove 331 in the left end of the upper connection reinforcement plate 30, and the projecting corner 71 of the second side connection reinforcement plate 70 is snapped into the inserting groove 331 in the right end of the upper connection reinforcement plate 30.

[0065] Then, the first side connection reinforcement plate 60 is riveted to the upper flanging 11 of the first side plate 10, the second side connection reinforcement plate 70 is riveted to the upper flanging 21 of the second side plate 20, thereby fixing the upper connection reinforcement plate 30 to the first side plate 10 and the second side plate 20 of a cabinet.

[0066] And then, the first control panel catches 41 on the control panel 40 are snapped into the first snapping holes 301 in the upper connection reinforcement plate 30, the second control panel catches 42 of the control panel 40 are snapped into the side plate snapping grooves 202 in the second side plate 20, and the positioning column 44 on control panel 40 is snapped into the positioning hole 101 in the first side plate 10. At the same time, the snapping projections 431 of the tongues 43 on the control panel 40 are hooked on the second snapping holes 302 in the upper connection reinforcement plate 30. Therefore, the control panel 40 is fixed to the upper connection reinforcement plate 30, the first side plate 10 and the second side plate 20 of the cabinet.

[0067] Finally, the top plate catches 51 on the top plate 50 are snapped into the third snapping holes 303 in the upper connection reinforcement plate 30, the top plate limiting ribs 52 on the top plate 50 are inserted into the

limiting grooves 304 in the upper connection reinforcement plate 30. The top plate is pressed on the tongues 43 to further limit the tongues 43, such that the control panel 40 can be fully fixed.

[0068] A clothes treatment device according to embodiments of the present disclosure includes the cabinet component 100 for the clothes treatment device according to the above embodiments. The clothes treatment device herein can be a washing machine such as a front-loading washer and a top-loading washer, or a clothes dryer or a clothes washer-dryer.

[0069] Since the cabinet component 100 for the clothes treatment device according to the above embodiments can achieve the above technical effects, the clothes treatment device according to embodiments of the present disclosure also can achieve the above technical effects. That is the clothes treatment device has a simple structure, less components, low manufacture cost and high assembling efficiency.

[0070] Other configurations and operations for the clothes treatment device according to the embodiments are known to those skilled in the art and will not be described in detail.

[0071] Reference throughout this specification to "an embodiment," "some embodiments," "illustrative embodiment," "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 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.

[0072] 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.

[0073] Alternative statements of the invention are recited below as numbered clauses:

1. A cabinet component (100) for a clothes treatment device, comprising:

a first side plate (10) and a second side plate (20) arranged opposite each other;
an upper connection reinforcement plate (30), arranged between the first side plate (10) and the second side plate (20), and having two ends connected to an upper end of the first side plate (10) and an upper end of the second side plate (20) respectively; and
a control panel (40), arranged in front of the first side plate (10), the second side plate (20)

and the upper connection reinforcement plate (30);

wherein the control panel (40) has a rear surface with a control panel snapping portion, the upper connection reinforcement plate (30) has an upper connection reinforcement plate snapping portion, and the control panel snapping portion is connected to the upper connection reinforcement plate snapping portion by snapping.

2. The cabinet component (100) according to clause 1, wherein the control panel snapping portion comprises a plurality of first control panel catches (41) arranged along a length direction of the control panel (40) at intervals and extend backward, the upper connection reinforcement plate snapping portion comprises a plurality of first snapping holes (301), and the plurality of first control panel catches (41) are snapped into the plurality of first snapping holes (301) one to one.

3. The cabinet component (100) according to clause 2, wherein the upper connection reinforcement plate (30) has a side facing the control panel (40), the side is provided with a connecting flanging (31), the connecting flanging (31) is bent upward and extends along a length direction of the upper connection reinforcement plate (30), and the plurality of first snapping holes (301) are all defined in the connecting flanging (31).

4. The cabinet component (100) according to clause 1, wherein the rear surface of the control panel (40) has a positioning column (44) extending backward, one of the first side plate (10) and the second side plate (20) has a side, facing the control panel (40), with a positioning hole (101) matching the positioning column (44).

5. The cabinet component (100) according to clause 4, wherein the rear surface of the control panel (40) has a plurality of second control panel catches (42) arranged along a width direction of the control panel (40) at intervals and extend backward, the other one of the first side plate (10) and the second side plate (20) has a side, facing the control panel (40), with a plurality of side plate snapping grooves (202) matching the second control panel catches (42).

6. The cabinet component (100) according to clause 1, wherein the rear surface of the control panel (40) has an upper portion with a plurality of tongues (43) arranged along the length direction of the control panel (40) at intervals and extend backward, the upper connection reinforcement plate (30) defines a plurality of second snapping holes (302), and the plurality of tongues (43) are snapped into the plurality of second snapping holes (302) one to one.

7. The cabinet component (100) according to clause 6, wherein each tongue (43) has an end away from the control panel (40), the end has a lower surface with a snapping projection (431), and the snapping

projection (431) is snapped into a corresponding second snapping hole (302).

8. The cabinet component (100) according to clause 6, further comprising a top plate (50), wherein the top plate (50) is mounted above the upper connection reinforcement plate (30) and pressed against the plurality of tongues (43), and each tongue (43) is clamped between the top plate (50) and the upper reinforcement plate (30).

9. The cabinet component (100) according to clause 8, wherein the top plate (50) has a lower surface with at least two top plate catches (51) arranged at an interval, the upper connection reinforcement plate (30) defines at least two third snapping holes (303), and the top plate catches (51) are snapped into the third snapping holes (303).

10. The cabinet component (100) according to clause 9, wherein a portion of the top plate catch (51) is fixedly connected to the lower surface of the top plate (50), other portion of the top plate catch (51) is spaced apart from the lower surface of the top plate (50) such that clearance gaps (511) can be defined, the top plate catches (51) are inserted into the third snapping holes (303), and at least a portion of the upper connection reinforcement plate (30) is snapped into the clearance gaps (511).

11. The cabinet component (100) according to clause 9, wherein the lower surface of the top plate (50) further has a top plate limiting rib (52) extending downward, the upper connection reinforcement plate (30) defines a limiting groove (304) matching the top plate limiting rib (52), and the top plate limiting ribs (52) are arranged in a supposed line connecting the at least two top plate catches (51).

12. The cabinet component (100) according to clause 11, wherein the upper connection reinforcement plate (30) has an upper surface with a mounting projection (32) projecting upward, the second snapping holes (302) and the third snapping holes (303) are defined in a top wall and/or side wall of the mounting projection (32), and the limiting groove (304) is defined in the top wall of the mounting projection (32).

13. The cabinet component (100) according to clause 1, wherein the first side plate (10) has an upper end with a first side connection reinforcement plate (60) extending toward the second side plate (20), the second side plate (20) has an upper end with a second side connection reinforcement plate (70) extending toward the first side plate (10), the upper connection reinforcement plate (30) has an end connected with the first side plate (10) by means of the first side connection reinforcement plate (60), and another end connected with the second side plate (20) by means of the second side connection reinforcement plate (70).

14. The cabinet component (100) according to clause 13, wherein the upper ends of the first side plate (10) and the second side plate (20) are bent

toward each other to form upper flangings (11, 21), the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) are riveted to the corresponding upper flangings (11, 21) respectively.

15. The cabinet component (100) according to clause 13, wherein two ends of the upper connection reinforcement plate (30) are connected to the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) by means of threaded connectors respectively.

16. The cabinet component (100) according to clause 13, wherein the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) have sides facing each other, the sides are provided with projecting corners (61, 71), the two ends of the upper connection reinforcement plate (30) define inserting grooves (331), and the projecting corner (61, 71) are inserted in the corresponding inserting grooves (331) respectively.

17. The cabinet component (100) according to clause 13, wherein the upper surface of the upper connection reinforcement plate (30) has two recess portions (33) extending downward, the recess portions (33) have side walls with openings, the recess portions (33) define the inserting grooves (331), and the projecting corner (61, 71) are inserted in the recess portions (33) through the openings.

18. A clothes treatment device, comprising the cabinet component (100) according to any one of clauses 1 to 17.

Claims

1. A cabinet component (100) for a clothes treatment device, comprising:

a first side plate (10) and a second side plate (20) arranged opposite each other;
an upper connection reinforcement plate (30), arranged between the first side plate (10) and the second side plate (20), and having two ends connected to an upper end of the first side plate (10) and an upper end of the second side plate (20) respectively; and

and a control panel (40), arranged in front of the first side plate (10), the second side plate (20) and the upper connection reinforcement plate (30);

wherein the control panel (40) has a rear surface with a control panel snapping portion, the upper connection reinforcement plate (30) has an upper connection reinforcement plate snapping portion, and the control panel snapping portion is connected to the upper connection reinforcement plate snapping portion by snapping.

2. The cabinet component (100) according to claim 1, wherein the control panel snapping portion comprises a plurality of first control panel catches (41) arranged along a length direction of the control panel (40) at intervals and extend backward, the upper connection reinforcement plate snapping portion comprises a plurality of first snapping holes (301), and the plurality of first control panel catches (41) are snapped into the plurality of first snapping holes (301) one to one. 5
3. The cabinet component (100) according to claim 2, wherein the upper connection reinforcement plate (30) has a side facing the control panel (40), the side is provide with a connecting flanging (31), the connecting flanging (31) is bent upward and extends along a length direction of the upper connection reinforcement plate (30), and the plurality of first snapping holes (301) are all defined in the connecting flanging (31). 10
4. The cabinet component (100) according to claim 1, wherein the rear surface of the control panel (40) has a positioning column (44) extending backward, one of the first side plate (10) and the second side plate (20) has a side, facing the control panel (40), with a positioning hole (101) matching the positioning column (44). 15
5. The cabinet component (100) according to claim 4, wherein the rear surface of the control panel (40) has a plurality of second control panel catches (42) arranged along a width direction of the control panel (40) at intervals and extend backward, the other one of the first side plate (10) and the second side plate (20) has a side, facing the control panel (40), with a plurality of side plate snapping grooves (202) matching the second control panel catches (42). 20
6. The cabinet component (100) according to claim 1, wherein the rear surface of the control panel (40) has an upper portion with a plurality of tongues (43) arranged along the length direction of the control panel (40) at intervals and extend backward, the upper connection reinforcement plate (30) defines a plurality of second snapping holes (302), and the plurality of tongues (43) are snapped into the plurality of second snapping holes (302) one to one. 25
7. The cabinet component (100) according to claim 6, wherein each tongue (43) has an end away from the control panel (40), the end has a lower surface with a snapping projection (431), and the snapping projection (431) is snapped into a corresponding second snapping hole (302). 30
8. The cabinet component (100) according to claim 6, further comprising a top plate (50), wherein the top plate (50) is mounted above the upper connection reinforcement plate (30) and pressed against the plurality of tongues (43), and each tongue (43) is clamped between the top plate (50) and the upper reinforcement plate (30). 35
9. The cabinet component (100) according to claim 8, wherein the top plate (50) has a lower surface with at least two top plate catches (51) arranged at an interval, the upper connection reinforcement plate (30) defines at least two third snapping holes (303), and the top plate catches (51) are snapped into the third snapping holes (303). 40
10. The cabinet component (100) according to claim 9, wherein a portion of the top plate catch (51) is fixedly connected to the lower surface of the top plate (50), other portion of the top plate catch (51) is spaced apart from the lower surface of the top plate (50) such that clearance gaps (511) can be defined, the top plate catches (51) are inserted into the third snapping holes (303), and at least a portion of the upper connection reinforcement plate (30) is snapped into the clearance gaps (511). 45
11. The cabinet component (100) according to claim 9, wherein the lower surface of the top plate (50) further has a top plate limiting rib (52) extending downward, the upper connection reinforcement plate (30) defines a limiting groove (304) matching the top plate limiting rib (52), and the top plate limiting ribs (52) are arranged in a supposed line connecting the at least two top plate catches (51). 50
12. The cabinet component (100) according to claim 11, wherein the upper connection reinforcement plate (30) has an upper surface with a mounting projection (32) projecting upward, the second snapping holes (302) and the third snapping holes (303) are defined in a top wall and/or side wall of the mounting projection (32), and the limiting groove (304) is defined in the top wall of the mounting projection (32). 55
13. The cabinet component (100) according to claim 1, wherein the first side plate (10) has an upper end with a first side connection reinforcement plate (60) extending toward the second side plate (20), the second side plate (20) has an upper end with a second side connection reinforcement plate (70) extending toward the first side plate (10), the upper connection reinforcement plate (30) has an end connected with the first side plate (10) by means of the first side connection reinforcement plate (60), and another end connected with the second side plate (20) by means of the second side connection reinforcement plate (70). 60
14. The cabinet component (100) according to claim 13,

wherein the upper ends of the first side plate (10) and the second side plate (20) are bent toward each other to form upper flangings (11, 21), the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) are riveted to the corresponding upper flangings (11, 21) respectively;

two ends of the upper connection reinforcement plate (30) are connected to the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) by means of threaded connectors respectively;

the first side connection reinforcement plate (60) and the second side connection reinforcement plate (70) have sides facing each other, the sides are provided with projecting corners (61, 71), the two ends of the upper connection reinforcement plate (30) define inserting grooves (331), and the projecting corner (61, 71) are inserted in the corresponding inserting grooves (331) respectively;

the upper surface of the upper connection reinforcement plate (30) has two recess portions (33) extending downward, the recess portions (33) have side walls with openings, the recess portions (33) define the inserting grooves (331), and the projecting corner (61, 71) are inserted in the recess portions (33) through the openings.

15. A clothes treatment device, comprising the cabinet component (100) according to any one of claims 1 to 14.

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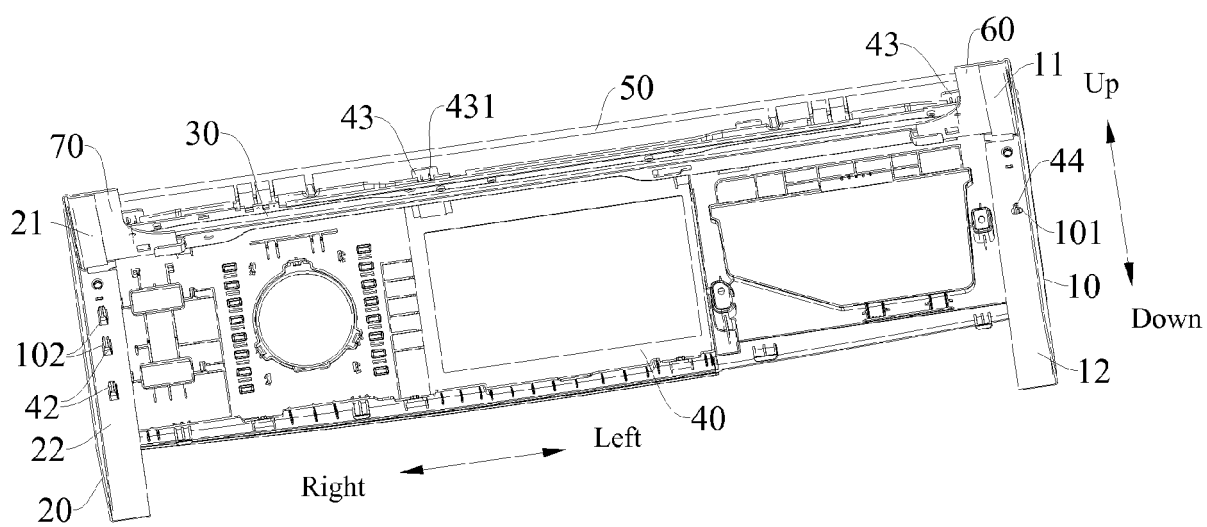


Fig.1

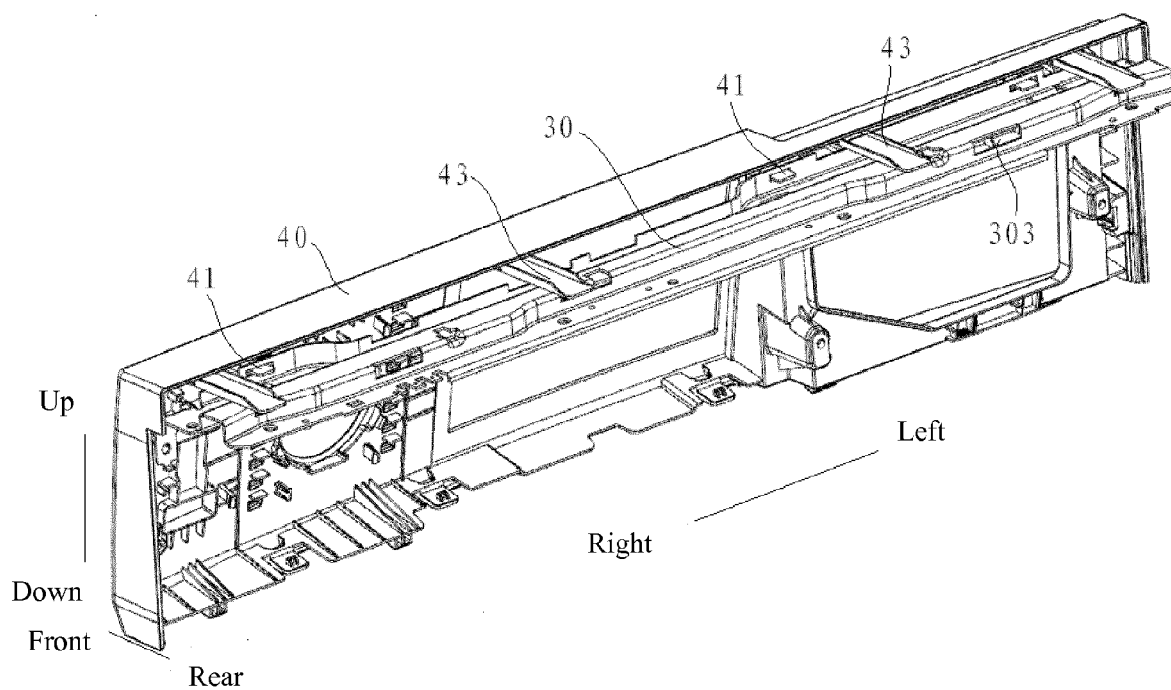


Fig.2

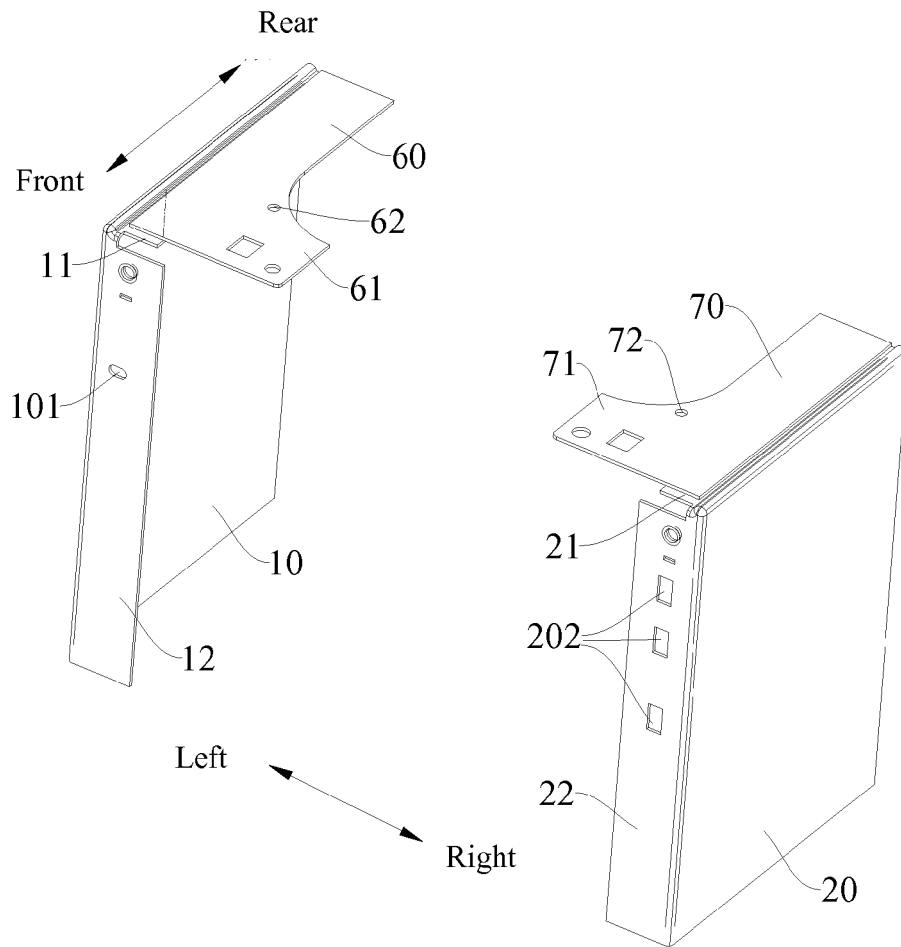


Fig.3

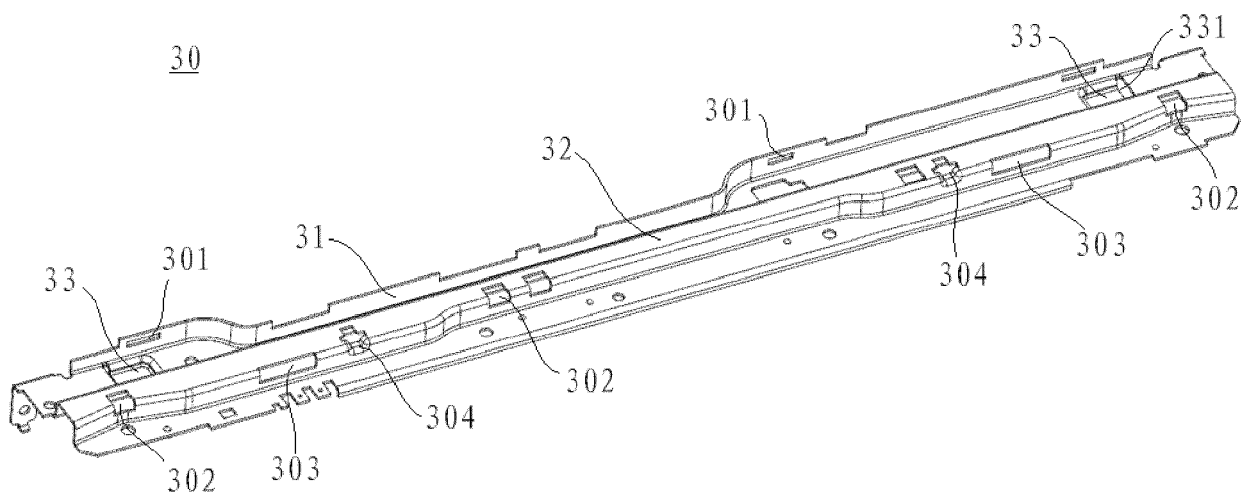


Fig.4

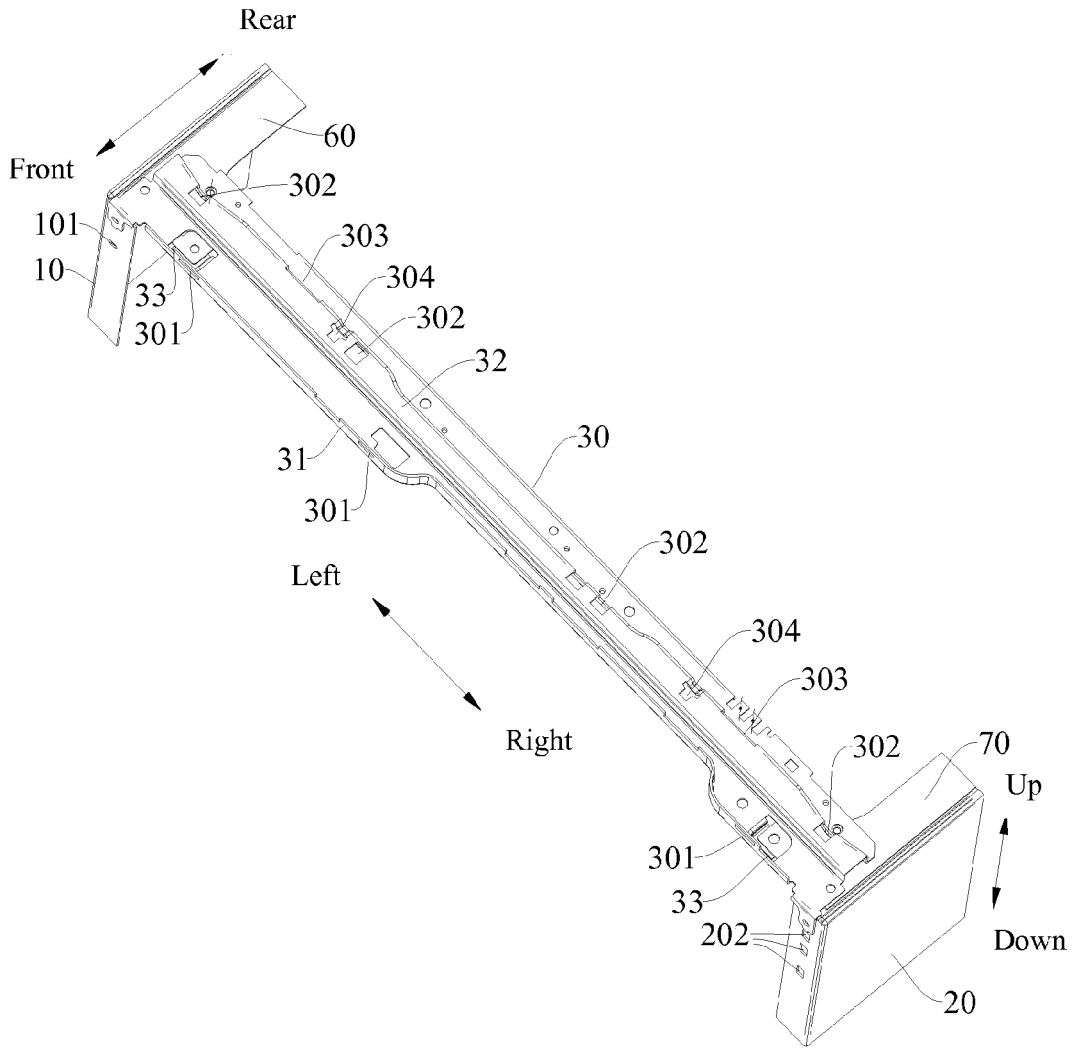


Fig. 5

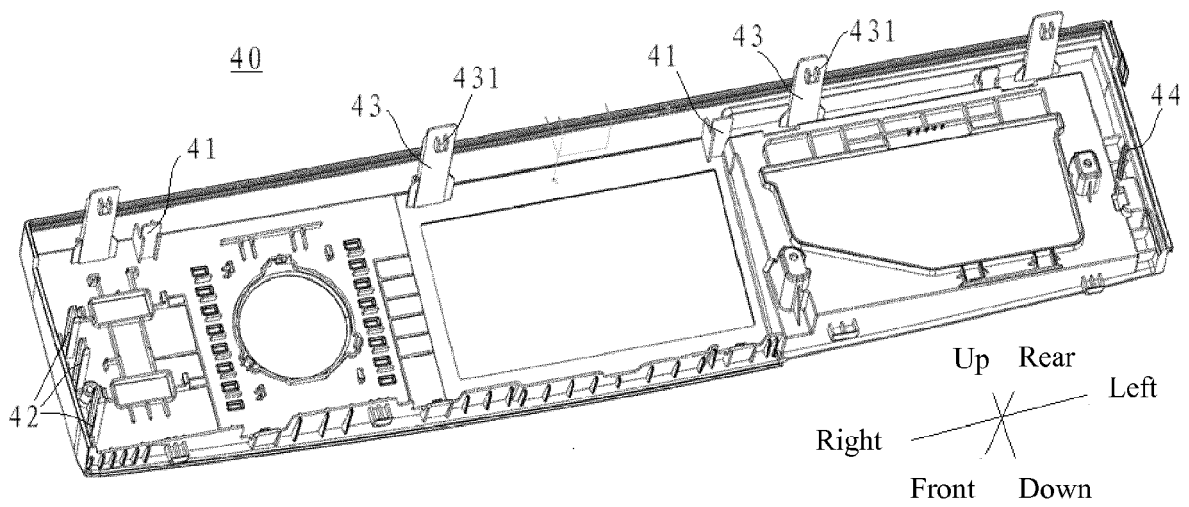


Fig. 6

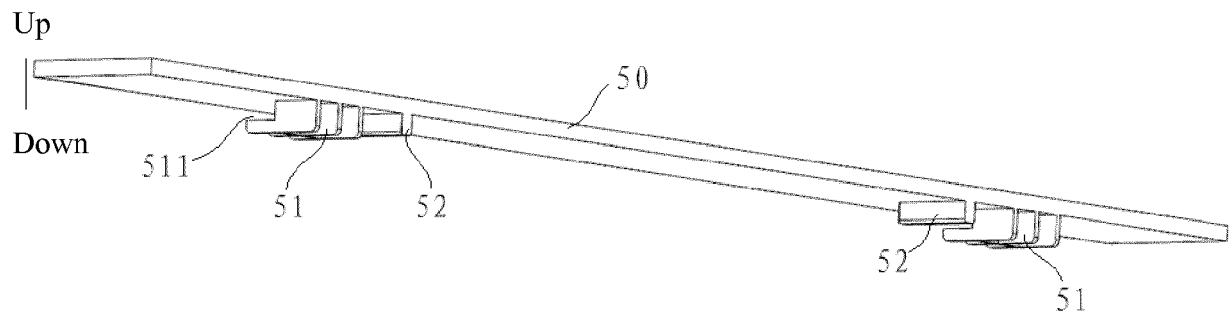


Fig. 7

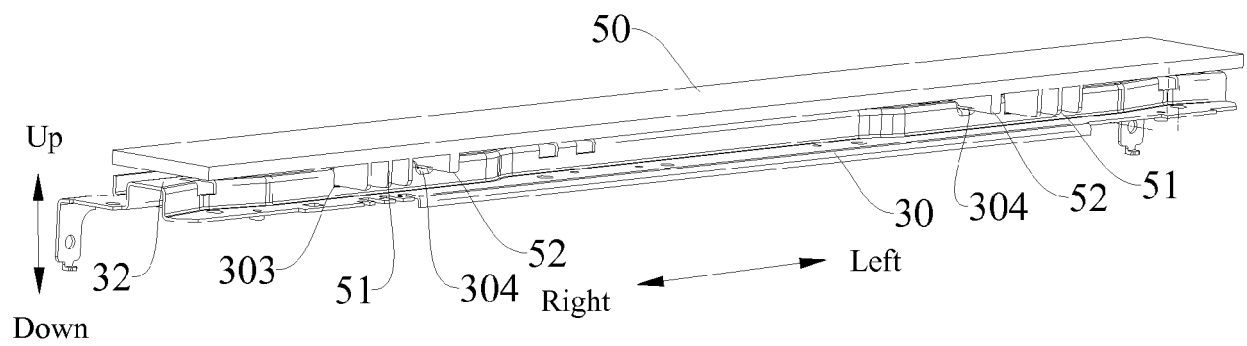


Fig. 8



EUROPEAN SEARCH REPORT

 Application Number
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			D06F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 June 2019	Examiner Jezierski, Krzysztof
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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