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- **CAI, Rongshuai**
Qingdao
Shandong 266101 (CN)
- **WANG, Jinkai**
Qingdao
Shandong 266101 (CN)
- **WU, Jun**
Qingdao
Shandong 266101 (CN)
- **JIANG, Wenfeng**
Qingdao
Shandong 266101 (CN)
- **NING, Xiao**
Qingdao
Shandong 266101 (CN)

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(71) Applicant: **Qingdao Haier Drum Washing Machine Co., Ltd.**
Qingdao, Shandong 266101 (CN)

(74) Representative: **Ziebig & Hengelhaupt**
Patentanwälte PartG mbB
Leipziger Straße 49
10117 Berlin (DE)

(72) Inventors:
• **LI, Wenwei**
Qingdao
Shandong 266101 (CN)

(54) **WASHING MACHINE AND CONTROL METHOD THEREFOR**

(57) The present disclosure discloses a washing machine and a control method thereof. The washing machine comprises a control panel (200) and at least two washing devices (300, 400), and a control system (100) separately connected with the control panel (200) and the washing devices (300, 400), wherein the control panel (200) is provided with a knob (213) which can be used as a selection key (210) for selecting one washing device (300 or 400) to execute next operation, and also can be used for selecting programs of the washing device (300 or 400), a set of control keys (260) which are shared by the washing devices (300, 400), and used for controlling the programs and parameters of the corresponding washing device (300 or 400) after the washing device (300 or 400) is selected by the selection key (210), and at least two display units which are corresponding to the washing devices (300, 400) one by one and used for displaying settings and operating states of the washing devices (300, 400). The washing machine can control and display the at least two washing devices (300, 400) by using only one control panel (200), so that the washing

machine is simplified in whole structure and reduced in cost.

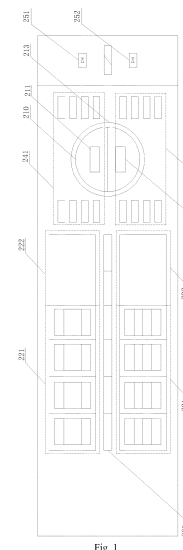


Fig. 1

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Description

TECHNICAL FIELD

[0001] The disclosure relates to the technical field of washing devices, and in particular relates to a washing machine and a control method thereof.

BACKGROUND

[0002] In modern life, every household cannot live without the washing machine; the washing machine has become a good helper for life of people. At present, the washing machines have more and more styles, and stronger and stronger functions; along with increase of the functions and the styles, dual-drum washing machines gradually appear in the life of household. The dual-drum washing machine has two mutually independent washing drums, a user can select to use any washing drum to wash clothes, or simultaneously select two washing drums to wash clothes separately. Therefore, the dual-drum washing machine can wash more clothes at a time, repeated operation of the user is avoided, and workload of the user is reduced. In addition, the dual-drum washing machine can wash the clothes in a classified manner according to clothes material types, or adult and baby clothes types. Thus, the user experience is enhanced; meanwhile, the washing efficiency is improved by using the dual-drum washing machine.

[0003] However, the existing dual-drum washing machine mostly adopts two control panels to control two washing drums separately, so as to be relatively high in production cost. Furthermore, the control panel of the washing machine is not compact in structure, and complex in user operation. In addition, the existing dual-drum washing machine adopts one control panel to separately control the two washing drums by using keys or other mechanical ways, so as to be unreasonable in operating mode, tedious in operating process, not elegant in appearance, and inconvenient for the user to check the operating states of the washing drums and set working parameters.

[0004] Therefore, the present disclosure is provided.

SUMMARY

[0005] In order to solve the above problem, the first aim of the present disclosure is to provide a washing machine, and to achieve a reasonable operating mode, a more compact display interface and a lower production cost for the control panel of the dual-drum washing machine,. Specifically, the following technical scheme is adopted:

a washing machine comprises at least two washing devices, a common control panel shared by the washing devices, and a control system separately connected with the control panel and the washing devices. The control panel is provided with a selection key used for selecting

one washing device to execute next operation; a set of control keys which are shared by the washing devices, and used for controlling programs and parameters of the corresponding washing device after the washing device is selected via the selection key; and at least two display units which are corresponding to the washing devices one by one and used for displaying settings and operating states of the washing devices.

[0006] Furthermore, the washing devices comprise a first washing device and a second washing device, and the control panel is provided with a first display unit and a second display unit for correspondingly displaying settings and operating states of the first washing device and the second washing device.

[0007] A set of control keys is arranged between the first display unit and the second display unit; areas of the first display unit and the second display unit which are corresponding to one or more control keys separately display a set of parameters of the control keys.

[0008] Furthermore, the set of control keys is transversely arranged between the first display unit and the second display unit, and a set of parameters displayed corresponding to one or more control keys are longitudinally arranged on the display units on two sides of the control keys.

[0009] Furthermore, the set of control keys at least comprises one or more control keys for controlling items selected from a group containing temperature, rotation speed, washing and rinsing. Display areas, corresponding to the control keys for controlling one or more items selected from a group containing temperature, rotation speed, washing and rinsing, of the first display unit and the second display unit separately display one or more items selected from a group containing temperature value parameters, rotation speed value parameters, washing time parameters and the rinsing times of the first washing device and the second washing device.

[0010] Furthermore, the first display unit comprises a display area for displaying a current washing program and remaining time thereof of the first washing device; and the second display unit comprises a display area for displaying the current washing program and remaining time thereof of the second washing device.

[0011] Furthermore, the set of control keys also comprises the control keys for controlling appointment and night washing. The display areas, for displaying the current washing programs and remaining times thereof, of the first display unit and the second display unit are correspondingly arranged on two sides of the control keys for controlling appointment and night washing.

[0012] Furthermore, the selection key is provided with selection icons corresponding to each washing device; the washing device corresponding to the selection icon is selected after the corresponding selection icon is activated.

[0013] After the selection icon, for one washing device, on the selection key is activated, the control key controls the programs and parameters of the washing device; and

the programs and parameters are displayed on the corresponding display unit.

[0014] After the selection icon of the other washing device in the selection key is activated, the control key is switched to control the programs and parameters of the other washing device, and the programs and parameters are displayed on the other corresponding display unit.

[0015] Furthermore, the control panel is also provided with multiple sets of clothes material icons and washing program icons which are separately arranged around the selection key.

[0016] The control panel is provided with a rotary knob or a touch knob used for selecting the clothes material icons and washing program icons.

[0017] Each washing device is corresponding to one set of clothes material icons and one set of washing program icons. When the selection icon, for one washing device, on the selection key is activated, selection operation is performed in the one set of clothes material icons and one set of washing program icons corresponding to the washing device by operating the rotary knob or the touch knob.

[0018] Preferably, the selection key is arranged on the rotary knob or the touch knob.

[0019] The second aim of the present disclosure is to provide a control method of the washing machine, the washing machine comprises at least two washing devices, a control panel and a control system separately connected with the control panel and the washing devices, and the control method comprises the steps as follows: The selection key receives a selection control signal of any washing device.

[0020] The control system controls the corresponding washing device to operate independently according to the selection control signal, and the control key controls programs and parameters corresponding to the washing device; and the control system also controls display units to simultaneously display the operating states of the corresponding washing units according to the operating states of the corresponding washing devices.

[0021] Furthermore, the method comprises the steps as follows:

one selection icon on the selection key is activated, and after receiving a signal of the activated selection icon of the selection key, the control system controls the corresponding washing device to operate independently, and a set of control keys and the selection key control adjustment of the programs and parameters of the washing device.

[0022] And when the other selection icon on the selection key is switched to be activated, the control system switches to control the other corresponding washing device to operate independently, and the set of control keys and the selection key are switched to control adjustment of the programs and parameters of the other washing device.

[0023] The washing machine provided by the present disclosure is provided with at least two washing devices

which can operate independently, functions of the control panel of each washing device is integrated on one control panel. The control panel is provided with the selection key used for selecting one of two washing device, and a set of control keys is shared by the washing devices. One washing device is selected by the selection key, and thus the set of control keys is able to control the washing programs and parameters of the washing device. When the selection key is switched to select the other washing device, the set of control keys is changed to control the washing programs and parameters of the other washing device. In addition, the control panel of the present disclosure is also provided with a plurality of display units corresponding to the washing devices one by one for displaying settings and operating states of the washing devices, so as to be more intuitive and obvious and facilitate user operation.

[0024] The washing machine provided by the present disclosure can control and display the at least two washing devices by using only one control panel, so that the washing machine is simplified in whole structure and reduced in cost. Switching between the multiple washing devices can be achieved, and the washing programs and parameters of the washing devices can be further controlled by arranging a selection key on the control panel of the present disclosure, so that user operation is facilitated. The control panel of the present disclosure is provided with a set of control keys shared by the washing devices, so that the control panel is simplified in structure, tidier and more elegant in appearance, and reduced in cost. A plurality of display units are arranged on the control panel of the present disclosure for separately displaying settings and operating states of the washing devices, so as to be more intuitive and facilitate user operation.

[0025] The control method of the washing machine provided by the present disclosure comprises the steps of selecting the washing device via the selection key at first, and then setting the washing programs and parameters according to an existing washing machine operating mode, wherein settings and operating states of the selected washing device can be intuitively observed on the display unit. Therefore, the control method of the washing machine provided by the present disclosure is simple and reasonable in logic, achieves control on the dual-drum washing machine even the multi-drum washing machine, and more facilitates user operation.

BRIEF DESCRIPTION OF DRAWINGS

[0026]

Fig. 1 is a schematic diagram of a control panel provided by the present disclosure;

Fig. 2 is a schematic diagram of a control panel provided by one embodiment of the present disclosure;

Fig. 3 is a schematic diagram of a washing machine provided by the present disclosure; and

Fig. 4 is a flow block of a control method of the wash-

ing machine provided by the present disclosure.

[0027] Reference signs in the drawings: 100-control system, 200-control panel, 210-selection key, 211-first selection icon, 212-second selection icon, 213-rotary knob or touch knob, 221-first display area, 222-third display area, 231-second display area, 232-fourth display area, 241-first washing program icon, 242-second washing program icon, 251-first pause/start key, 252-second pause/start key, 260-control key, 300-second washing device, and 400-first washing device.

DETAILED DESCRIPTION

[0028] In order to achieve clearer aim, technical scheme and advantages of the present disclosure, the technical scheme of the present disclosure will be clearly and completely described below via embodiments with reference to drawings in the present disclosure, and obviously, the described embodiments are a part of embodiments of the present disclosure, but not all of them. Based on the embodiments of the present disclosure, those skilled in the art can obtain other embodiments, without any inventive work, which should be within the scope of the present disclosure.

[0029] As shown in Fig. 3, a washing machine comprises at least two washing devices, a control panel 200 shared by the washing devices, and a control system 100 separately connected with the control panel 200 and the washing devices. The present disclosure is mainly to provide a control panel 200 of a drum washing machine with dual or more drums.

[0030] As shown in Fig. 1, the control panel 200 of the present disclosure is provided with a selection key 210 used for selecting one washing device to execute next operation; a set of control keys 260 shared by the washing devices, and used for controlling programs and parameters of the corresponding washing device after the washing device is selected via the selection key 210; and at least two display units corresponding to the washing devices one by one for displaying settings and operating states of the washing devices.

[0031] The washing machine provided by the present disclosure is provided with at least two washing devices which can operate independently, wherein functions of a control panel of each washing device are integrated on one control panel 200, the control panel 200 is provided with a selection key 210 for selecting one washing device and a set of control keys 260 shared by the washing devices. One washing device can be selected via the selection key 210, and thus the set of control keys 260 can control the washing programs and parameters of the selected washing device; when the selection key 210 is switched to select the other washing device, the set of control keys 260 is changed to control the washing programs and parameters of the other washing device. In addition, the control panel 200 of the present disclosure is also provided with a plurality of display units corre-

sponding to the washing devices one by one for displaying settings and operating states of the washing devices, so as to be more intuitive and obvious and facilitate user operation.

[0032] The selection key 210 of the present disclosure is provided with selection icons corresponding to the washing devices; after the corresponding selection icon is activated, the corresponding washing device is selected. When the selection icon, for one washing device, on the selection key is activated, the control keys 260 control the programs and parameters of the selected washing device, and the programs and parameters are displayed on the corresponding display unit. When the selection key is switched to select the selection icon of the other washing device, the control keys 260 are switched to control the programs and parameters of the other washing device, and the programs and parameters are displayed on the corresponding display unit.

[0033] The control panel 200 of the present disclosure is also provided with multiple sets of clothes material icons and washing program icons, the clothes material icons and washing program icons are separately arranged around the selection key. The control panel 200 is also provided with a rotary knob or a touch knob for selecting the clothes material icons and washing program icons; and after the selection icon for one washing device on the selection key is activated, the clothes material icon and the washing program icon of the washing device can be selected by operating the rotary knob or the touch knob.

[0034] As a preferred embodiment of the present disclosure, the selection key is arranged on the rotary knob or the touch knob. Therefore, the selection key is integrated on the rotary knob or the touch knob, and does not need to be independently arranged on the control panel 200, so that setting area of the control panel is reduced, and overall simplicity of the control panel 200 is ensured.

[0035] The washing machine provided by the present disclosure uses only one control panel 200 to realize the control and display of at least two washing devices, so that the washing machine is simplified in whole structure and reduced in cost.

[0036] Switching between the multiple washing devices can be achieved by arranging a selection key 210 on the control panel 200 of the present disclosure, and washing programs and parameters of the washing devices can be further controlled, so that user operation is more facilitated.

[0037] The control panel 200 of the present disclosure is provided with a set of control keys 260 shared by the washing devices, so that the control panel is simplified in structure, tidier and more elegant in appearance, and reduced in cost.

[0038] A plurality of display units are arranged on the control panel 200 of the present disclosure for separately displaying settings and operating states of the washing devices, so as to be more intuitive and facilitate user op-

eration.

[0039] Specifically, the present disclosure further describes by the dual-drum washing machine which is relatively widely used at present.

[0040] The washing devices of the washing machine provided by the present disclosure comprise a first washing device 400 and a second washing device 300, a control panel 200 is arranged at the front part of a box of the washing machine, and the control panel 200 can realize the control and display of the first washing device 400 and the second washing device 300.

[0041] A first display unit and a second display unit correspondingly displaying settings and operating states of the first washing device 400 and the second washing device 300 are arranged on the control panel of the present disclosure. Therefore, the first washing device 400 and the second washing device 300 of the present disclosure share one control panel 200; the control panel 200 can simultaneously display the settings and the operating states of the first washing device 400 and the second washing device 300, so as to be more intuitive and facilitate user operation.

[0042] In order to facilitate user operation and to display corresponding results on the display units of the control panel 200, a set of control keys 260 of the present disclosure is arranged between the first display unit and the second display unit, so that the two washing devices can share one set of control keys 260, and thus the control panel is more compact and reasonable in overall layout. As some control keys in the set of control keys 260 have a plurality of parameters, when the control key is controlled to adjust the corresponding parameter value, the user needs to make a judgment immediately according to an adjustment result; areas, corresponding to one or more control keys, of the first display unit and the second display unit separately display the set of parameters of the control key, so that the user can make a more intuitive judgment.

[0043] Specifically, as a preferred embodiment of the present disclosure, the set of control keys 260 is transversely arranged between the first display unit and the second display unit, and a set of parameters displayed corresponding to one or more control keys are longitudinally arranged on the display units on two sides of the control keys. Therefore, the control keys can be simultaneously close to the two display units as much as possible, the display units can display the control parameters corresponding to the control key more directly, so that the user can make a judgment more intuitively.

[0044] Specifically, as a preferred embodiment of the present disclosure, the set of control keys 260 at least comprises the control keys for controlling temperature, rotation speed, washing and rinsing. Display areas, corresponding to the control keys for controlling temperature, rotation speed, washing and rinsing, of the first display unit and the second display unit separately display sets of temperature value parameters, rotation speed value parameters, washing time parameters and the rinsing

times of the first washing device and the second washing device.

lay unit at least comprises a first display area 221 which is arranged corresponding to the control keys for controlling temperature, rotation speed, washing and rinsing, and meanwhile, the first display area 221 displays parameter values corresponding to the control keys. In a similar way, the second display unit at least comprises a second display area 231 which is also arranged corresponding to the control keys for controlling temperature, rotation speed, washing and rinsing, and meanwhile, the second display area 231 displays parameter values corresponding to the control keys.

[0045] In addition, the first display unit of the present disclosure also comprises a display area, namely, a third display area 222 in the Fig. 1, for displaying a current washing program and remaining time thereof of the first washing device; the second display unit, namely, a fourth display area 232 in the Fig. 1, also comprises a display area for displaying the current washing program and the remaining time thereof of the second washing device.

[0046] Therefore, the first display unit and the second display unit of the present disclosure are symmetrically arranged on upper and lower sides of the set of control keys 260, so that layout of the control panel is more reasonable, overall area of the control panel is reduced, and installation area and production cost are reduced.

[0047] As a preferred embodiment of the present disclosure, the control keys of the present disclosure also comprise some special function keys, specifically, the set of control keys also comprises the control keys for controlling appointment and night washing. The display areas, for displaying the washing programs and remaining times thereof, of the first display unit and the second display unit are correspondingly arranged on two sides of the control keys for controlling appointment and night washing. Therefore, the washing machine provided by the present disclosure has more functions for selection.

[0048] The selection key 210 of the present intention is provided with a first selection icon 211 corresponding to the first washing device 400 and a second selection icon 212 corresponding to the second washing device 300; the corresponding washing device can be selected after the corresponding selection icon is activated. When the first selection icon 211 of the selection key 210 is activated, the control keys 260 can control the programs and parameters of the first washing device 400, and the programs and the parameters are displayed on the first display unit; when the second selection icon 212 on the selection key 210 is switched to be activated, the control keys 260 are switched to control the programs and parameters of the second washing device 300, and the programs and the parameters are displayed on the second display unit.

[0049] The present disclosure can select the first selection icon 211 and the second selection icon 212 by touch control or by press control.

[0050] The control panel 200 of the present disclosure

is also provided with multiple sets of clothes material icons and washing program icons which are separately arranged around the selection key; the selection key comprises a rotary knob or a touch knob for selecting the clothes material icons and washing program icons; and after the selection icon, for one washing device, on the selection key is activated, the clothes material icon and the washing program icon of the washing device can be selected by operating the rotary knob or touch knob.

[0051] The first washing device 400 and the second washing device 300 of the present disclosure can share the clothes material icons and the washing program icons. Therefore, the control panel can be applicable to the dual-drum washing machine with two drums which are the same in size or with two drums which are not distinguished in washing function. Such arrangement mode is simpler, and each washing device has more functions for selection.

[0052] The first washing device 400 and the second washing device 300 of the present disclosure can also be separately corresponding to the sets of the clothes material icons and the washing program icons. Therefore, the control panel can be applicable to the dual-drum washing machine with a big drum and a small drum, wherein the small drum is mainly used for washing small clothes, and the big drum is mainly used for washing big clothes, so that the washing devices with different functions select different clothes material icons and different washing program icons, so as to be more targeted, and misoperation of the user is prevented.

[0053] In addition, in order to further facilitate distinguished display of the first washing device 400 and the second washing device 300, a first display interface and a second display interface of the present disclosure have different display colors.

Embodiment 1

[0054] As shown in Fig. 2, a washing machine of the present disclosure comprises a first washing device 400 and a second washing device 300, wherein a control panel 200 is arranged at the front part of a box of the washing machine, and the control panel 200 can control and display the first washing device 400 and the second washing device 300.

[0055] A selection key 210 is arranged on the control panel 200, a first selection icon 211, namely an upper drum, and a second selection icon 212, namely a lower drum, are arranged on the selection key 210, and the upper drum and the lower drum of the selection key 210 are activated and selected in a touch control manner.

[0056] Clothes material icons and washing program icons are arranged around the selection key 210, the upper half part of the selection key 210 is provided with first washing program icons 241 including clothes material icons and washing program icons of the first washing device, the lower half part of the selection key 210 is provided with second washing program icons 242 includ-

ing clothes material icons and washing program icons of the second washing device.

[0057] The selection key 210 also comprises a rotary knob 213 which can be rotated for selection; when the upper drum of the selection key is selected, the rotary knob 213 can perform selection in the first washing program icons 241, and when the lower drum of the selection key is selected, the rotary knob 213 can perform selection in the second washing program icons 242.

[0058] The first washing program icons 241 of the present disclosure comprise shirt, express service, dewatering, rinsing, cradle washing, baby clothes washing, underwear washing and self-cleaning icons, and the second washing program icons 242 comprise mixing, express service, dewatering, rinsing, large clothes washing, jeans, down feather and self-cleaning icons.

[0059] Control keys 260 comprising a temperature control key, a rotation speed control key, a washing control key, a rinsing control key, an appointment control key and a night washing control key are also arranged on the control panel 200.

[0060] A first display unit is arranged on the upper side of the set of control keys 260 on the control panel 200, a second display unit is arranged on the lower side of the same, and the first display unit comprises a first display area 221 and a third display area 222. The first display area 221 displays a heating temperature parameter, which can be 30 °C, 40 °C, 60 °C and 95 °C, corresponding to the temperature control key; and when the temperature control key is operated, the selected heating temperature parameter is lightened. The first display area 221 displays a rotation speed parameter, which can be 600r, 800r, 1000r and 1200r, corresponding to the rotation speed control key; and when the rotation speed control key is operated, the selected rotation speed parameter is lightened. The first display area 221 displays a washing time parameter, which can be 10 min, 20 min, 30 min and 40 min, corresponding to the washing control key; and when the washing control key is operated, the selected washing time parameter is lightened. The first display area 221 displays the parameter of rinsing times, which can be 1 time, 2 times, 3 times and 4 times, etc., corresponding to the rinsing control key; and when the rinsing control key is operated, the selected parameter of rinsing times is lightened.

[0061] The second display unit comprises a second display area 231 and a fourth display area 232. The second display unit 231 and the first display area 221 have the same display interface or are symmetrically arranged with respect to the control key 260, and a detailed description is omitted herein.

[0062] The third display area 222 displays a current washing program and remaining time thereof of the upper drum, and the fourth display area 232 displays the current washing program and remaining time thereof of the lower drum.

[0063] The control panel of the embodiment is also provided with a first pause/start key 251 and a second

pause/start key 252.

Embodiment 2

[0064] As shown in Fig. 4, the present embodiment provides a control method of a washing machine. The washing machine comprises at least two washing devices, a control panel, and a control system separately connected with the control panel and the washing devices. The control method comprises the following steps as follows:

S1, a selection key receives a selection control signal of any washing device; and
 S2, the control system controls the corresponding washing device to operate independently according to the selection control signal, and the control key controls programs and parameters corresponding to the washing device; and the control system also controls display units to simultaneously display the operating states of the corresponding washing units according to the operating states of the corresponding washing devices.

[0065] Specifically, the control method of the washing machine provided by the embodiment comprises the steps as follows:

one selection icon on the selection key is activated, and after receiving a signal of the activated selection icon of the selection key, the control system controls the corresponding washing device to operate independently, and a set of control keys and the selection key control adjustment of the programs and parameters of the washing device. And when the other selection icon on the selection key is switched to be activated, the control system switches to control the other corresponding washing device to operate independently, and the set of control keys and the selection key are switched to control adjustment of the programs and parameters of the other washing device.

[0066] The control method of the washing machine provided by the present embodiment comprises the steps of selecting the washing device via the selection key at first, and then setting the washing programs and parameters according to an existing washing machine operating mode, wherein settings and operating states of the selected washing device can be intuitively observed on the display unit. Therefore, the control method of the washing machine provided by the present disclosure is simple and reasonable in logic, achieves control on the dual-drum washing machine even the multi-drum washing machine, and more facilitates user operation.

[0067] The above-mentioned embodiments are only preferred embodiments of the present disclosure, but not intended to limit the present disclosure in any form. Although the present disclosure has been described in terms of preferred embodiments, it is not intended to be limited to these disclosed embodiments. Equivalent em-

bodiments, of which some changes or modifications are equivalent changes, may be made by any skilled in the art by using the above-mentioned technical contents without departing from the technical scheme scope of the present disclosure. However, all simple amendments, equivalent changes and modifications made to the above embodiments according to the technical essence of the present disclosure without departing from the technical scheme scope of the present disclosure all still fall within the protection scope of the present disclosure.

Claims

1. A washing machine, comprising at least two washing devices, a control panel shared by the washing devices, and a control system separately connected with the control panel and the washing devices, wherein the control panel comprises:
 - a selection key which is used for selecting one washing device to execute next operation,
 - a set of control keys which are shared by the washing devices, and used for controlling programs and parameters of the washing device after the washing device is selected via the selection key,
 - and at least two display units which are corresponding to the washing devices one by one and used for displaying settings and operating states of the washing devices.
2. The washing machine according to claim 1, wherein the washing devices comprise a first washing device and a second washing device, and the control panel is provided with a first display unit and a second display unit for correspondingly displaying settings and operating states of the first washing device and the second washing device; and
 - a set of control keys is arranged between the first display unit and the second display unit; areas, corresponding to one or more control keys, of the first display unit and the second display unit separately display a set of parameters of the control keys.
3. The washing machine according to claim 2, wherein the set of control keys is transversely arranged between the first display unit and the second display unit, and a set of parameters corresponding to one or more control keys is longitudinally arranged and displayed on the display units on two sides of the control keys.
4. The washing machine according to claim 2, wherein the set of control keys at least comprises one or more control keys for controlling items selected from a group containing temperature, rotation speed, wash-

- ing and rinsing;
display areas, corresponding to the control keys for
controlling one or more items selected from a group
containing temperature, rotation speed, washing
and rinsing, of the first display unit and the second
display unit separately display the set of one or more
items selected from a group containing temperature
value parameters, rotation speed value parameters,
washing time parameters and rinsing times of the
first washing device and the second washing device.
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- performed according to the set of clothes material
icons and washing program icons corresponding to
the washing device by operating the rotary knob or
the touch knob; and
preferably, the selection key is arranged on the rotary
knob or the touch knob.
9. A control method of the washing machine according
to any one of claims 1-8, the washing machine comprising
at least two washing devices, a control panel,
and a control system separately connected with the
control panel and the washing devices, wherein the
control method comprising following steps:
- a selection key receiving a selection control signal
of one washing device; and
the control system controlling the corresponding
washing device to operate independently according
to the selection control signal,
the control key controlling programs and parameters
corresponding to the washing device; and
the control system also controlling display units
to simultaneously display the operating states
of the washing device according to the operating
states of the corresponding washing device.
10. The control method of the washing machine according
to claim 9, comprising following steps:
- activating one selection icon on the selection
key,
after receiving a signal of the selection icon
activated of the selection key, the control system
controlling the washing device to operate
independently, and a set of control keys and the
selection key controlling adjustment of the
programs and parameters of the washing device;
and
when the other selection icon on the selection
key is switched and activated, the control system
switching to control the other washing device to
operate independently, and the set of control
keys and the selection key being switched to
control adjustment of the programs and
parameters of the other washing device.

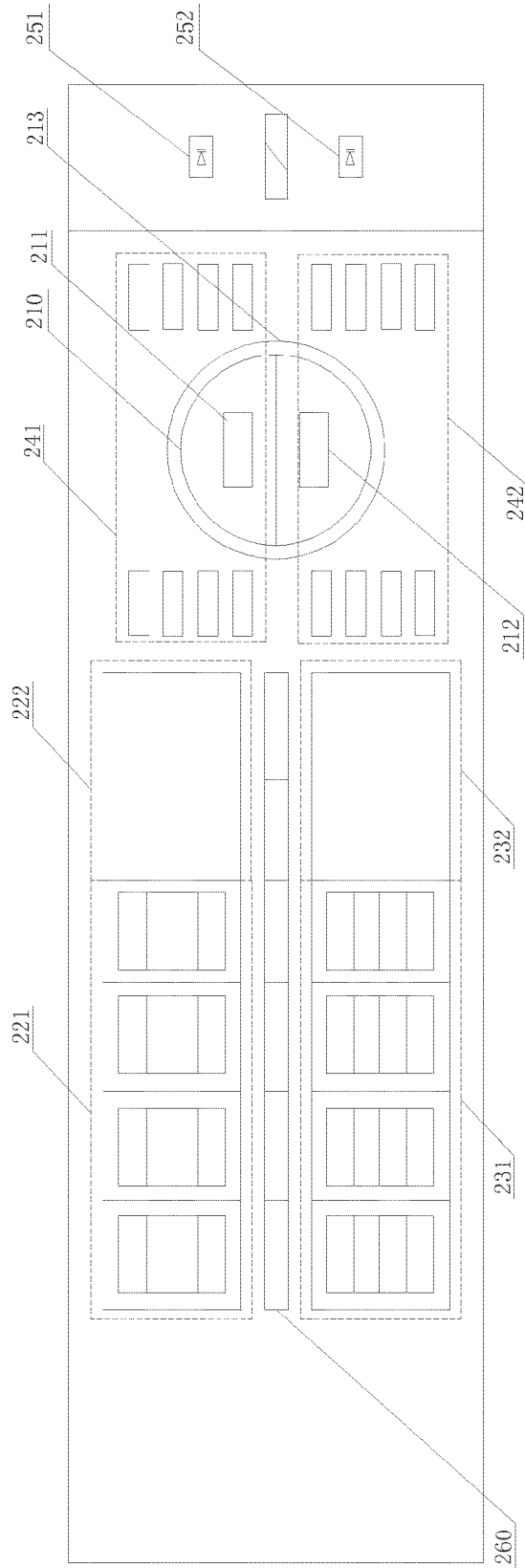


Fig. 1

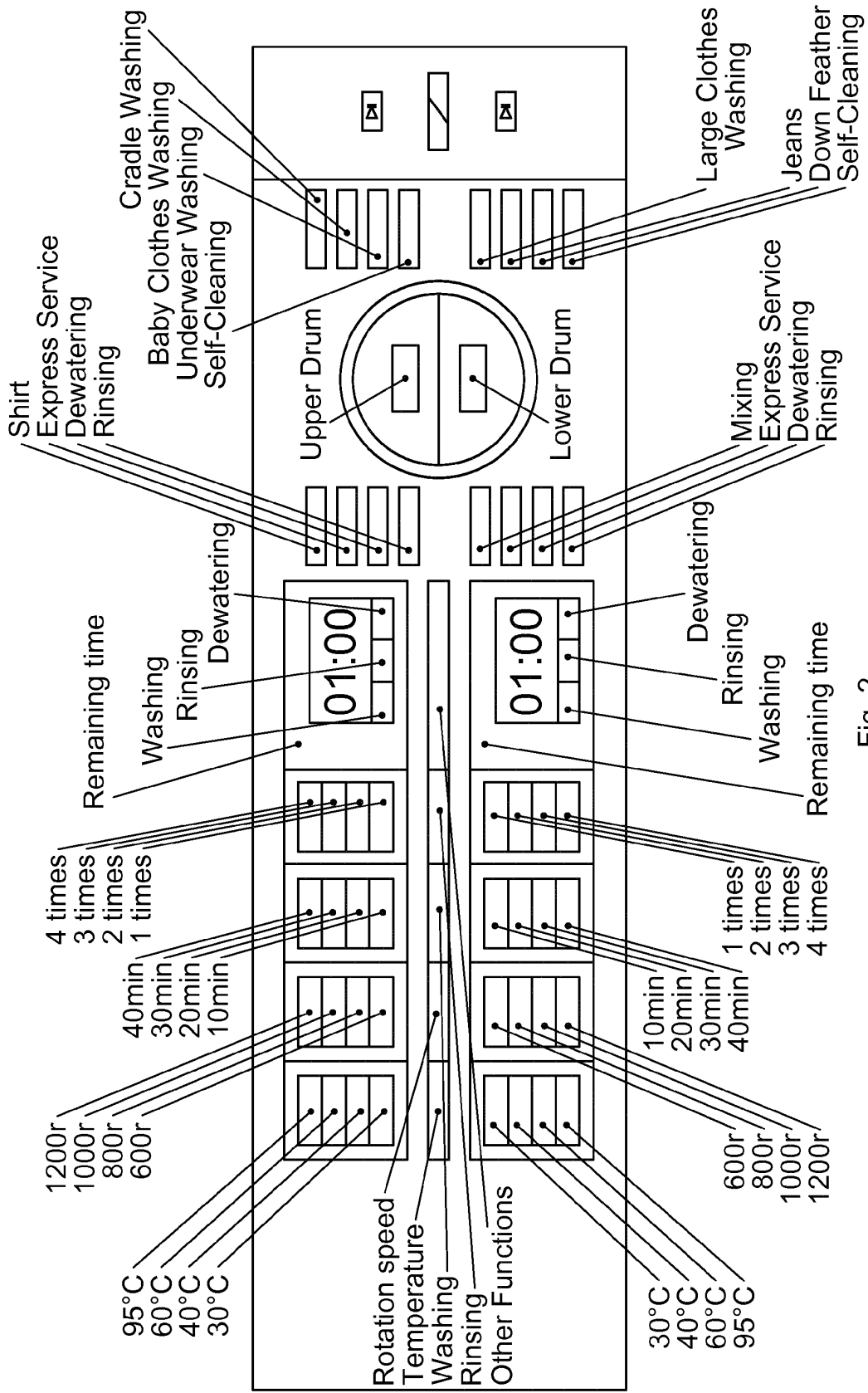


Fig. 2

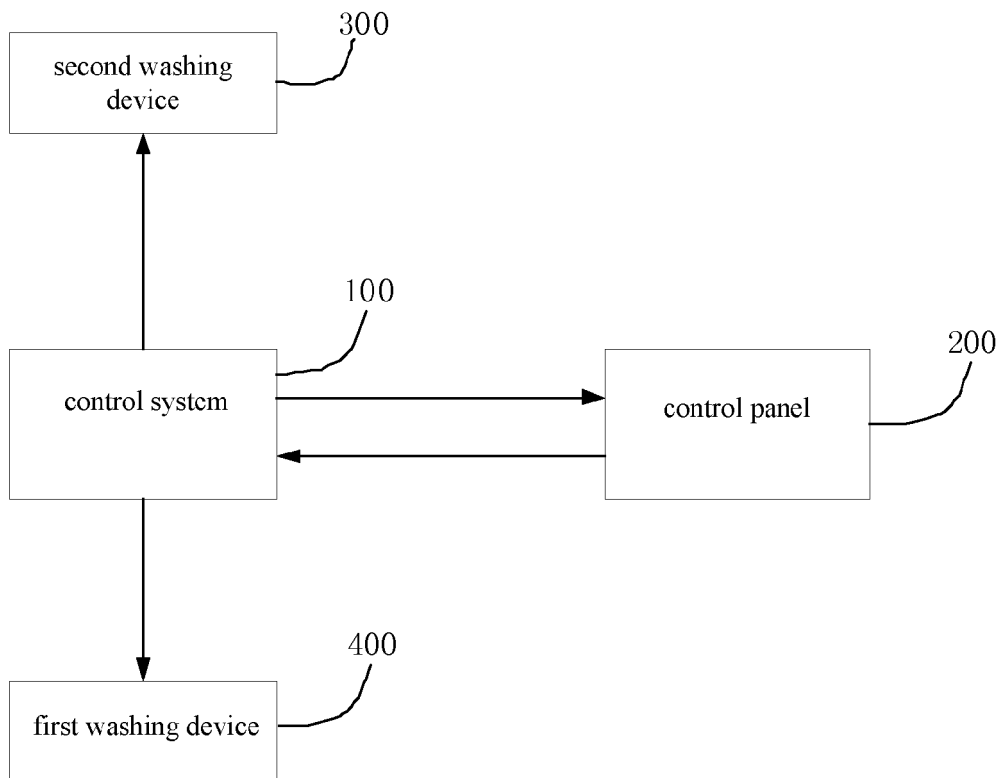


Fig. 3

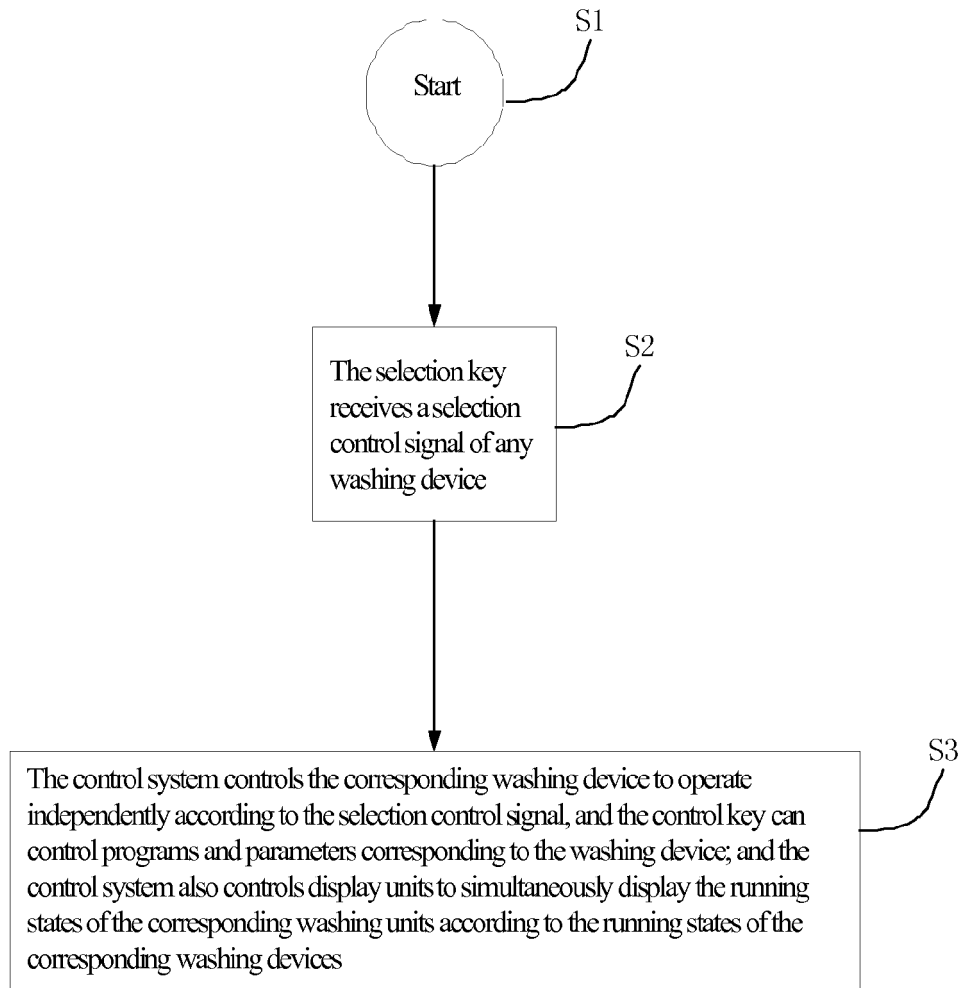


Fig.4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2016/094135

5	A. CLASSIFICATION OF SUBJECT MATTER	
	D06F 58/28 (2006.01) i	
	According to International Patent Classification (IPC) or to both national classification and IPC	
10	B. FIELDS SEARCHED	
	Minimum documentation searched (classification system followed by classification symbols)	
	D06F	
15	Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched	
	Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)	
20	CNKI, CNPAT, WPI, EPODOC: QINGDAO HAIER ROLLER WASHING MACHINE CO., LTD.; washing clothes, public, same, panel, DOUBLE, DRUM?, ROLLER, WASH+, MACHINE, EQUIPMENT, TWO, COMMON, UNIT, CONTROL+	
	C. DOCUMENTS CONSIDERED TO BE RELEVANT	
25	Category*	Citation of document, with indication, where appropriate, of the relevant passages
	E	CN 205443672 U (QINGDAO HAIER WASHING MACHINE CO., LTD.), 10 August 2016 (10.08.2016), description, paragraphs 0030-0040, and figures 1-8
	X	CN 101113557 A (SAMSUNG SDI CO., LTD.), 30 January 2008 (30.01.2008), description, page 7, and figures 1-3
30	X	CN 104404736 A (HEFEI RONGSHIDA SANYO ELECTRIC CO., LTD.), 11 March 2015 (11.03.2015), abstract
	X	CN 204343050 U (WHIRLPOOL CHINA CO., LTD.), 20 May 2015 (20.05.2015), abstract
	A	CN 103806247 A (HEFEI RONGSHIDA SANYO ELECTRIC CO., LTD.), 21 May 2014 (21.05.2014), the whole document
	A	CN 203741589 U (HEFEI RONGSHIDA SANYO ELECTRIC CO., LTD.), 30 July 2014 (30.07.2014), the whole document
35	<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.	
	* Special categories of cited documents:	“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
40	“A” document defining the general state of the art which is not considered to be of particular relevance	“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
	“E” earlier application or patent but published on or after the international filing date	“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
45	“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	“&” document member of the same patent family
	“O” document referring to an oral disclosure, use, exhibition or other means	
	“P” document published prior to the international filing date but later than the priority date claimed	
50	Date of the actual completion of the international search	Date of mailing of the international search report
	31 October 2016 (31.10.2016)	14 November 2016 (14.11.2016)
55	Name and mailing address of the ISA/CN: State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088, China Facsimile No.: (86-10) 62019451	Authorized officer JIA, Qifeng Telephone No.: (86-10) 53318965

INTERNATIONAL SEARCH REPORT

International application No. PCT/CN2016/094135

5	C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
10	A	CN 101210368 A (SUZHOU SAMSUNNG ELECTRONICS CO., LTD.), 02 July 2008 (02.07.2008), the whole document	1-10
	A	EP 1462563 A1 (ELECTROLUX HOME PROD. CORP. N.V.), 29 September 2004 (29.09.2004), the whole document	1-10
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2016/094135

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CN 205443672 U	10 August 2016	None	
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		US 7904983 B2	15 March 2011
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CN 103806247 A	21 May 2014	None	
CN 203741589 U	30 July 2014	None	
CN 101210368 A	02 July 2008	None	
EP 1462563 A1	29 September 2004	ES 2376231 T3	12 March 2012
		AT 535642 T	15 December 2011
		DE 10313763 A1	07 October 2004
		EP 1462563 B1	30 November 2011