



EUROPEAN PATENT APPLICATION
published in accordance with Art. 153(4) EPC

(43) Date of publication:
20.05.2020 Bulletin 2020/21

(51) Int Cl.:
A47L 15/00 (2006.01)

(21) Application number: **18832662.3**

(86) International application number:
PCT/CN2018/073698

(22) Date of filing: **23.01.2018**

(87) International publication number:
WO 2019/010948 (17.01.2019 Gazette 2019/03)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD TN

(30) Priority: **14.07.2017 CN 201710576749**

(71) Applicants:
• **Foshan Shunde Midea Washing Appliances Mfg. Co., Ltd.**
Foshan, Guangdong 528311 (CN)
• **Midea Group Co., Ltd.**
Foshan, Guangdong 528311 (CN)

(72) Inventors:
• **SHIN, Jaekyoo**
Foshan
Guangdong 528311 (CN)
• **QIU, Canhua**
Foshan
Guangdong 528311 (CN)
• **HUANG, Huaming**
Foshan
Guangdong 528311 (CN)
• **HAN, Bing**
Foshan
Guangdong 528311 (CN)

(74) Representative: **Lam, Alvin et al**
Maucher Jenkins
26 Caxton Street
London SW1H 0RJ (GB)

(54) **CONTROL METHOD FOR DISHWASHER, DISHWASHER AND COMPUTER-READABLE STORAGE MEDIUM**

(57) A dishwasher (100), a control method for a dishwasher (100) and a computer-readable storage medium (200), wherein dishwasher (100) comprises a housing (110), a blower (120), a humidity detection unit (140), a heating device (170) and an input device (180). The control method comprises: determining whether a rinsing agent is input into an input device (180) (S151); controlling, after a dishwasher (100) finishes washing, a humidity detection unit (140) so that same detects the humidity (S152); when the rinsing agent is input into the input device, controlling, according to the humidity, a blower (120) so that same stops for a first predetermined time and then operates for a second predetermined time after the dishwasher (100) finishes washing (S153); and when the rinsing agent is not input into the input device (180), controlling, according to the humidity, the blower (120) and a heating device (170) so that same stop for a third predetermined time and then operate for a fourth predetermined time after the dishwasher (100) finishes washing (S154).

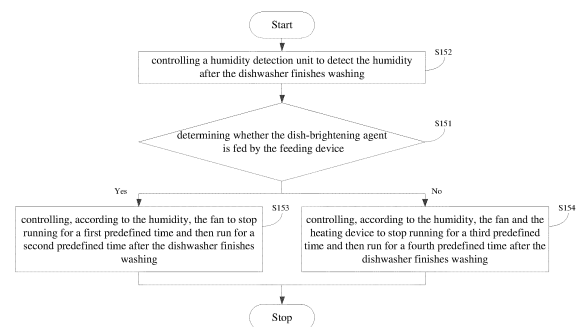


Fig. 1

Description

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the priority and right of the patent application with the patent application number 201710576749.4, which was filed with the State Intellectual Property Office of China on July 14, 2017, and is incorporated herein by reference in its entirety.

FIELD

[0002] The present disclosure relates to household appliances, in particular, to a control method for a dishwasher, a dishwasher and a computer-readable storage medium.

BACKGROUND

[0003] For dishwashers, drying is generally performed only during the drying phase of the washing program. So, in order to avoid subsequent re-elevation of humidity leading to wet dishes, user have to take out the dishes as soon as possible after the washing program is finished, so as to avoid the problem of bacterial growth caused by wet dishes. Since users cannot remove the dishes for a short time, how to prevent the dishes from becoming wet becomes a technical problem to be solved.

SUMMARY

[0004] Embodiments of the present disclosure provide a control method for a dishwasher, a dishwasher and a computer-readable storage medium.

[0005] In the embodiment of the present disclosure, a control method for a dishwasher is provided, the dishwasher including a housing, a fan, a humidity detection unit, a heating device and a feeding device for a dish-brightening agent, wherein the housing is provided with a working chamber and an air flue for keeping the working chamber in communication with the outside, the humidity detection unit is configured to detect a humidity of the working chamber, and the fan is configured to establish an airflow passing through the heating device and the air flue to ventilate the working chamber, the control method comprising steps of:

determining whether the dish-brightening agent is fed by the feeding device;

controlling the humidity detection unit to detect the humidity after the dishwasher finishes washing;

controlling, according to the humidity, the fan to stop running for a first predefined time and then run for a second predefined time after the dishwasher finishes washing, when the dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second prede-

fined time; and

controlling, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0006] In a certain embodiment, before the dishwasher finishes washing, the method includes steps of:

controlling the fan to stop running for a fifth predefined time, run for a sixth predefined time and stop running for a seventh predefined time in order, when the dish-brightening agent is fed by the feeding device; and

controlling the fan and the heating device to stop running for an eighth predefined time, run for a ninth predefined time and stop running for a tenth predefined time in order, when no dish-brightening agent is fed by the feeding device.

[0007] In a certain embodiment, the fifth predefined time and the eighth predefined time are both about 5 minutes, the sixth predefined time and the ninth predefined time are both about 40 minutes, and the seventh predefined time and the tenth predefined time are both about 60 minutes.

[0008] In a certain embodiment, the step of controlling the humidity detection unit to detect a humidity after the dishwasher finishes washing includes steps of:

controlling the fan to run for an eleventh predefined time after the dishwasher finishes washing and before the first predefined time when the dish-brightening agent is fed by the feeding device;

controlling the fan and the heating device to run for a twelfth predefined time after the dishwasher finishes washing and before the third predefined time when no dish-brightening agent is fed by the feeding device; and

controlling the humidity detection unit to detect the humidity within the eleventh predefined time or the twelfth predefined time.

[0009] In a certain embodiment, the step of controlling the humidity detection unit to detect a humidity after the dishwasher finishes washing includes steps of:

controlling the humidity detection unit to perform a plurality of detections to obtain a plurality of initial humidity values; and

processing the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.

[0010] In a certain embodiment, when the humidity is less than or equal to 50%, the first predefined time is about 170 minutes and the second predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the first predefined time is about 140 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the first predefined time is about 110 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the first predefined time is about 80 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the first predefined time is about 40 minutes, and the second predefined time is about 20 minutes; and when the humidity is greater than 85%, the first predefined time is about 10 minutes, and the second predefined time is about 20 minutes.

[0011] In a certain embodiment, when the humidity less than or equal to 55%, the third predefined time is about 170 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 55% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 20 minutes; when the humidity is greater than 70% and less than or equal to 85%, the third predefined time is about 60 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes.

[0012] In a certain embodiment, the step of controlling, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device includes steps of:

determining whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device;

controlling, according to the humidity, the fan and the heating device to stop running for the third predefined time and then run for the fourth predefined time after the dishwasher finishes washing, when the humidity is greater than the humidity threshold; and

controlling, according to the humidity, the fan to stop running for the third predefined time and then run for the fourth predefined time and controlling the heating device to stop heating after the dishwasher finishes washing, when the humidity is less than or equal to the humidity threshold.

[0013] A dishwasher of the embodiment of the present disclosure, including:

a housing, provided with a working chamber and an air flue for keeping the working chamber in commu-

nication with the outside;

a fan, configured to establish an airflow passing through the air flue to ventilate the working chamber; a humidity detection unit, configured to detect a humidity of the working chamber;

a heating device;

a feeding device for the dish-brightening agent; and a processor, configured to:

determine whether the dish-brightening agent is fed by the feeding device;

control the humidity detection unit to detect the humidity after the dishwasher finishes washing;

control, according to the humidity, the fan to stop running for a first predefined time and then run for a second predefined time after the dishwasher finishes washing, when the dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and

control, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0014] In a certain embodiment, the processor is configured to:

control the fan to stop running for a fifth predefined time, run for a sixth predefined time and stop running for a seventh predefined time in order, when the dish-brightening agent is fed by the feeding device; and control the fan and the heating device to stop running for an eighth predefined time, run for a ninth predefined time and stop running for a tenth predefined time in order, when no dish-brightening agent is fed by the feeding device.

[0015] In a certain embodiment, the fifth predefined time and the eighth predefined time are both about 5 minutes, the sixth predefined time and the ninth predefined time are both about 40 minutes, and the seventh predefined time and the tenth predefined time are both about 60 minutes.

[0016] In a certain embodiment, the processor is configured to:

control the fan to run for an eleventh predefined time after the dishwasher finishes washing and before the first predefined time when the dish-brightening agent is fed by the feeding device;

control the fan and the heating device to run for a

twelfth predefined time after the dishwasher finishes washing and before the third predefined time when no dish-brightening agent is fed by the feeding device; and

control the humidity detection unit to detect the humidity within the eleventh predefined time or the twelfth predefined time.

[0017] In a certain embodiment, the processor is configured to:

control the humidity detection unit to perform a plurality of detections to obtain a plurality of initial humidity values; and

process the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.

[0018] In a certain embodiment, when the humidity is less than or equal to 50%, the first predefined time is about 170 minutes and the second predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the first predefined time is about 140 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the first predefined time is about 110 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the first predefined time is about 80 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the first predefined time is about 40 minutes, and the second predefined time is about 20 minutes; and when the humidity is greater than 85%, the first predefined time is about 10 minutes, and the second predefined time is about 20 minutes.

[0019] In a certain embodiment, when the humidity less than or equal to 55%, the third predefined time is about 170 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 55% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 20 minutes; when the humidity is greater than 70% and less than or equal to 85%, the third predefined time is about 60 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes.

[0020] In a certain embodiment, the processor is configured to:

determine whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device;

control, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for the fourth predefined time after

the dishwasher finishes washing, when the humidity is greater than the humidity threshold; and

control, according to the humidity, the fan to stop running for the third predefined time and then run for the fourth predefined time and control the heating device to stop heating after the dishwasher finishes washing, when the humidity is less than or equal to the humidity threshold.

[0021] In a certain embodiment, the humidity detection unit includes a humidity sensor.

[0022] In a certain embodiment, the dishwasher is provided with a plurality of fans, and the plurality of fans is configured to be cooperated to establish an airflow passing through the air flue to ventilate the working chamber.

[0023] In a certain embodiment, the heating device includes a heating pipe.

[0024] In a certain embodiment, the feeding device includes a feeding detection unit, and the feeding detection unit includes a pressure sensor.

[0025] A dishwasher of the embodiment of the present disclosure, including:

a housing, provided with a working chamber and an air flue for keeping the working chamber in communication with the outside;

a fan, configured to establish an airflow passing through the air flue to ventilate the working chamber;

a humidity detection unit, configured to detect a humidity of the working chamber;

a heating device;

a feeding device for a dish-brightening agent;

one or more processors;

a memory; and

one or more programs, wherein the one or more programs are stored in the memory, and configured to be executed by the one or more processors, and the one or more programs are configured to execute instructions of the control method as described above.

[0026] A computer-readable storage medium of the embodiment of the present disclosure includes a computer program for use in conjunction with a dishwasher, the computer program is executable by a processor to complete the control method as described above.

[0027] The control method for dishwasher, the dishwasher and the computer-readable storage medium according to embodiments of the present disclosure control the fan and heating device according to whether the dish-brightening agent is added and the humidity of the working chamber, thereby reducing the water vapor content of the working chamber.

[0028] The additional aspects and advantages of the present disclosure will be set forth in part in the description which follows, and will be known from the practice of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0029] The above and/or additional aspects and advantages of the present disclosure will become apparent and readily understood with combination of the following drawings, in which:

Fig. 1 is a flow chart of a control method for a dishwasher of an embodiment of the present disclosure;
Fig. 2 is a structural diagram of a dishwasher of an embodiment of the present disclosure;

Fig. 3 is another flow chart of a control method for a dishwasher of an embodiment of the present disclosure;

Fig. 4 is still another flow chart of a control method for a dishwasher of an embodiment of the present disclosure;

Fig. 5 is further still another flow chart of a control method for a dishwasher of an embodiment of the present disclosure;

Fig. 6 is another structural diagram of a dishwasher of an embodiment of the present disclosure;

Fig. 7 is further still another flow chart of a control method for a dishwasher of an embodiment of the present disclosure;

Fig. 8 is still another structural diagram of a dishwasher of an embodiment of the present disclosure;

Fig. 9 is a diagram showing a connection between a dishwasher and a computer-readable storage medium of an embodiment of the present disclosure.

Description of Main Reference Numerals:

[0030] dishwasher 100, housing 110, working chamber 111, air flue 112, fan 120, humidity detection unit 140, processor 150, memory 160, heating device 170, feeding device 180, feeding detection unit 182, computer-readable storage medium 200.

DETAILED DESCRIPTION

[0031] Below is detailed description of embodiments of the present disclosure, which are shown in the drawings. Throughout the drawings, same or similar reference signs identify same or similar elements or elements having same or similar functions. The embodiments described below in conjunction with the drawings are illustrative, i.e., the embodiments are intended to illustrate the present disclosure, but not to limit the present disclosure.

[0032] As shown in combination of Figs. 1 and 2, a control method of an embodiment of the present disclosure may be applied to a dishwasher 100. The dishwasher 100 includes a housing 110, a fan 120, a humidity detection unit 140, a heating device 170, and a feeding device 180 for the dish-brightening agent. The housing 110 is provided with a working chamber 111 and an air flue 112 for keeping the working chamber 111 in com-

munication with the outside, and the humidity detection unit 140 is configured to detect a humidity of the working chamber 111. The fan 120 is configured to establish an airflow passing through the heating device 170 and the air flue 112 to ventilate the working chamber 111. The control method includes steps of:

S151: determining whether a dish-brightening agent is fed by the feeding device 180;

S152: controlling the humidity detection unit 140 to detect a humidity after the dishwasher 100 finishes washing;

S153: controlling the fan 120 to run for a second predefined time after stopping running for a first predefined time according to the humidity after the dishwasher 100 finishes washing when the dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and

S154: controlling the fan 120 and the heating device 170 to run for a fourth predefined time after stopping running for a third predefined time according to the humidity after the dishwasher 100 finishes washing when no dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0033] Again, with reference to Fig. 2, the dishwasher 100 of an embodiment of the present disclosure includes a housing 110, a fan 120, a humidity detection unit 140, a processor 150, a heating device 170, and a feeding device 180 for the dish-brightening agent. The housing 110 is provided with a working chamber 111 and an air flue 112 for keeping the working chamber 111 in communication with the outside. The fan 120 is configured to establish an airflow passing through the air flue 112 to ventilate the working chamber 111. The humidity detection unit 140 is configured to detect the humidity of the working chamber 111. The processor 150 is configured to:

determine whether a dish-brightening agent is fed by the feeding device 180;

control the humidity detection unit 140 to detect a humidity after the dishwasher 100 finishes washing; control the fan 120 to run for a second predefined time after stopping running for a first predefined time according to the humidity after the dishwasher 100 finishes washing when the dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and

control the fan 120 and the heating device 170 to run for a fourth predefined time after stopping running for a third predefined time according to the humidity

after the dishwasher 100 finishes washing when no dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0034] That is to say, the control method of an embodiment of the present disclosure may be implemented by the dishwasher 100 of the embodiment of the present disclosure, wherein steps S151, S152, S153, and S154 may be implemented by the processor 150.

[0035] The control method for dishwasher 100 and the dishwasher 100 of the embodiment of the present disclosure control the fan 120 and heating device 170 according to whether the dish-brightening agent is fed and the humidity of the working chamber 111, thereby reducing the water vapor content of the working chamber 111.

[0036] Again, with reference to Fig. 1, the step S151 of the embodiment of the present disclosure is executed after the step S152. It is to be understood that, in other embodiments, the step S151 may be executed before the step S152, which is not specifically limited herein.

[0037] In a certain embodiment, due to the space limitation of the working chamber 111, for example, the working chamber 111 is small, the humidity detection unit 140 may not be directly installed in the working chamber 111, thus the humidity detection unit 140 may be installed in the air flue 112 to detect the humidity in the air flue 112 using the humidity detection unit 140. The working chamber 111 refers to a component in the dishwasher 100 for placing dishes and washing dishes, and is also called an inner container. In some embodiments, the humidity in the air flue 112 may be regarded as the humidity of the working chamber 111.

[0038] In some embodiments, the humidity detection unit 140 may be directly disposed in the working chamber 111 to accurately obtain the humidity of the working chamber 111, which is not specifically limited herein.

[0039] In some embodiments, the fan 120 may be disposed inside the dishwasher 100 or outside the dishwasher 100, which is not specifically limited herein. In an embodiment, the fan 120 is disposed adjacent to the heating device 170, so that the fan 120 may blow a thermal energy generated by the operation of the heating device 170 to the working chamber 111.

[0040] In some embodiments, the dishwasher 100 finishing washing means that the dishwasher 100 has finished the washing program, which generally includes several programs such as pre-washing, main washing, rinsing and drying. The dishwasher 100 finishing washing generally means that the drying program has ended. The steps S151, S152, S153, and S154 of the embodiment of the present disclosure may be regarded as maintenance programs, and the steps S151, S152, S153, and S154 may be repeatedly executed repeatedly to keep the work chamber 111 dry.

[0041] In some embodiments, the humidity detection unit 140 includes a humidity sensor.

[0042] As such, the humidity sensor may be used to obtain the humidity quickly.

[0043] Specifically, the humidity sensor may refer to a device for measuring the relative humidity of the air. The humidity detection unit 140 is generally configured to measure the relative humidity.

[0044] Specifically, the dish-brightening agent refers to a product for reducing the surface tension of water and avoiding water marks on the dishes after the dishwasher 100 finishes washing. It is to be understood that when the dishwasher 100 performs washing, basically no water marks will be left on the dishes if the dish-brightening agent is fed by the feeding device 180, without using the heating device 170 to evaporate the water marks, so the heating device 170 may be controlled to be turned off to reduce the power consumption of the dishwasher 100; when the dishwasher 100 performs washing, water marks will be left on the dishes if no dish-brightening agent is fed by the feeding device 180, so the heating device 170 may be controlled to work, so that the water marks on the dishes may be evaporated into water vapor, and further the fan 120 may discharge the water vapor from the working chamber 111.

[0045] It is to be understood that when the humidity is relatively small, indicating that the water vapor in the dishwasher 100 is not easy to condense into water droplets, the fan 120 may be controlled to stop running for a longer time (that is, the first predefined time and the third predefined time are both longer) and run for a shorter time (that is, the second predefined time and the fourth predefined time are both short); when the humidity is relatively large, indicating that the water vapor in the dishwasher 100 is easy to condense into water droplets, the fan 120 may be controlled to stop running for a short time (that is, the first predefined time and the third predefined time are both shorter) and run for a longer time (that is, the second predefined time and the fourth predefined time are both longer), thereby removing the water vapor in the dishwasher 100, further preventing the water vapor from condensing into droplets.

[0046] In some embodiments, when the humidity values are the same, the first predefined time and the third predefined time may be the same or different, and the second predefined time and the fourth predefined time may be the same or different, which are not specifically limited herein.

[0047] In some embodiments, the heating device 170 includes a heating pipe. As such, the heating device 170 may be used to generate the thermal energy.

[0048] In some embodiments, the feeding device 180 includes a feeding detection unit 182, and the feeding detection unit 182 includes a pressure sensor. As such, whether a dish-brightening agent is fed by the feeding device 180 may be determined by an output of the feeding detection unit 182.

[0049] Specifically, the feeding detection unit 182 may be a pressure sensor, and then by placing the pressure sensor in the feeding device 180, such as at the bottom

of the feeding device 180, whether the dish-brightening agent is fed may be determined through the changes in pressure generated by the dish-brightening agent stored in the feeding detection device 180. For example, when the pressure detected by the pressure sensor becomes smaller, it indicates that the feeding device 180 may feed the dish-brightening agent into the dishwasher.

[0050] In some embodiments, the feeding detection unit 182 may also be an infrared sensor. The infrared sensor determines whether the dish-brightening agent fed into the device 180 is reduced by the emission and the return time of infrared light.

[0051] In some embodiments, the feeding device 180 includes a switch configured to control the entry and exit of the dish-brightening agent, and the state of the switch may also be used to determine whether the dish-brightening agent is fed by the feeding device 180.

[0052] It should be noted that the dish-brightening agent is generally used in the washing program of the dishwasher 100 such as a rinsing program. If the dish-brightening agent is used during the rinsing program, it can be determined that the dish-brightening agent is fed by the feeding device 180, and if the dish-brightening agent is not used during the rinsing program, it can be determined that no dish-brightening agent is fed by the feeding device 180.

[0053] With reference to Fig. 3, in some embodiments, before the dishwasher 100 finishes washing, the method includes steps of:

S155: controlling the fan 120 to stop running for a seventh predefined time after stopping running for a fifth predefined time and after running for a sixth predefined time when the dish-brightening agent is fed by the feeding device 180; and

S156: controlling the fan 120 and the heating device 170 to stop running for a tenth predefined time after stopping running for an eighth predefined time and after running for a ninth predefined time when no dish-brightening agent is fed by the feeding device 180.

[0054] Again, with reference to Fig. 2, in some embodiments, the processor 150 is configured to:

control the fan 120 to stop running for a seventh predefined time after stopping running for a fifth predefined time and after running for a sixth predefined time when the dish-brightening agent is fed by the feeding device 180; and

control the fan 120 and the heating device 170 to stop running for a tenth predefined time after stopping running for an eighth predefined time and after running for a ninth predefined time when no dish-brightening agent is fed by the feeding device 180.

[0055] That is to say, the steps S155 and S156 may be implemented by the processor 150.

[0056] As such, dishes in the dishwasher 100 may be subjected to drying treatment.

[0057] Specifically, before the dishwasher 100 finishes washing, the dishwasher 100 generally includes a drying program, and the water vapor content in the working chamber 111 may be greatly reduced by the drying program. When the dish-brightening agent is fed by the feeding device 180, the drying program of the dishwasher 100 may be implemented by controlling the fan 120 to stop running for the fifth predefined time and run for the sixth predefined time, and when no dish-brightening agent is fed by the feeding device 180, the drying program of the dishwasher 100 may be implemented by controlling the fan 120 to stop running for the eighth predefined time and run for the ninth predefined time. That is to say, the drying program of the dishwasher 100 may be running for a period of time (a sixth predefined time or a ninth predefined time) after the fan 120 is controlled to stop running for a period of time (the fifth predefined time or the eighth predefined time). It can be understood that in order to greatly reduce the water vapor content in the working chamber 111, the fifth predefined time may be much shorter than the sixth predefined time, and the eighth predefined time may be much shorter than the ninth predefined time, and the fan 120 may be controlled to work for the fifth predefined time and the sixth predefined time in multiple times or the fan 120 may be controlled to work for an eighth predefined time and a ninth predefined time in multiple times.

[0058] It should be noted that the steps S151, S152, S153, and S154 of the embodiment of the present disclosure may also be used to dry the air in the working chamber 111, but generally a long time is required, so the fan 120 may be controlled to stop running for a period of time (the fifth predefined time or the eighth predefined time) and run for a period of time (the sixth predefined time or the ninth predefined time) to dry the air in the working chamber 111 in a short time. In addition, after the working chamber 111 is dried by the fan 120, the water vapor content of the working chamber 100 is low in a short time, so the fan 120 may be controlled to stop running for the seventh predefined time or the tenth predefined time, such as 60 minutes, thereby reducing the power consumption of the dishwasher 100.

[0059] It is to be understood that the fifth predefined time and the eighth predefined time may be the same or different, the sixth predefined time and the ninth predefined time may be the same or different, and the seventh predefined time and the tenth predefined time may be the same or different, which are not specifically limited herein.

[0060] In some embodiments, the fifth predefined time and the eighth predefined time are both about 5 minutes, the sixth predefined time and the ninth predefined time are both about 40 minutes, and the seventh predefined time and the tenth predefined time are both about 60 minutes.

[0061] As such, the air in the working chamber 111

may be dried.

[0062] In some embodiments, the fifth predefined time and the eighth predefined time are the same, the sixth predefined time and the ninth predefined time are the same, and the seventh predefined time and the tenth predefined time are the same. Specifically, when the fan 120 is controlled to dry the dishwasher 100, generally, the fan 120 first stops running for the shorter fifth predefined time or the eighth predefined time, such as 0 to 10 minutes, preferably 5 minutes, then runs for a longer sixth predefined time or the ninth predefined time, such as 30 to 60 minutes, preferably 40 minutes, thereby fully taking away the water vapor in the working chamber 111 and further ensuring the drying of the working chamber 111. After the working chamber 111 is dried by the fan 120, the water vapor content of the working chamber 111 is low, then the fan 120 may stop running for the seventh predefined time or the tenth predefined time, such as 50 to 70 minutes, preferably 60 minutes, and after stopping running for 60 minutes, the humidity may be detected and the fan 120 may be controlled to operate to execute the maintenance program of the dishwasher 100 according to the control method of the embodiment of the present disclosure.

[0063] With reference to Fig. 4, in some embodiments, the step S151 includes steps of:

S1511: controlling the fan 120 to run for the eleventh predefined time after the dishwasher 100 finishes washing and before the first predetermined time when the dish-brightening agent is fed by the feeding device 180;

S1512: controlling the fan 120 and the heating device 170 to run for the twelfth predefined time after the dishwasher 100 finishes washing and before the third predetermined time when no dish-brightening agent is fed by the feeding device 180; and

S1513: controlling the humidity detection unit 140 to detect the humidity within the eleventh predefined time or the twelfth predefined time.

[0064] Again, with reference to Fig. 2, in some embodiments, the processor 150 is configured to:

control the fan 120 to run for the eleventh predefined time after the dishwasher 100 finishes washing and before the first predetermined time when the dish-brightening agent is fed by the feeding device 180; control the fan 120 and the heating device 170 to run for the twelfth predefined time after the dishwasher 100 finishes washing and before the third predetermined time when no dish-brightening agent is fed by the feeding device 180; and control the humidity detection unit 140 to detect the humidity within the eleventh predefined time or the twelfth predefined time.

[0065] That is to say, the steps S1511, S1512 and

S1513 may be implemented by the processor 150.

[0066] As such, the humidity detected by the humidity detection unit 140 may be made substantially consistent with the humidity of the working chamber.

[0067] Specifically, the humidity detection unit 140 may be disposed in the air flue 112, and when the humidity detection unit 140 works, the fan 120 may be controlled to run if the dish-brightening agent is fed by the feeding device 180; the fan 120 and the heating device 170 may be controlled to run simultaneously if no dish-brightening agent is fed by the feeding device 180; then the fan 120 may drive the air in the working chamber 111 to flow, and further the air in the air flue 112 may be regarded as the air in the working chamber 111, that is, the humidity detected by the humidity detection unit 140 may be regarded as the humidity of the working chamber 111.

[0068] It is to be understood that the eleventh predefined time is between the end of washing of the dishwasher 100 and the first predefined time, and in some embodiments, the eleventh predefined time may refer to the last period of the seventh predefined time, such as the last 20 seconds of the seventh predefined time. In an embodiment, just when the washing program ends, the eleventh predefined time may refer to the last period of the seventh predefined time, such as 20 seconds. In another embodiment, when the steps S151, S152, S153, and S154 are executed cyclically and the previous first predefined time and the second predefined time have just ended, the eleventh predefined time may refer to the last period of the previous second predefined time, such as 20 seconds.

[0069] It is to be understood that the twelfth predefined time is between the end of washing of the dishwasher 100 and the third predefined time, and in some embodiments, the twelfth predefined time may refer to the last period of the tenth predefined time, such as the last 20 seconds of the tenth predefined time. In an embodiment, just when the washing program ends, the twelfth predefined time may refer to the last period of the tenth predefined time, such as 20 seconds. In another embodiment, when the steps S151, S152, S153, and S154 are executed cyclically and the previous third predefined time and the fourth predefined time have just ended, the twelfth predefined time may refer to the last period of the previous fourth predefined time, such as 20 seconds.

[0070] It is to be understood that controlling the humidity detection unit 140 to detect the humidity within the eleventh predefined time or the twelfth predefined time refers to controlling the humidity detection unit 140 to detect the humidity within the eleventh predefined time when the dish-brightening agent is fed by the feeding device 180, and controlling the humidity detection unit 140 to detect the humidity within the twelfth predefined time when no dish-brightening agent is fed by the feeding device 180.

[0071] It should be noted that in order to ensure that the humidity detected by the humidity detection unit 140

is substantially the same as the humidity of the working chamber 111 when no dish-brightening agent is fed by the feeding device 180, generally, the twelfth predefined time is greater than the eleventh predefined time, e.g., the eleventh predefined time may be 20 seconds, and the twelfth predefined time may be 1 minute. In some embodiments, the eleventh predefined time and the twelfth predefined time may also be the same.

[0072] With reference to Fig. 5, in some embodiments, the step S151 includes steps of:

S1514: controlling the humidity detection unit 140 to perform a plurality of detections to obtain a plurality of initial humidity values; and

S1515: processing the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.

[0073] Again, with reference to Fig. 2, in some embodiments, the processor 150 is configured to:

control the humidity detection unit 140 to perform a plurality of detections to obtain a plurality of initial humidity values; and

process the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.

[0074] That is to say, the steps S1514 and S1515 may be implemented by the processor 150.

[0075] As such, the accuracy of the humidity may be ensured.

[0076] It is to be understood that the humidity detection unit 140 may detect to obtain an initial humidity, a plurality of initial humidity values may be obtained through a plurality of detections by the humidity detection unit 140, and the humidity may be obtained by processing the plurality of initial humidity values. Specifically, the method of processing the plurality of initial humidity values to obtain the humidity includes methods such as taking the average value of the plurality of initial humidity values as the humidity, or taking the median value of the plurality of initial humidity values as the humidity, etc., which are not specifically limited herein.

[0077] In addition, the plurality of initial humidity values may be to obtain an initial humidity at intervals, for example, to obtain an initial humidity at intervals of 5 seconds within 20 seconds or an initial humidity at intervals of 20 seconds within 1 minute, and so on.

[0078] With reference to Fig. 6, in some embodiments, the fan 120 has a plurality of fans, and the plurality of fans 120 is configured to be cooperated to establish an airflow passing through the air flue 112 to ventilate the working chamber 111.

[0079] As such, the dehumidifying effect of the dishwasher 100 may be achieved to a large extent.

[0080] It is to be understood that in order to enhance the dehumidification capacity of the working chamber 111, the fan 120 has a plurality of fans, that is, the dishwasher 100 includes a plurality of fans 120, so that the plurality of fans 120 may be operated simultaneously to enhance the air circulation in the working chamber 111 and discharge the water vapor in the air from the dishwasher 100.

[0081] It should be noted that the plurality of fans 120 may be disposed inside or outside the dishwasher 100. In an embodiment, one fan 120 is disposed adjacent to the heating device 170 to blow the thermal energy generated by the heating device 170 to the working chamber 111, and one fan 120 is disposed in the air flue 112 to guide the air into the air flue 112, thereby working simultaneously to speed up the air circulation in the working chamber 111.

[0082] In some embodiments, when the humidity is less than or equal to 50%, the first predefined time is about 170 minutes and the second predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the first predefined time is about 140 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the first predefined time is about 110 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the first predefined time is about 80 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the first predefined time is about 40 minutes, and the second predefined time is about 20 minutes; and when the humidity is greater than 85%, the first predefined time is about 10 minutes, and the second predefined time is about 20 minutes.

[0083] As such, the fan 120 may be controlled to run according to the humidity.

[0084] Specifically, when the humidity is less than or equal to 50%, indicating that the humidity is very small, the water vapor in the dishwasher 100 may not easily be condensed into water droplets, so the fan 120 is controlled to run for about 10 minutes after stopping running for about 170 minutes; when the humidity is greater than 50% and less than or equal to 60%, indicating that the humidity is smaller, so the fan 120 is controlled to run for about 10 minutes after stopping running for about 140 minutes; when the humidity is greater than 60% and less than or equal to 70%, indicating that the humidity is slightly higher, so the fan 120 is controlled to run for about 10 minutes after stopping running for about 110 minutes; when the humidity is greater than 70% and less than or equal to 80%, indicating that the humidity is higher, so the fan 120 is controlled to run for about 10 minutes after stopping running for about 80 minutes; when the humidity is greater than 80% and less than or equal to 85%, indicating that the humidity is very high, the water vapor in the dishwasher 100 may easily be condensed into water droplets, so the fan 120 is controlled to run for about 20

minutes after stopping running for about 40 minutes; when the humidity is greater than 85%, indicating that the humidity is extremely high, the water vapor in the dishwasher 100 has been substantially condensed into water droplets, so the fan 120 is controlled to run for about 20 minutes after stopping running for about 10 minutes.

[0085] In some embodiments, the third predefined time is the same as the first predefined time, and the fourth predefined time is the same as the second predefined time, that is, when the humidity is less than or equal to 50%, the third predefined time is about 170 minutes and the fourth predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the third predefined time is about 140 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the third predefined time is about 80 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the third predefined time is about 40 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes.

[0086] In some embodiments, when the humidity less than or equal to 55%, the third predefined time is about 170 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 55% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 20 minutes; when the humidity is greater than 70% and less than or equal to 85%, the third predefined time is about 60 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes.

[0087] As such, the fan 120 may be controlled to run according to the humidity.

[0088] Specifically, when the humidity is less than or equal to 55%, indicating that the humidity is very small, the water vapor in the dishwasher 100 may not easily be condensed into water droplets, so the fan 120 and the heating device 170 are controlled to run for about 10 minutes after stopping running for about 170 minutes; when the humidity is greater than 55% and less than or equal to 70%, indicating that the humidity is slightly higher, so the fan 120 and the heating device 170 are controlled to run for about 20 minutes after stopping running for about 110 minutes; when the humidity is greater than 70% and less than or equal to 85%, indicating that the humidity is higher, so the fan 120 and the heating device 170 are controlled to run for about 20 minutes after stopping running for about 60 minutes; when the humidity is greater than 85%, indicating that the humidity is extremely high,

the water vapor in the dishwasher 100 has been substantially condensed into water droplets, so the fan 120 and the heating device 170 are controlled to run for about 20 minutes after stopping running for about 10 minutes.

[0089] With reference to Fig. 7, in some embodiments, the step S154 includes steps of:

S1542: determining whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device 180;

S1544: controlling the fan 120 and the heating device 170 to run for the fourth predefined time after stopping running for the third predefined time according to the humidity after the dishwasher 100 finishes washing when the humidity is greater than the humidity threshold; and

S1546: controlling the fan 120 to run for the fourth predefined time after stopping running for the third predefined time and controlling the heating device 170 to stop running according to the humidity after the dishwasher 100 finishes washing when the humidity is less than or equal to the humidity threshold.

[0090] Again, with reference to Fig. 2, in some embodiments, the processor 150 is configured to:

determine whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device 180;

control the fan 120 and the heating device 170 to run for the fourth predefined time after stopping running for the third predefined time according to the humidity after the dishwasher 100 finishes washing when the humidity is greater than the humidity threshold; and control the fan 120 to run for the fourth predefined time after stopping running for the third predefined time and control the heating device 170 to stop running according to the humidity after the dishwasher 100 finishes washing when the humidity is less than or equal to the humidity threshold.

[0091] That is to say, the steps S1542, S1544 and S1546 may be implemented by the processor 150.

[0092] As such, the heating device 170 may be controlled to stop working when the humidity is less than or equal to the humidity threshold to reduce the power consumption of the dishwasher 100.

[0093] Specifically, when no dish-brightening agent is fed by the feeding device 180, the water marks attached to the dishes may be evaporated to form the water vapor through the working of the heating device 170, thereby using the fan 120 discharge the water vapor to prevent bacteria from breeding. When the humidity is greater than the humidity threshold, the humidity in the working chamber 111 is larger, and the fan 120 and the heating device 170 may be controlled to simultaneously run for the fourth predefined time after stopping running for the third predefined time according to the humidity; when the humidity

is less than or equal to the humidity threshold, the humidity in the working chamber 111 is smaller, and the fan 120 may be controlled to run for the fourth predefined time after stopping running for the third predefined time and the heating device 170 may be controlled to stop working according to the humidity, thereby reducing the power consumption of the dishwasher 100.

[0094] It is to be understood that the humidity threshold may be preset in the dishwasher 100 or determined by a user input, e.g., the humidity threshold may be 60%, 70%, or 80%, which is not specifically limited herein.

[0095] With reference to Fig. 8, the dishwasher 100 of the embodiment of the present disclosure includes a housing 110, a fan 120, a humidity detection unit 140, a heating device 170, a feeding device 180, one or more processors 150, a memory 160, and one or more programs. Among them, the one or more programs are stored in the memory 160, and configured to be executed by the one or more processors 150, and the programs are configured to execute instructions of the control method of any one of above embodiments.

[0096] For example, the programs may be configured to execute instructions of the control method below:

S151: determining whether a dish-brightening agent is fed by the feeding device 180;

S152: controlling the humidity detection unit 140 to detect a humidity after the dishwasher 100 finishes washing;

S153: controlling the fan 120 to run for a second predefined time after stopping running for a first predefined time according to the humidity after the dishwasher 100 finishes washing when the dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and

S154: controlling the fan 120 and the heating device 170 to run for a fourth predefined time after stopping running for a third predefined time according to the humidity after the dishwasher 100 finishes washing when no dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0097] With reference to Fig. 9, a computer-readable storage medium 200 of the embodiment of the present disclosure includes a computer program for use in conjunction with the dishwasher 100, and the computer program is executable by the processor 150 to complete the control method of any one of above embodiments of the present disclosure.

[0098] For example, the computer program may be executed by the processor 150 to complete the following control methods:

S151: determining whether a dish-brightening agent

is fed by the feeding device 180;

S152: controlling the humidity detection unit 140 to detect a humidity after the dishwasher 100 finishes washing;

S153: controlling the fan 120 to run for a second predefined time after stopping running for a first predefined time according to the humidity after the dishwasher 100 finishes washing when the dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and

S154: controlling the fan 120 and the heating device 170 to run for a fourth predefined time after stopping running for a third predefined time according to the humidity after the dishwasher 100 finishes washing when no dish-brightening agent is fed by the feeding device 180, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

[0099] It should be noted that the computer readable storage medium 200 may be a storage medium built in the dishwasher 100, or a storage medium that may be plugged and inserted in the dishwasher 100.

[0100] In the description of the embodiment of the present disclosure, the terms 'first', 'second' are used only for description and shall not be interpreted as an indication or implication of relative importance or an implicit indication of the number of technical features. Thus, the feature defined by 'first', 'second' can explicitly or implicitly include one or more characteristics. In the description of the embodiment of the present disclosure, the meaning of "a plurality" is two or more than two, unless specifically defined otherwise.

[0101] In the description of the embodiment of the present disclosure, the terms 'install', 'interconnect', and 'connect' should be understood from a broad extent. For instance, it may be connected in a fixed, removable or integrated manner; and it may be mechanically or electrically connected or communicated; and it may be directly or indirectly (via a media in between) connected; and it may be the inside of two elements in communication with each other or two elements interacting with each other. The ordinary artisans concerned may understand the specific meaning of terms in the embodiment of the present disclosure according to specific circumstance.

[0102] In the description of the present specification, the description with reference to the terms "an embodiment", "some embodiments", "illustrative embodiments", "example", "specific example", or "some examples" and the like means that specific features, structures, materials, or features described in connection with the embodiments or examples are included in at least one embodiment or example of the present disclosure. In the present specification, the schematic representation of the above terms does not necessarily mean the same embodiment or example. Furthermore, the particular features, struc-

tures, materials, or characteristics described may be combined in a suitable manner in any one or more embodiments or examples.

[0103] Any process or method description in the flowcharts or otherwise described herein may be understood to represent a module, segment or portion of code including one or more executable instructions for implementing the steps of a custom logic function or process, and the scope of the preferred embodiments of the present disclosure includes additional implementations in which functions may not be performed in the order shown or discussed, including in a substantially simultaneous manner or in reverse order depending on the functionality involved, which should be understood by those skilled in the art to which the embodiments of the present disclosure pertain.

[0104] The logic and/or steps represented in the flowcharts or otherwise described herein, for example, may be considered as an ordered list of executable instructions for implementing logical functions, and may be embodied in any computer readable medium for use by or in connection with an instruction execution system, apparatus, or device (e.g., a computer-based system, a system including a processor, or other system that can fetch instructions from an instruction execution system, apparatus, or device and execute instructions). For the purposes of this specification, a "computer-readable medium" can be any apparatus that can contain, store, communicate, propagate, or transport a program for use in an instruction execution system, apparatus, or device, or in conjunction with the instruction execution system, apparatus, or device. More specific examples (non-exhaustive list) of computer readable medium include electrical connection (electronic device) having one or more wirings, portable computer disk cartridge (magnetic device), random access memory (RAM), read only memory (ROM), erasable and editable read-only memory (EPROM or flash memory), fiber optic devices, and portable compact disk read-only memory (CDROM). Additionally, since a program can be obtained electronically, for example by optical scanning of paper or other medium, followed by editing, interpretation or, if necessary, processing in other suitable manner, and then storing it in computer memory, the computer readable medium can even be a paper or other suitable medium on which the program can be printed.

[0105] It should be understood that portions of the embodiment of the present disclosure may be implemented in hardware, software, firmware or a combination thereof. In the above-described embodiments, multiple steps or methods may be implemented in software or firmware stored in a memory and executed by a suitable instruction execution system. For example, if implemented in hardware and in another embodiment, it can be implemented by any of the following techniques or combinations thereof well known in the art: discrete logic circuit with logic gates for implementing logic functions on data signals, ASIC with appropriate combinational logic gate, Pro-

grammable Gate Array (PGA), Field Programmable Gate Array (FPGA), etc..

[0106] It will be appreciated by those of ordinary skill in the art that all or part of the steps of implementing embodiments of the foregoing method may be performed by hardware related to the program instructions. The foregoing program may be stored in a computer readable storage medium, which, when executed, includes one or a combination of the steps of a method embodiment.

[0107] In addition, the functional units in the embodiments of the present disclosure can be integrated in one processing module or each unit may independently physically exist, or two or more units may be integrated into one module. The integrated modules can be implemented in the form of hardware, and can also be implemented in the form of a software functional module. If the integrated modules are implemented in the form of a software functional module and sold or used as an independent product, they can be stored in a computer-readable storage medium.

[0108] The above-mentioned storage medium may be a read only memory, a magnetic disk or an optical disk or the like.

[0109] Although embodiments of the disclosure have been shown and described above, it will be understood that the above embodiments are illustrative and are not to be construed as limiting the present disclosure. Changes, modifications, alterations and variations of the above-described embodiments may be made by those skilled in the art.

Claims

1. A control method for a dishwasher, the dishwasher comprising a housing, a fan, a humidity detection unit, a heating device and a feeding device for a dish-brightening agent, wherein the housing is provided with a working chamber and an air flue for keeping the working chamber in communication with the outside, the humidity detection unit is configured to detect a humidity of the working chamber, and the fan is configured to establish an airflow passing through the heating device and the air flue to ventilate the working chamber, the control method comprising steps of:

determining whether the dish-brightening agent is fed by the feeding device;

controlling the humidity detection unit to detect the humidity after the dishwasher finishes washing;

controlling, according to the humidity, the fan to stop running for a first predefined time and then run for a second predefined time after the dishwasher finishes washing, when the dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the first

- predefined time, and the humidity is positively correlated to the second predefined time; and controlling, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.
2. The control method according to claim 1, wherein before the dishwasher finishes washing, the method comprises steps of:
- controlling the fan to stop running for a fifth predefined time, run for a sixth predefined time and stop running for a seventh predefined time in order, when the dish-brightening agent is fed by the feeding device; and
- controlling the fan and the heating device to stop running for an eighth predefined time, run for a ninth predefined time and stop running for a tenth predefined time in order, when no dish-brightening agent is fed by the feeding device.
3. The control method according to claim 2, wherein the fifth predefined time and the eighth predefined time are both about 5 minutes, the sixth predefined time and the ninth predefined time are both about 40 minutes, and the seventh predefined time and the tenth predefined time are both about 60 minutes.
4. The control method according to claim 1, wherein the step of controlling the humidity detection unit to detect a humidity after the dishwasher finishes washing comprises steps of:
- controlling the fan to run for an eleventh predefined time after the dishwasher finishes washing and before the first predefined time when the dish-brightening agent is fed by the feeding device;
- controlling the fan and the heating device to run for a twelfth predefined time after the dishwasher finishes washing and before the third predefined time when no dish-brightening agent is fed by the feeding device; and
- controlling the humidity detection unit to detect the humidity within the eleventh predefined time or the twelfth predefined time.
5. The control method according to claim 1, wherein the step of controlling the humidity detection unit to detect a humidity after the dishwasher finishes washing comprises steps of:
- controlling the humidity detection unit to perform a plurality of detections to obtain a plurality of initial humidity values; and
- processing the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.
6. The control method according to claim 1, wherein when the humidity is less than or equal to 50%, the first predefined time is about 170 minutes and the second predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the first predefined time is about 140 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the first predefined time is about 110 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the first predefined time is about 80 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the first predefined time is about 40 minutes, and the second predefined time is about 20 minutes; and when the humidity is greater than 85%, the first predefined time is about 10 minutes, and the second predefined time is about 20 minutes.
7. The control method according to claim 1, wherein when the humidity less than or equal to 55%, the third predefined time is about 170 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 55% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 20 minutes; when the humidity is greater than 70% and less than or equal to 85%, the third predefined time is about 60 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes.
8. The control method according to claim 1, wherein the step of controlling, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device comprises steps of:
- determining whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device;
- controlling, according to the humidity, the fan and the heating device to stop running for the third predefined time and then run for the fourth

predefined time after the dishwasher finishes washing, when the humidity is greater than the humidity threshold; and
controlling, according to the humidity, the fan to stop running for the third predefined time and then run for the fourth predefined time and controlling the heating device to stop heating after the dishwasher finishes washing, when the humidity is less than or equal to the humidity threshold.

9. A dishwasher, comprising:

a housing, provided with a working chamber and an air flue for keeping the working chamber in communication with the outside;
a fan, configured to establish an airflow passing through the air flue to ventilate the working chamber;
a humidity detection unit, configured to detect a humidity of the working chamber;
a heating device;
a feeding device for the dish-brightening agent; and
a processor, configured to:

determine whether the dish-brightening agent is fed by the feeding device;
control the humidity detection unit to detect the humidity after the dishwasher finishes washing;
control, according to the humidity, the fan to stop running for a first predefined time and then run for a second predefined time after the dishwasher finishes washing, when the dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the first predefined time, and the humidity is positively correlated to the second predefined time; and
control, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when no dish-brightening agent is fed by the feeding device, wherein the humidity is negatively correlated to the third predefined time, and the humidity is positively correlated to the fourth predefined time.

10. The dishwasher according to claim 9, wherein the processor is configured to:

control the fan to stop running for a fifth predefined time, run for a sixth predefined time and stop running for a seventh predefined time in order, when the dish-brightening agent is fed by

the feeding device; and

control the fan and the heating device to stop running for an eighth predefined time, run for a ninth predefined time and stop running for a tenth predefined time in order, when no dish-brightening agent is fed by the feeding device.

11. The dishwasher according to claim 10, wherein the fifth predefined time and the eighth predefined time are both about 5 minutes, the sixth predefined time and the ninth predefined time are both about 40 minutes, and the seventh predefined time and the tenth predefined time are both about 60 minutes.

12. The dishwasher according to claim 9, wherein the processor is configured to:

control the fan to run for an eleventh predefined time after the dishwasher finishes washing and before the first predefined time when the dish-brightening agent is fed by the feeding device;
control the fan and the heating device to run for a twelfth predefined time after the dishwasher finishes washing and before the third predefined time when no dish-brightening agent is fed by the feeding device; and
control the humidity detection unit to detect the humidity within the eleventh predefined time or the twelfth predefined time.

13. The dishwasher according to claim 9, wherein the processor is configured to:

control the humidity detection unit to perform a plurality of detections to obtain a plurality of initial humidity values; and
process the plurality of initial humidity values to obtain the humidity, the humidity being an intermediate value or an average value of the plurality of initial humidity values.

14. The dishwasher according to claim 9, wherein when the humidity is less than or equal to 50%, the first predefined time is about 170 minutes and the second predefined time is about 10 minutes; when the humidity is greater than 50% and less than or equal to 60%, the first predefined time is about 140 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 60% and less than or equal to 70%, the first predefined time is about 110 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 70% and less than or equal to 80%, the first predefined time is about 80 minutes, and the second predefined time is about 10 minutes; when the humidity is greater than 80% and less than or equal to 85%, the first predefined time is about 40 minutes, and the second predefined time is about 20 minutes; and

when the humidity is greater than 85%, the first predefined time is about 10 minutes, and the second predefined time is about 20 minutes.

15. The dishwasher according to claim 9, wherein when the humidity less than or equal to 55%, the third predefined time is about 170 minutes, and the fourth predefined time is about 10 minutes; when the humidity is greater than 55% and less than or equal to 70%, the third predefined time is about 110 minutes, and the fourth predefined time is about 20 minutes; when the humidity is greater than 70% and less than or equal to 85%, the third predefined time is about 60 minutes, and the fourth predefined time is about 20 minutes; and when the humidity is greater than 85%, the third predefined time is about 10 minutes, and the fourth predefined time is about 20 minutes. 5
16. The dishwasher according to claim 9, wherein the processor is configured to: 20
determine whether the humidity is greater than a humidity threshold when no dish-brightening agent is fed by the feeding device;
control, according to the humidity, the fan and the heating device to stop running for a third predefined time and then run for a fourth predefined time after the dishwasher finishes washing, when humidity is greater than the humidity threshold; and 25
control, according to the humidity, the fan to stop running for the third predefined time and then run for the fourth predefined time and control the heating device to stop heating after the dishwasher finishes washing, when the humidity is less than or equal to the humidity threshold. 30 35
17. The dishwasher according to claim 9, wherein the humidity detection unit comprises a humidity sensor. 40
18. The dishwasher according to claim 9, wherein the dishwasher is provided with a plurality of fans, and the plurality of fans is configured to be cooperated to establish an airflow passing through the air flue to ventilate the working chamber. 45
19. The dishwasher according to claim 9, wherein the heating device comprises a heating pipe.
20. The dishwasher according to claim 9, wherein the feeding device comprises a feeding detection unit, and the feeding detection unit comprises a pressure sensor. 50
21. A dishwasher, comprising: 55
a housing, provided with a working chamber and an air flue for keeping the working chamber in

communication with the outside;
a fan, configured to establish an airflow passing through the air flue to ventilate the working chamber;
a humidity detection unit, configured to detect a humidity of the working chamber;
a heating device;
a feeding device for a dish-brightening agent;
one or more processors;
a memory; and
one or more programs, wherein the one or more programs are stored in the memory, and configured to be executed by the one or more processors, and the one or more programs are configured to execute instructions of the control method according to any one of claims 1 to 8.

22. A computer-readable storage medium, comprising a computer program for use in conjunction with a dishwasher, the computer program being executable by a processor to complete the control method according to any one of claims 1 to 8.

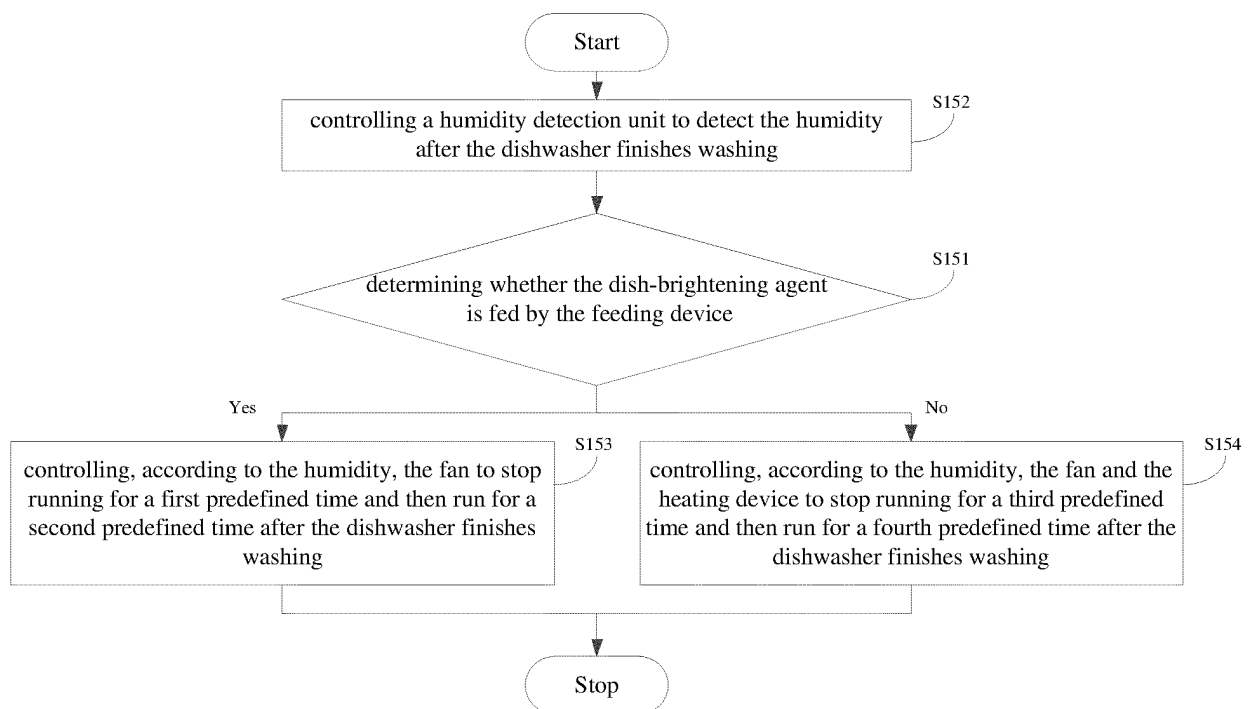


Fig. 1

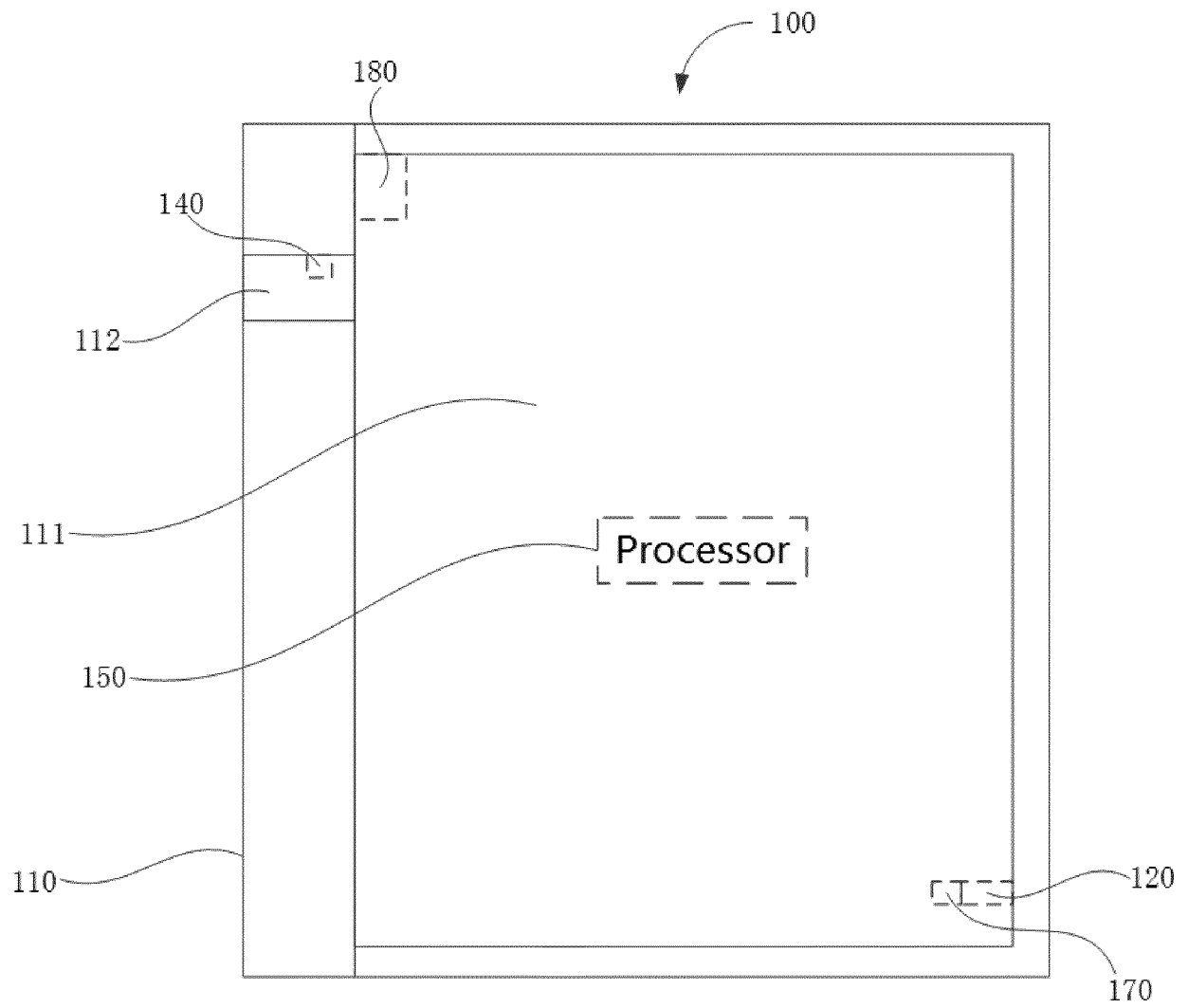


Fig. 2

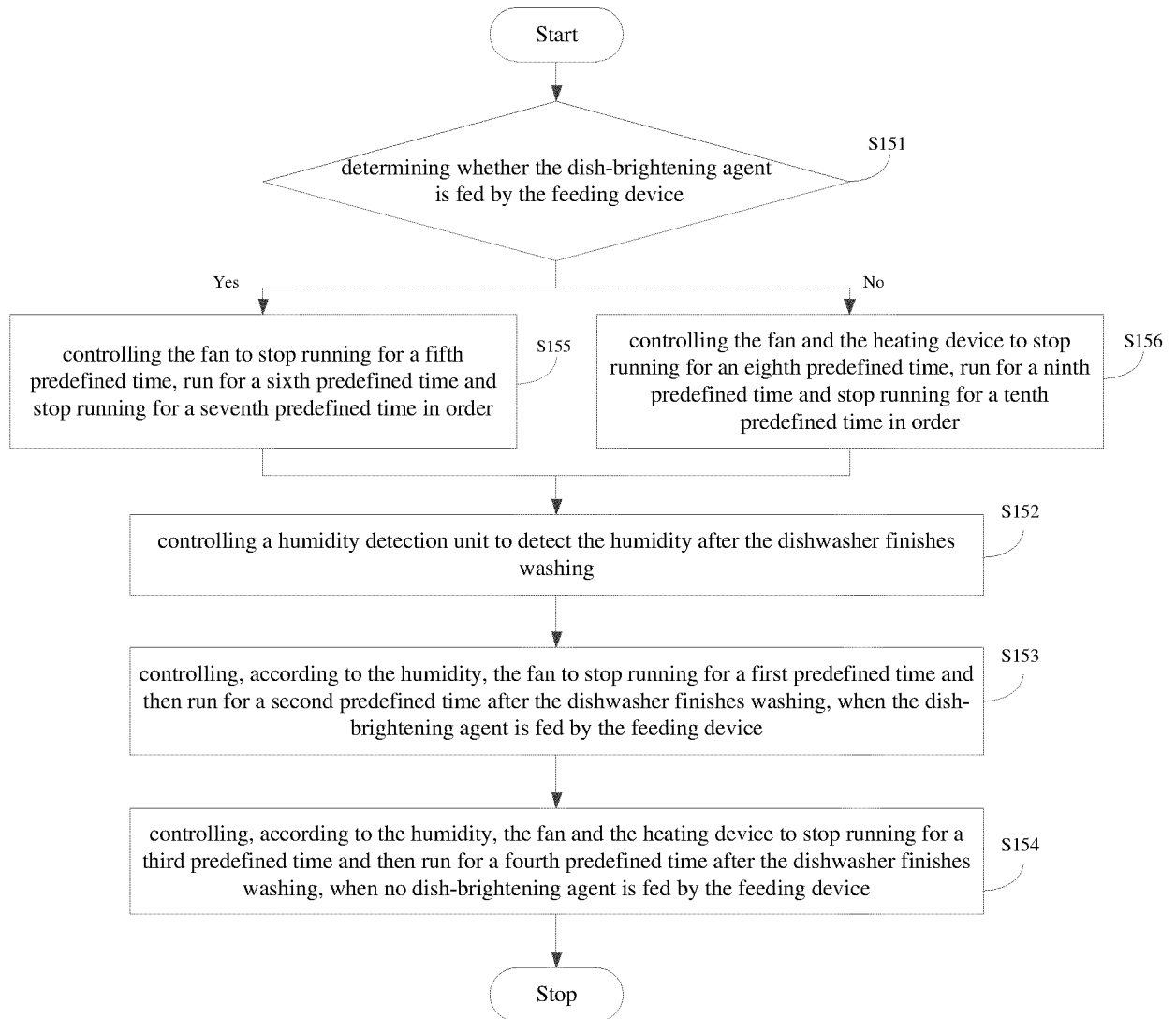


Fig. 3

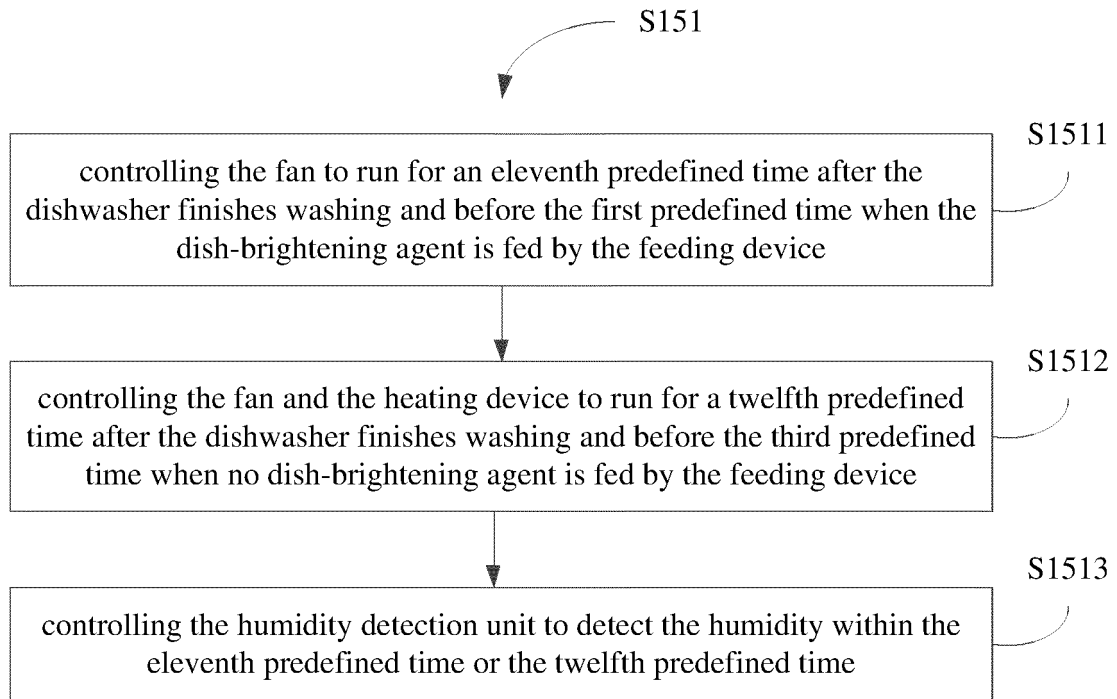


Fig. 4

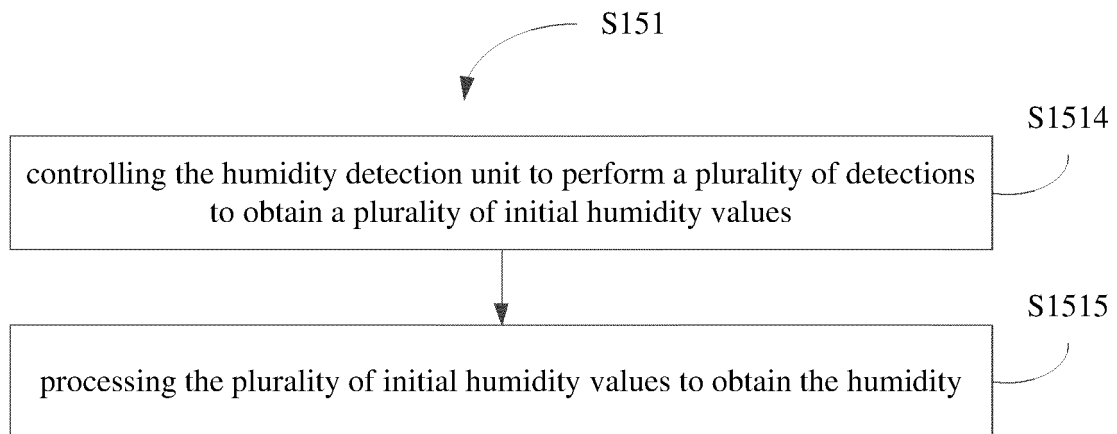


Fig. 5

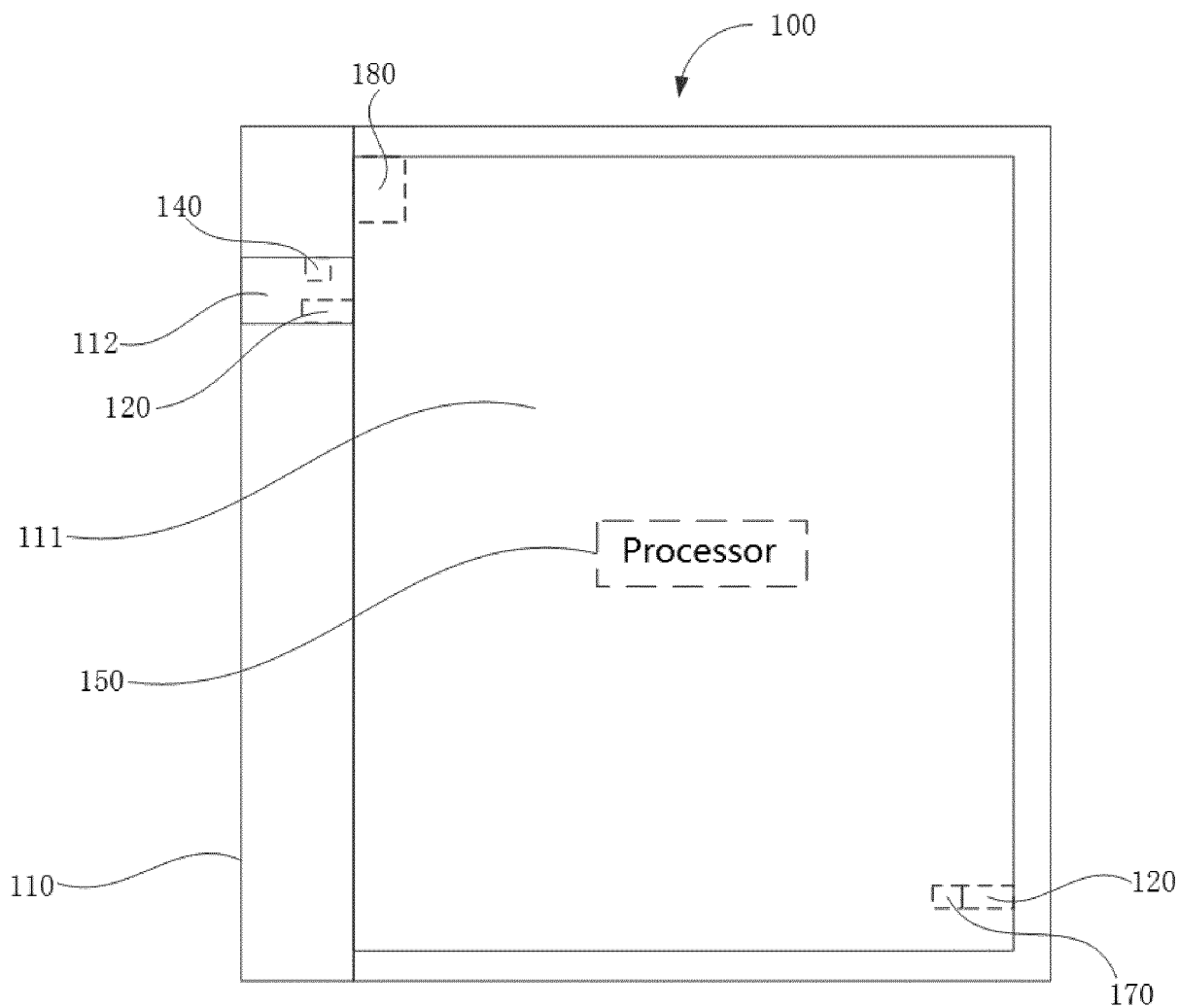


Fig. 6

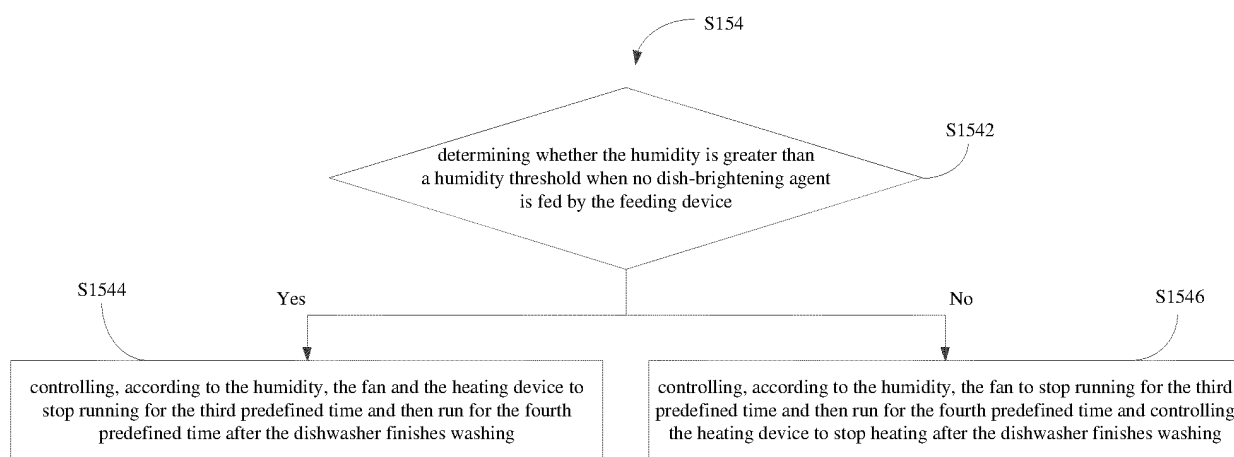


Fig. 7

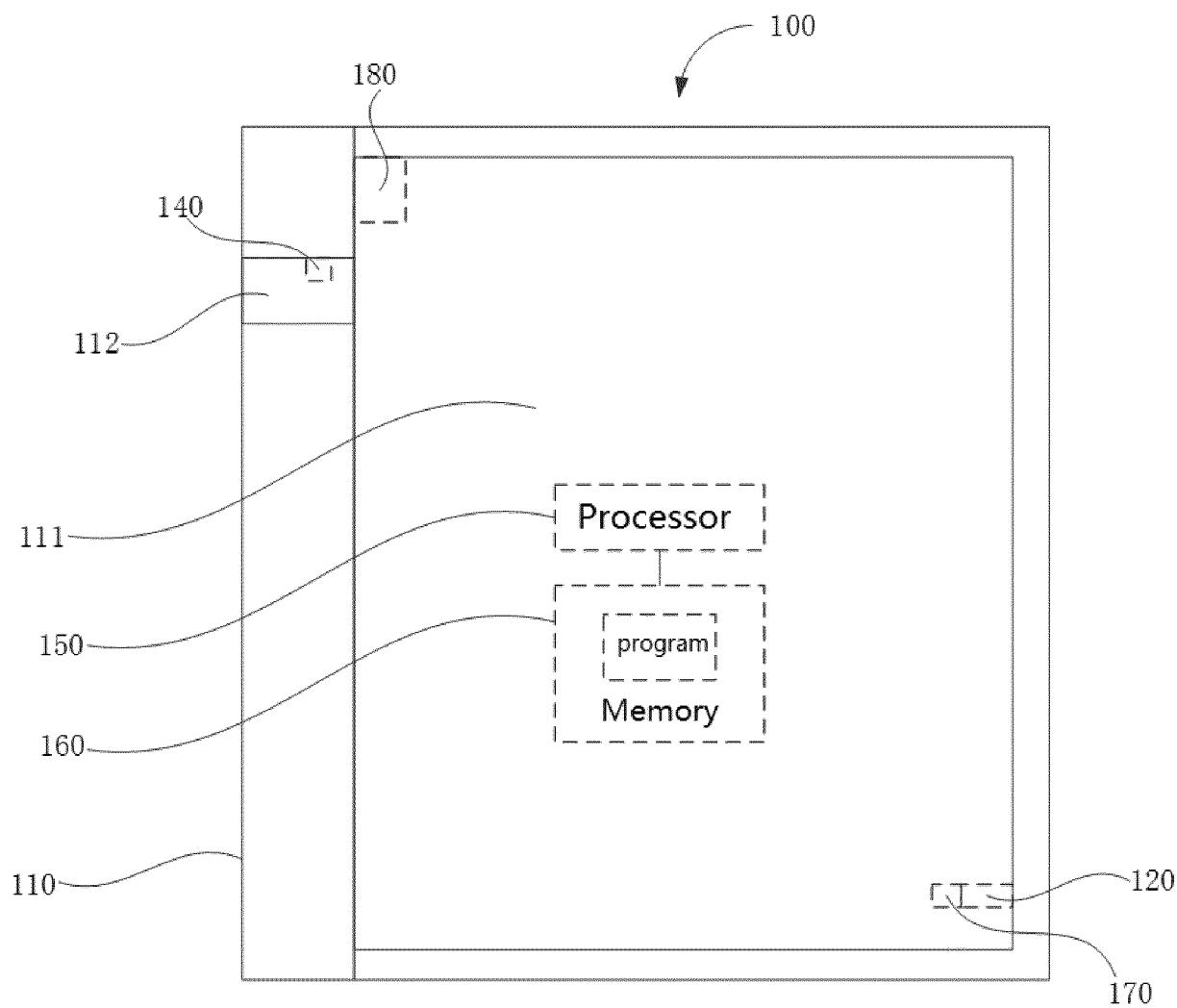


Fig. 8

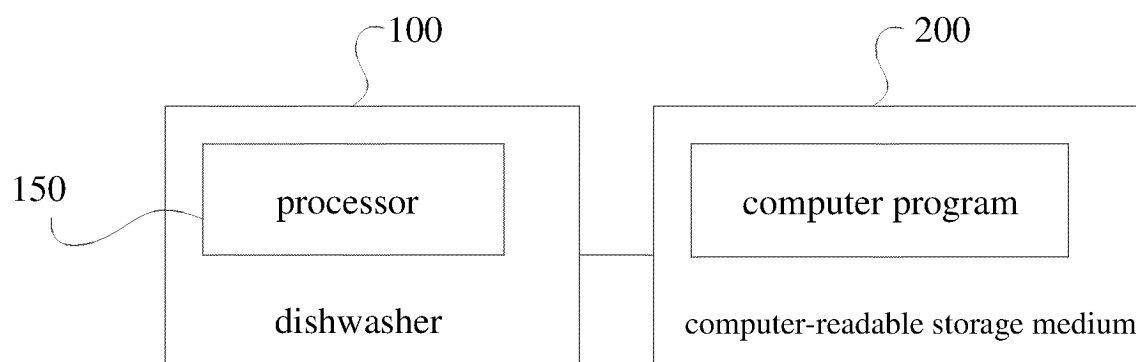


Fig. 9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2018/073698

A. CLASSIFICATION OF SUBJECT MATTER

A47L 15/00 (2006.01) i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A47L 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)

CNPAT, CNKI, WPI, EPODOC: 湿度, 洗碗机, 控制, 加热, 亮碟, 亮洁, 风机, 投入, 压力, 水蒸气, 水蒸汽, 舱, 腔, 内胆, 室, 干燥, 烘干, 吹干, 吹风, 热风, 除湿, 通风, 送风, 风扇, dishwasher, washer, humidity, heat+, vapor+, vapour+, chamber?, tub?, container?, dry+, blow+, ventilat+, outlet+, outtak+, mildew, germ, bacteria, mold, proof, prevent+, fan

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
PX	CN 107307825 A (FOSHAN SHUNDE MIDEA WASHING APPLIANCES MFG. CO., LTD. et al.), 03 November 2017 (03.11.2017), claims 1-22, description, paragraphs [0083]-[0186], and figures 1-9	1-22
A	CN 105832263 A (JOYOUNG CO., LTD.), 10 August 2016 (10.08.2016), description, paragraphs [0006]-[0073], and figures 1-5	1-22
A	CN 106725184 A (FOSHAN SHUNDE MIDEA WASHING APPLIANCES MFG. CO., LTD. et al.), 31 May 2017 (31.05.2017), entire document	1-22
A	CN 106510596 A (FOSHAN SHUNDE MIDEA WASHING APPLIANCES MFG. CO., LTD. et al.), 22 March 2017 (22.03.2017), entire document	1-22
A	CN 102368943 A (ELECTROLUX HOME PRODUCTS INC.), 07 March 2012 (07.03.2012), entire document	1-22
A	CN 101278826 A (PANASONIC CORPORATION), 08 October 2008 (08.10.2008), entire document	1-22

☒ Further documents are listed in the continuation of Box C. ☒ 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
"A" document defining the general state of the art which is not considered to be of particular relevance	
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"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
"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	"&" document member of the same patent family

Date of the actual completion of the international search 10 April 2018	Date of mailing of the international search report 20 April 2018
Name and mailing address of the ISA 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 LI, Jiarui Telephone No. (86-10) 53962386

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2018/073698

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2014150286 A1 (ELECTROLUX HOME PRODUCTS, INC.), 05 June 2014 (05.06.2014), entire document	1-22
A	CN 206151405 U (FOSHAN BAISITE ELECTRIC APPLIANCE TECHNOLOGY CO., LTD.), 10 May 2017 (10.05.2017), entire document	1-22

Form PCT/ISA/210 (continuation of second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT
 Information on patent family members

 International application No.
 PCT/CN2018/073698

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 107307825 A	03 November 2017	None	
CN 105832263 A	10 August 2016	None	
CN 106725184 A	31 May 2017	None	
CN 106510596 A	22 March 2017	None	
CN 102368943 A	07 March 2012	US 8696824 B2	15 April 2014
		EP 2393410 A2	14 December 2011
		US 2010192977 A1	05 August 2010
		CN 102368943 B	20 August 2014
		WO 2010091159 A2	12 August 2010
		US 2014165421 A1	19 June 2014
		US 9907450 B2	06 March 2018
CN 101278826 A	08 October 2008	JP 4238919 B2	18 March 2009
		JP 2008253543 A	23 October 2008
		CN 101278826 B	08 December 2010
		CN 201316246 Y	30 September 2009
US 2014150286 A1	05 June 2014	None	
CN 206151405 U	10 May 2017	None	

Form PCT/ISA/210 (patent family annex) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- CN 201710576749 [0001]