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(54) **WATER LOADING CONTROL METHOD AND APPARATUS, CLOTHES TREATMENT DEVICE, AND STORAGE MEDIUM**

(57) A water loading control method and apparatus, a clothes treatment device (100), and a storage medium. The method comprises: executing a first water loading process and a second water loading process on the basis of a clothes treatment instruction, wherein the first water loading process is executed before and/or after the second water loading process, the first water loading process comprises loading water into a clothes accommodating apparatus (101) of the clothes treatment device (100) by means of a first water supply pipeline (103), the first water supply pipeline (103) is in communication with the clothes accommodating apparatus (101) by means of an air outlet channel (105) of the clothes treatment device (100), a filter screen (106) for filtering air flow during drying is arranged in the air outlet channel (105), the second water loading process comprises loading water into the clothes accommodating apparatus (101) by means of a second water supply pipeline (107), and the second water supply pipeline (107) is in communication with the clothes accommodating apparatus (101) by means of a detergent box (102) of the clothes treatment device (100). Cleaning the filter screen (106) before and/or after clothes treatment indicated by the clothes treatment instruction is executed can increase the ventilation area of the filter screen (106) to improve the ventilation performance of the filter screen (106) during the

execution of the clothes treatment instruction, thereby improving the drying effect.

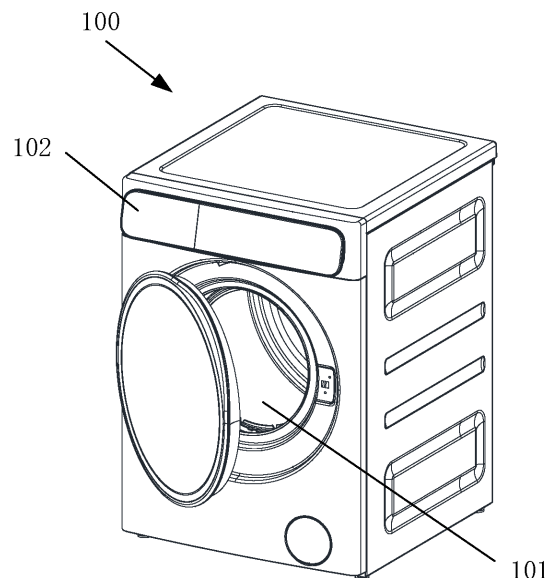


FIG. 1

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Description

[0001] The present disclosure claims priority to Chinese Patent Application No. 202311129993.8, filed with the China National Intellectual Property Administration on August 31, 2023 and entitled "WATER SUPPLY CONTROL METHOD AND APPARATUS, CLOTHING TREATMENT DEVICE, AND STORAGE MEDIUM", which is incorporated herein by reference in its entirety.

TECHNICAL FIELD

[0002] The present disclosure relates to the technical field of household appliances, and in particular, to a water supply control method and apparatus, a clothing treatment device, and a storage medium.

BACKGROUND ART

[0003] After the clothing treatment device performs a drying treatment on clothing, lint may be generated. To address this, a filter screen may be disposed in the air outlet channel that enables the drying assembly to be in communication with a clothing accommodating apparatus. In this way, during the drying treatment process, the airflow introduced from the clothing accommodating apparatus enters the drying assembly after passing through the air outlet channel, and impurities such as the lint carried by the airflow can be collected by the filter screen.

[0004] However, if the lint still remains on the filter screen after the drying treatment, the ventilation performance of the filter screen may be affected in the subsequent clothing treatment process, thereby affecting the drying effect.

[0005] Therefore, how to remove the lint generated by the drying treatment on the filter screen in a timely manner has become an urgent technical problem to be solved at present.

SUMMARY OF THE INVENTION

[0006] Embodiments of the present disclosure provide a water supply control method and apparatus, a clothing treatment device, and a storage medium, so as to solve the technical problem in the related art that the clothing treatment effect is affected by a failure to clean away the lint on a filter screen in a timely manner.

[0007] In a first aspect, one embodiment of the present disclosure provides a water supply control method. The water supply control method includes:

performing, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment, the first water supply treatment being performed before and/or after the second water supply treatment, where the first water supply treatment includes supplying water to a clothing accommodating apparatus of a

clothing treatment device through a first water supply pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment is disposed in the air outlet channel; and

the second water supply treatment includes supplying water to the clothing accommodating apparatus through a second water supply pipeline, and the second water supply pipeline is in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device.

[0008] In one embodiment of the present disclosure, optionally, before performing the first water supply treatment and the second water supply treatment, the method further includes:

acquiring, based on the clothing treatment instruction, a first clothing treatment mode, where the first clothing treatment mode is a second clothing treatment mode indicated by the clothing treatment instruction or a third clothing treatment mode operated prior to an operation of the second clothing treatment mode;

when the first clothing treatment mode is a designated mode, during the operation of the second clothing treatment mode, entering the step of performing the first water supply treatment and the second water supply treatment, where the designated mode is a clothing treatment mode including the drying treatment; and

when the first clothing treatment mode is not the designated mode, performing the second water supply treatment.

[0009] In one embodiment of the present disclosure, optionally, performing the first water supply treatment and the second water supply treatment includes:

if the first clothing treatment mode is the third clothing treatment mode operated prior to the operation of the second clothing treatment mode, performing the first water supply treatment first and then performing the second water supply treatment.

[0010] In one embodiment of the present disclosure, optionally, performing the first water supply treatment and the second water supply treatment includes:

if the first clothing treatment mode is the second clothing treatment mode indicated by the clothing treatment instruction, performing the second water supply treatment first and then performing the first water supply treatment.

[0011] In one embodiment of the present disclosure, optionally, after performing the first water supply treatment and before performing the second water supply treatment, the method further includes:

performing a first drainage treatment in an initial drainage stage, where the first drainage treatment includes discharging the water supplied by the first water supply treatment through a first drainage pipeline, a first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and a second end of the first drainage pipeline is in communication with outside world.

[0012] In one embodiment of the present disclosure, optionally, the method further includes: setting a drainage duration of the first drainage treatment to be a first preset duration.

[0013] In one embodiment of the present disclosure, optionally, after performing the first water supply treatment and before performing the second water supply treatment, the method further includes:

performing a second drainage treatment in an initial drainage stage, where the second drainage treatment includes discharging the water supplied by the first water supply treatment through a second drainage pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through the filter screen, a first end of the second drainage pipeline is in communication with the clothing accommodating apparatus, and a second end of the second drainage pipeline is in communication with outside world.

[0014] In one embodiment of the present disclosure, optionally, the method further includes: setting a drainage duration of the second drainage treatment to be a second preset duration.

[0015] In one embodiment of the present disclosure, optionally, the method further includes: setting a water supply duration of the first water supply treatment to be a third preset duration, where the third preset duration is less than a drainage duration of the initial drainage stage.

[0016] In one embodiment of the present disclosure, optionally, the second water supply treatment further includes supplying water to the clothing accommodating apparatus through the first water supply pipeline.

[0017] In one embodiment of the present disclosure, optionally, performing the second water supply treatment includes:

performing a first water supply sub-treatment in a first water supply stage of the second water supply treatment, the first water supply sub-treatment including supplying water to the clothing accommodating apparatus through the first water supply pipeline; performing a second water supply sub-treatment in a second water supply stage of the second water supply treatment, the second water supply stage occurring after the first water supply stage, and the

second water supply sub-treatment including supplying water to the clothing accommodating apparatus only through the second water supply pipeline.

[0018] In one embodiment of the present disclosure, optionally, the first water supply sub-treatment further includes:

supplying water to the clothing accommodating apparatus through the second water supply pipeline, where in the first water supply stage, a ratio of a total water supply duration of the second water supply pipeline to a total water supply duration of the first water supply pipeline is greater than or equal to zero.

[0019] In one embodiment of the present disclosure, optionally, the first water supply stage includes an initial rinsing stage, and a ratio of a total water supply duration of the second water supply pipeline in the initial rinsing stage to a total water supply duration of the first water supply pipeline in the initial rinsing stage is greater than or equal to zero.

[0020] In one embodiment of the present disclosure, optionally, performing the second water supply sub-treatment includes:

when entering a final rinsing stage of the second water supply stage, activating water supply through the second water supply pipeline; and when a water supply amount in the final rinsing stage reaches a designated amount or a water supply duration in the final rinsing stage reaches a fourth preset duration, stopping the water supply through the second water supply pipeline.

[0021] In one embodiment of the present disclosure, optionally, after performing the first water supply treatment, the method further includes:

performing a third drainage treatment in a final drainage stage, where the third drainage treatment includes discharging the water supplied by the first water supply treatment through the first drainage pipeline, a first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and a second end of the first drainage pipeline is in communication with outside world.

[0022] In one embodiment of the present disclosure, optionally, the method further includes:

setting a drainage duration of the third drainage treatment to be a fifth preset duration.

[0023] In one embodiment of the present disclosure, optionally, after a fourth water supply treatment is completed, the method further includes:

performing a fourth drainage treatment in the final drainage stage, where the fourth drainage treatment includes discharging

the water supplied by the first water supply treatment through the second drainage pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through the filter screen, a first end of the second drainage pipeline is in communication with the clothing accommodating apparatus, and a second end of the second drainage pipeline is in communication with outside world.

[0024] In one embodiment of the present disclosure, optionally, the method further includes: setting a drainage duration of the fourth drainage treatment to be a sixth preset duration.

[0025] In one embodiment of the present disclosure, optionally, the method further includes: setting the water supply duration of the first water supply treatment to be a seventh preset duration, where the seventh preset duration is less than a drainage duration of the final drainage stage.

[0026] In a second aspect, one embodiment of the present disclosure provides a water supply control apparatus. The water supply control apparatus includes:

a water supply treatment unit, configured to perform, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment, the first water supply treatment being performed before and/or after the second water supply treatment, where the first water supply treatment includes supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment is disposed in the air outlet channel; and the second water supply treatment includes supplying water to the clothing accommodating apparatus through a second water supply pipeline, and the second water supply pipeline is in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device.

[0027] In a third aspect, one embodiment of the present disclosure provides a clothing treatment device. The clothing treatment device includes:

a clothing accommodating apparatus, configured to accommodate clothing to be treated;
a clothing treatment agent box, in communication with the clothing accommodating apparatus, configured to accommodate a clothing treatment agent to be dispensed into the clothing accommodating apparatus;
a drying assembly, in communication with the cloth-

ing accommodating apparatus, configured to dry an airflow introduced from the clothing accommodating apparatus;

an air outlet channel, enabling the clothing accommodating apparatus to be in communication with the drying assembly and configured to allow the airflow to pass through;

a filter screen, disposed in the air outlet channel and configured to filter the airflow;

a first water supply pipeline, in communication with the clothing accommodating apparatus through the filter screen, configured to supply water to the clothing accommodating apparatus through the filter screen;

a second water supply pipeline, in communication with the clothing accommodating apparatus through the clothing treatment agent box, configured to supply water to the clothing accommodating apparatus through the clothing treatment agent box; and

a water supply control portion, connected to the first water supply pipeline and the second water supply pipeline and configured to perform, when receiving a clothing treatment instruction, the water supply control method described in any embodiment of the first aspect above, to cause the first water supply pipeline and the second water supply pipeline to supply water.

[0028] In a fourth aspect, one embodiment of the present disclosure provides a storage medium storing a computer-executable instruction, the computer-executable instruction being configured to perform the water supply control method described in any embodiment of the first aspect above.

[0029] According to the above technical solutions, in view of the technical problem in the related art that the clothing treatment effect is affected by a failure to clean away the lint on the filter screen in a timely manner, when the clothing treatment instruction is received, the filter screen is cleaned before performing the clothing treatment indicated by the clothing treatment instruction, and/or the filter screen is cleaned after performing the clothing treatment indicated by the clothing treatment instruction. In both cases, a ventilation area of the filter screen can be increased, and the ventilation performance of the filter screen during the execution of the clothing treatment instruction is improved, thereby facilitating the improvement of the drying effect.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030] The drawings, which are incorporated into and constitute a part of the specification, illustrate embodiments consistent with the present disclosure and are used in conjunction with the specification to explain the principles of the present disclosure. Apparently, the drawings in the following description are merely some embodiments of the present disclosure, and those of

ordinary skill in the art may still derive other drawings from these drawings without creative efforts.

FIG. 1 is a schematic diagram of a clothing treatment device according to one embodiment of the present disclosure;

FIG. 2 is a schematic diagram of a clothing treatment device according to another embodiment of the present disclosure;

FIG. 3 is a schematic diagram of an air outlet channel according to one embodiment of the present disclosure;

FIG. 4 is a schematic diagram of a filter screen according to one embodiment of the present disclosure;

FIG. 5 is a schematic diagram of a clothing treatment device according to yet another embodiment of the present disclosure;

FIG. 6 is a schematic diagram of water supply control logic according to one embodiment of the present disclosure;

FIG. 7 is a flowchart of a water supply control method according to one embodiment of the present disclosure;

FIG. 8 is a flowchart of a water supply control method according to another embodiment of the present disclosure;

FIG. 9 is a flowchart of a water supply control method according to yet another embodiment of the present disclosure;

FIG. 10 is a flowchart of a water supply control method according to still another embodiment of the present disclosure;

FIG. 11 is a flowchart of a second water supply treatment according to one embodiment of the present disclosure;

FIG. 12 is a block diagram of a water supply control apparatus according to one embodiment of the present disclosure;

FIG. 13 is a block diagram of a computer device according to one embodiment of the present disclosure; and

FIG. 14 is a block diagram of a computer device according to another embodiment of the present disclosure.

DETAILED DESCRIPTION

[0031] Exemplary embodiments will now be described more comprehensively with reference to the drawings. However, the exemplary embodiments may be implemented in various forms, and should not be understood as being limited to the examples described herein. On the contrary, these embodiments are provided to make the present disclosure more comprehensive and complete, and comprehensively convey the idea of the exemplary embodiments to a person skilled in the art. The described features, structures, or characteristics may be combined

in one or more embodiments in any suitable manner. In the following description, many specific details are provided to give a full understanding of the embodiments of the present disclosure. However, those skilled in the art will recognize that the technical solutions of the present disclosure may be practiced without one or more of the specific details, or other methods, components, apparatuses, steps, or the like, may be employed. In other instances, well-known technical solutions are not shown or described in detail to avoid obscuring aspects of the present disclosure.

[0032] In addition, the drawings are only schematic illustrations of the present disclosure and are not necessarily drawn to scale. The same reference numerals in the drawings indicate the same or similar parts, and thus, repeated description thereof will be omitted. Some of the block diagrams shown in the drawings are functional entities, which are not necessarily required to correspond to physically or logically independent entities. These functional entities may be implemented in the form of software, or in one or more hardware modules or integrated circuits, or across different networks and/or processor apparatuses and/or microcontroller apparatuses.

[0033] One embodiment of the present disclosure provides a clothing treatment device 100. The clothing treatment device 100 is configured to perform washing, rinsing, ironing, drying, and other treatments on clothing. The clothing treatment device 100 includes, but is not limited to, a washing machine, a dryer, a washer-dryer combo, and the like. It should be noted that although a side-loading washer-dryer combo is shown in the drawings of the present disclosure to illustrate the clothing treatment device 100 according to the embodiments of the present disclosure, it should be understood that the clothing treatment device 100 according to the embodiments of the present disclosure may be a clothing treatment device of any type, including but not limited to, a side-loading drum washing machine, a top-loading drum washing machine, a pulsator washing machine, an agitator washing machine, a mini washing machine, and the like.

[0034] One embodiment of the present disclosure provides a clothing treatment device 100. The clothing treatment device 100 includes: a clothing accommodating apparatus 101, a clothing treatment agent box 102, a first water supply pipeline 103, a drying assembly 104, an air outlet channel 105, a filter screen 106, a second water supply pipeline 107, and a water supply control portion 108.

[0035] As shown in FIG. 1, the clothing accommodating apparatus 101 is configured to accommodate clothing to be processed. The clothing to be treated includes, but is not limited to, clothing to be subjected to a washing treatment, a rinsing treatment, an ironing treatment, and a drying treatment. The clothing accommodating apparatus 101 includes, but is not limited to, an accommodating cylinder, an accommodating basket, a drum, and the like.

[0036] As shown in FIG. 1, the clothing treatment agent box 102 is in communication with the clothing accommodating apparatus 101, and is configured to accommodate a clothing treatment agent to be dispensed into the clothing accommodating apparatus 101. The clothing treatment agent box 102 may be disposed on the clothing accommodating apparatus 101 through a movable connection, such as a slide rail connection, a pivot connection, or the like. The clothing treatment agent box 102 includes a plurality of receiving grooves, and each receiving groove may receive the clothing treatment agent.

[0037] In one embodiment of the present disclosure, the plurality of receiving grooves may be configured to accommodate different types of clothing treatment agents, including but not limited to, liquid detergent, powder detergent, fabric softener, disinfectant, bleaching powder, bleaching agent, and the like.

[0038] In one embodiment of the present disclosure, to quickly and effectively dispense different clothing treatment agents, the plurality of receiving grooves are respectively provided with different circulation path lengths, circulation path cross-sectional widths, groove surface materials, groove bottom surface inclination angles, groove side surface inclination angles, and the like for different clothing treatment agents.

[0039] The first water supply pipeline 103 is in communication with the clothing accommodating apparatus 101 through the clothing treatment agent box 102, and is configured to supply water to the clothing accommodating apparatus 101. The first water supply pipeline 103 includes one or more water supply channels. At least one water supply channel is connected to a water inlet end of the clothing treatment agent box 102, and water flow moves from the water inlet end of the clothing treatment agent box 102 into the clothing treatment agent box 102 through the water supply channel, and then flows from a water outlet end of the clothing treatment agent box 102 into the clothing accommodating apparatus 101 in communication with the clothing treatment agent box 102. This configuration can not only supply water to the clothing accommodating apparatus 101, but also flush the clothing treatment agent in the clothing treatment agent box 102 into the clothing accommodating apparatus 101, thereby facilitating the treatment of the clothing to be treated in the clothing accommodating apparatus 101.

[0040] As shown in FIG. 2, the drying assembly 104 is in communication with the clothing accommodating apparatus 101 and is configured to dry the airflow introduced from the clothing accommodating apparatus. The air outlet channel 105 enables the clothing accommodating apparatus 101 to be in communication with the drying assembly 104 to allow the airflow to pass through.

[0041] In one embodiment of the present disclosure, the air outlet channel 105 is shown in FIG. 3. The filter screen 106 is disposed in the air outlet channel 105 and is configured to filter the airflow introduced from the clothing accommodating apparatus and entering the drying assembly 104. A black arrow in FIG. 3 indicates an airflow

direction.

[0042] In one embodiment of the present disclosure, the filter screen 106 is disposed perpendicular to a flow direction of the airflow.

[0043] In another embodiment of the present disclosure, as shown in FIG. 3, the filter screen 106 may be obliquely disposed relative to the flow direction of the airflow to increase a cross-sectional area of the filter screen 106 for filtering the airflow, thereby fully filtering out lint and impurities.

[0044] In one embodiment of the present disclosure, a mesh structure of the filter screen 106 is shown in FIG. 4. Certainly, the mesh structure of the filter screen 106 may also be any structure that meets the actual filtering requirements, such as a triangular mesh, a hexagonal mesh, or the like.

[0045] As shown in FIG. 5, the first water supply pipeline 103 is in communication with the clothing accommodating apparatus 101 through the filter screen 106 and is configured to supply water to the clothing accommodating apparatus 101 through the filter screen 106. The second water supply pipeline 107 is in communication with the clothing accommodating apparatus 101 through the clothing treatment agent box 102, and is configured to supply water to the clothing accommodating apparatus 101 through the clothing treatment agent box 102.

[0046] Certainly, the clothing treatment device 100 further includes the water supply control portion 108. As shown in FIG. 6, the water supply control portion 108 is connected to the first water supply pipeline 103 and the second water supply pipeline 107, and is configured to perform, when receiving a clothing treatment instruction, a water supply control method shown in FIG. 7, to cause the first water supply pipeline 103 and the second water supply pipeline 107 to supply water.

[0047] As shown in FIG. 7, a water supply control method according to one embodiment of the present disclosure includes the following:

[0048] In step 702, a first water supply treatment and a second water supply treatment are performed based on the clothing treatment instruction. The first water supply treatment is performed before and/or after the second water supply treatment, the first water supply treatment includes supplying water to the clothing accommodating apparatus 101 of the clothing treatment device through the first water supply pipeline 103, and the second water supply treatment includes supplying water to the clothing accommodating apparatus 101 through the second water supply pipeline 107.

[0049] The clothing treatment instruction is used to activate the clothing treatment device 100 to perform a clothing treatment.

[0050] Structures of the first water supply pipeline 103 and the second water supply pipeline 107 are as described above, and thus will not be repeated herein.

[0051] In one embodiment, based on the clothing treatment instruction, the first water supply treatment may be performed before the second water supply treatment.

The first water supply treatment is to supply water to the clothing accommodating apparatus 101 of the clothing treatment device through the first water supply pipeline 103, and the water supplied through the first water supply pipeline 103 flows through the filter screen 106 to flush away the lint and impurities, thereby being capable of cleaning the filter screen 106. After the filter screen 106 is flushed through the first water supply treatment, the second water supply treatment is performed to meet the water supply requirement of the clothing treatment mode indicated by the clothing treatment instruction.

[0052] In other words, before the clothing treatment is performed, the filter screen 106 is cleaned first to improve the effect of the current clothing treatment. Specifically, cleaning the filter screen 106 can increase a ventilation area of the filter screen 106, and improve the ventilation performance of the filter screen 106 during the execution of the clothing treatment instruction, thereby facilitating the improvement of the drying effect.

[0053] In another embodiment, based on the clothing treatment instruction, the second water supply treatment may be performed before the first water supply treatment. After the second water supply treatment is performed to meet the water supply requirement of the clothing treatment mode indicated by the clothing treatment instruction, the first water supply treatment is performed; that is, water is supplied to the clothing accommodating apparatus 101 of the clothing treatment device through the first water supply pipeline 103. In this case, the water supplied through the first water supply pipeline 103 flows through the filter screen 106 to flush away the lint and impurities, thereby being capable of cleaning the filter screen 106.

[0054] In other words, after the clothing treatment is performed, the filter screen 106 is cleaned again to prevent the existing lint on the filter screen 106 from affecting the effect of the next and all subsequent clothing treatments. Cleaning the filter screen 106 can increase the ventilation area of the filter screen 106, and improve the ventilation performance of the filter screen 106, thereby facilitating the improvement of the drying effect.

[0055] In yet another embodiment, based on the clothing treatment instruction, the first water supply treatment may be performed first to clean the filter screen 106 first, thereby improving the effect of the current clothing treatment. Then, the second water supply treatment is performed again, and the first water supply treatment is performed again after the second water supply treatment is performed, so as to clean the filter screen 106 again after the clothing treatment, thereby preventing the existing lint on the filter screen 106 from affecting the effect of the next and all subsequent clothing treatments.

[0056] In the above technical solution, the filter screen 106 is cleaned before the water supply required for the clothing treatment, so as to improve the effect of the current clothing treatment; the filter screen 106 is cleaned again after the water supply required for the clothing treatment, so as to improve the effect of the next and all subsequent clothing treatments; and the filter screen

106 is cleaned both before and after the water supply required for the clothing treatment, so that the ventilation area of the filter screen can be improved, and the drying effect during the clothing treatment can be improved.

[0057] FIG. 8 is a flowchart of a water supply control method according to another embodiment of the present disclosure.

[0058] As shown in FIG. 8, the water supply control method according to another embodiment of the present disclosure includes:

[0059] In step 802, a first clothing treatment mode is acquired based on the clothing treatment instruction. The first clothing treatment mode is a second clothing treatment mode indicated by the clothing treatment instruction or a third clothing treatment mode operated prior to the operation of the second clothing treatment mode.

[0060] In other words, the second clothing treatment mode is a clothing treatment mode required to be operated for the current clothing treatment, and the third clothing treatment mode is a clothing treatment mode operated for a historical clothing treatment that has been performed.

[0061] In one embodiment of the present disclosure, the third clothing treatment mode is a previous clothing treatment mode adjacent to the second clothing treatment mode.

[0062] In one embodiment of the present disclosure, the third clothing treatment mode includes at least one clothing treatment mode from clothing treatment modes operated for historical clothing treatments that have been performed.

[0063] When the first clothing treatment mode is a designated mode, the method enters step 804, and when the first clothing treatment mode is not the designated mode, the method enters step 806.

[0064] The designated mode is a clothing treatment mode including the drying treatment.

[0065] When the first clothing treatment mode includes the drying treatment, the airflow introduced from the clothing accommodating apparatus 101 during a drying treatment process carries the lint and impurities. When the airflow passes through the filter screen 106, the lint and impurities are filtered by the filter screen 106 and remain on the filter screen 106. That is, the first clothing treatment mode causes the filter screen 106 to retain the lint and impurities, consequently affecting the effect of the subsequent clothing treatment.

[0066] Therefore, once the first clothing treatment mode includes the drying treatment, the filter screen 106 needs to be cleaned before and/or after the first clothing treatment mode is operated, so as to prevent the lint and impurities from affecting the subsequent clothing treatment effect after the first clothing treatment mode is operated.

[0067] In step 804, in response to determining to operate the second clothing treatment mode, the first water supply treatment and the second water supply treatment are performed. The first water supply treatment is per-

formed before and/or after the second water supply treatment, the first water supply treatment includes supplying water to the clothing accommodating apparatus 101 of the clothing treatment device through the first water supply pipeline 103, and the second water supply treatment includes supplying water to the clothing accommodating apparatus 101 through the second water supply pipeline 107.

[0068] The first water supply treatment is used for cleaning the filter screen 106, and the second water supply treatment is used for supplying water for the clothing treatment in the second clothing treatment mode.

[0069] In step 806, the second water supply treatment is performed.

[0070] Certainly, when the first clothing treatment mode is not the designated mode, that is, the first clothing treatment mode does not include the drying treatment, there is no need to clean the filter screen 106 through the first water supply treatment, and the second water supply treatment is directly performed to supply water for the clothing treatment in the second clothing treatment mode.

[0071] According to the above technical solution, after the clothing treatment mode including the drying treatment is operated, the first water supply treatment may be triggered to clean the filter screen 106, which improves the cleanliness of the filter screen 106 and is beneficial to improving the clothing treatment effect.

[0072] FIG. 9 is a flowchart of a water supply control method according to yet another embodiment of the present disclosure.

[0073] As shown in FIG. 9, the water supply control method according to yet another embodiment of the present disclosure includes:

[0074] In step 902, the first water supply treatment is performed based on the clothing treatment instruction.

[0075] In step 904, a first drainage treatment and/or a second drainage treatment is performed in an initial drainage stage.

[0076] Specifically, after the first water supply treatment is performed to clean the filter screen 106, the water supplied by the first water supply treatment or the water for cleaning the filter screen 106 also needs to be discharged, so as to prevent the water for cleaning the filter screen 106 from affecting the amount of water in the subsequent clothing treatment process, thereby reducing the impact of flushing the filter screen 106 on the subsequent clothing treatment effect.

[0077] In one embodiment of the present disclosure, the first drainage treatment includes discharging the water supplied by the first water supply treatment through a first drainage pipeline. A first end of the first drainage pipeline is in communication with the first water supply pipeline 103 through the filter screen 106, and a second end of the first drainage pipeline is in communication with the outside world.

[0078] The outside world includes, but is not limited to,

a sewer pipe, a water collection apparatus, and the like outside the clothing treatment device 100, and includes, but is not limited to, any object outside the clothing treatment device 100 that is capable of accommodating the water discharged by the clothing treatment device 100.

[0079] The first drainage pipeline makes the filter screen 106 in communication with the outside world. The drainage thereof is equivalent to directly discharging the water used for flushing the filter screen 106 out of the clothing treatment device 100 through the air outlet channel 105, so as to prevent the water from being retained in other components of the clothing treatment device 100 during the discharging process, which affects the subsequent clothing treatment effect.

[0080] In one embodiment of the present disclosure, a drainage duration of the first drainage treatment is set to be a first preset duration.

[0081] Optionally, the first preset duration is set to be 10 s, 15 s, 18 s, or 20 s. Certainly, the first preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0082] In another embodiment of the present disclosure, the second drainage treatment includes discharging the water supplied by the first water supply treatment through a second drainage pipeline, the first water supply pipeline 103 is in communication with the clothing accommodating apparatus 101 through the filter screen 106, a first end of the second drainage pipeline is in communication with the clothing accommodating apparatus 101, and a second end of the second drainage pipeline is in communication with the outside world.

[0083] The second drainage pipeline enables the filter screen 106 to be in communication with the outside world through the clothing accommodating apparatus 101; that is, the water used for flushing the filter screen 106 is discharged into the clothing accommodating apparatus 101 through the air outlet channel 105, and then discharged out of the clothing treatment device 100 through a drainage outlet of the clothing accommodating apparatus 101. In this way, the water supplied by the first water supply treatment can not only clean the filter screen 106, but also clean the clothing accommodating apparatus 101 when the clothing accommodating apparatus 101 is vacant, thereby improving the overall cleaning effect of the first water supply treatment on the clothing treatment device 100. Meanwhile, the water supplied by the first water supply treatment is discharged out of the clothing treatment device 100 through the drainage outlet of the clothing accommodating apparatus 101, so that there is no need to additionally dispose a communication port to the outside world in the air outlet channel 105. This structure allows the airflow introduced from the clothing accommodating apparatus 101 to enter the drying assembly 104 through the air outlet channel 105 more smoothly, thereby improving the drying effect and enhancing the practicability of the clothing treatment mode

including the drying treatment.

[0084] In one embodiment of the present disclosure, a drainage duration of the second drainage treatment is set to be a second preset duration.

[0085] Optionally, the second preset duration is set to be 10 s, 15 s, 18 s, or 20 s. Certainly, the second preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0086] In addition, in one embodiment of the present disclosure, a water supply duration of the first water supply treatment may also be set to be a third preset duration. The third preset duration is less than a drainage duration of the initial drainage stage. In this way, after water is supplied through the first water supply treatment for the third preset duration, the drainage duration greater than the third preset duration allows the water after cleaning the filter screen 106 to be completely discharged as much as possible, so as to prevent the insufficient drainage duration from causing the water after cleaning the filter screen 106 to remain in the clothing treatment device 100, which affects the clothing treatment effect.

[0087] Optionally, if the first preset duration and/or the second preset duration is 15 s, the third preset duration may be set to be 10 s.

[0088] Optionally, if the first preset duration is 15 s and the second preset duration is 12 s, the third preset duration may be set to be 10 s.

[0089] Certainly, the third preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0090] In one embodiment of the present disclosure, a third drainage treatment and a fourth drainage treatment may be performed simultaneously or sequentially to improve the drainage speed and drainage amount.

[0091] In step 906, the second water supply treatment is performed.

[0092] FIG. 10 is a flowchart of a water supply control method according to still another embodiment of the present disclosure.

[0093] As shown in FIG. 10, the water supply control method according to still another embodiment of the present disclosure includes:

[0094] In step 1002, the second water supply treatment is performed based on the clothing treatment instruction to meet a water supply requirement of the clothing treatment mode indicated by the clothing treatment instruction.

[0095] Step 1004, in response to determining that the second water supply treatment is completed, the first water supply treatment is performed to flush the filter screen 106.

[0096] In step 1006, the third drainage treatment and/or the fourth drainage treatment is performed in the final drainage stage.

[0097] Specifically, after the first water supply treat-

ment is performed to clean the filter screen 106, the water supplied by the first water supply treatment or the water for cleaning the filter screen 106 also needs to be discharged, so as to prevent the water for cleaning the filter screen 106 from affecting the amount of water in the subsequent clothing treatment process, thereby reducing the impact of flushing the filter screen 106 on the subsequent clothing treatment effect.

[0098] In one embodiment of the present disclosure, the third drainage treatment includes discharging the water supplied by the first water supply treatment through the first drainage pipeline, the first end of the first drainage pipeline is in communication with the first water supply pipeline 103 through the filter screen 106, and the second end of the first drainage pipeline is in communication with the outside world.

[0099] The outside world includes, but is not limited to, a sewer pipe, a water collection apparatus, and the like outside the clothing treatment device 100, and includes, but is not limited to, any object outside the clothing treatment device 100 that is capable of accommodating the water discharged by the clothing treatment device 100.

[0100] The first drainage pipeline makes the filter screen 106 in communication with the outside world. The drainage thereof is equivalent to directly discharging the water used for flushing the filter screen 106 out of the clothing treatment device 100 through the air outlet channel 105, so as to prevent the water from being retained in other components of the clothing treatment device 100 during the discharging process, which affects the subsequent clothing treatment effect.

[0101] In one embodiment of the present disclosure, a drainage duration of the third drainage treatment is set to be a fifth preset duration.

[0102] Optionally, the fifth preset duration is set to be 10 s, 15 s, 18 s, or 20 s. Certainly, the fifth preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0103] In another embodiment of the present disclosure, the fourth drainage treatment includes discharging the water supplied by the first water supply treatment through the second drainage pipeline, the first water supply pipeline 103 is in communication with the clothing accommodating apparatus 101 through the filter screen 106, the first end of the second drainage pipeline is in communication with the clothing accommodating apparatus 101, and the second end of the second drainage pipeline is in communication with the outside world.

[0104] The second drainage pipeline enables the filter screen 106 to be in communication with the outside world through the clothing accommodating apparatus 101; that is, the water used for flushing the filter screen 106 is discharged into the clothing accommodating apparatus 101 through the air outlet channel 105, and then discharged out of the clothing treatment device 100 through a drainage outlet of the clothing accommodating appa-

ratus 101. In this way, the water supplied by the first water supply treatment can not only clean the filter screen 106, but also clean the clothing accommodating apparatus 101 when the clothing accommodating apparatus 101 is vacant, thereby improving the overall cleaning effect of the first water supply treatment on the clothing treatment device 100. Meanwhile, the water supplied by the first water supply treatment is discharged out of the clothing treatment device 100 through the drainage outlet of the clothing accommodating apparatus 101, so that there is no need to additionally dispose a communication port to the outside world in the air outlet channel 105. This structure allows the airflow introduced from the clothing accommodating apparatus 101 to enter the drying assembly 104 through the air outlet channel 105 more smoothly, thereby improving the drying effect and enhancing the practicability of the clothing treatment mode including the drying treatment.

[0105] In one embodiment of the present disclosure, a drainage duration of the fourth drainage treatment is set to be a sixth preset duration.

[0106] Optionally, the sixth preset duration is set to be 10 s, 15 s, 18 s, or 20 s. Certainly, the sixth preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0107] In addition, in one embodiment of the present disclosure, the water supply duration of the first water supply treatment may also be set to be a seventh preset duration. The seventh preset duration is less than a drainage duration of the final drainage stage. In this way, after water is supplied through the first water supply treatment for the seventh preset duration, the drainage duration greater than the seventh preset duration allows the water after cleaning the filter screen 106 to be completely discharged as much as possible, so as to prevent the insufficient drainage duration from causing the water after cleaning the filter screen 106 to remain in the clothing treatment device 100, which affects the clothing treatment effect.

[0108] Optionally, if the fifth preset duration and/or the sixth preset duration is 15 s, the seventh preset duration may be set to be 10 s.

[0109] Optionally, if the fifth preset duration is 15 s and the sixth preset duration is 12 s, the seventh preset duration may be set to be 10 s.

[0110] Certainly, the seventh preset duration may be any time interval that meets an actual drainage requirement, and is not limited to the examples provided in the present disclosure.

[0111] In one embodiment of the present disclosure, the second water supply treatment further includes supplying water to the clothing accommodating apparatus 101 through the first water supply pipeline 103.

[0112] On this basis, if the first water supply treatment is performed before the second water supply treatment, cleaning the filter screen 106 by the first water supply treatment can not only increase the ventilation area of the

filter screen 106, but also increase a water flow area of the filter screen 106, thereby providing better water supply performance for the operation of supplying water through the first water supply pipeline 103 via the filter screen during the second water supply treatment.

[0113] If the first water supply treatment is performed after the second water supply treatment, cleaning the filter screen 106 by the first water supply treatment can not only increase the ventilation area of the filter screen 106, but also increase the water flow area of the filter screen 106, so that the first water supply pipeline 103 can provide better water supply performance for the subsequent clothing treatment, thereby improving the clothing treatment effect.

[0114] FIG. 11 is a flowchart of a second water supply treatment according to one embodiment of the present disclosure.

[0115] As shown in FIG. 11, a flow of the second water supply treatment according to one embodiment of the present disclosure includes:

[0116] In step 1102, a first water supply sub-treatment is performed in a first water supply stage of the second water supply treatment. The first water supply sub-treatment includes supplying water to the clothing accommodating apparatus 101 through the first water supply pipeline 103.

[0117] In step 1104, a second water supply sub-treatment is performed in a second water supply stage of the second water supply treatment. The second water supply stage occurs after the first water supply stage, and the second water supply sub-treatment includes supplying water to the clothing accommodating apparatus 101 only through the second water supply pipeline 107.

[0118] The water supply control portion 108 controls the first water supply pipeline 103 to supply water to the clothing accommodating apparatus 101 during the first water supply stage of a second water supply treatment process, and controls the second water supply pipeline 107 to supply water to the clothing accommodating apparatus 101 during the second water supply stage of the second water supply treatment process.

[0119] When the second water supply pipeline 107 supplies water to the clothing accommodating apparatus 101, the water flow passes through the filter screen 106 to flush away the lint and impurities. The applicant found through testing that after the water flow passes through the filter screen 106, a water film easily forms on a surface of the filter screen 106, which affects the drying performance. When the drying assembly 104 performs the drying treatment through the circulating airflow, the presence of the water film reduces the ventilation area of the filter screen 106, resulting in a reduction in the circulating airflow passing through the filter screen 106. Meanwhile, a portion of the airflow blocked by the water film accumulates heat, leading to an increase in the local temperature of the clothing treatment device 100, thereby affecting the safe operation and service life of local components. In addition, the circulating airflow is blocked

by the water film, which may also cause high load and high temperature of a fan in the drying assembly 104, thereby affecting the safe operation and service life of the fan.

[0120] To address this, in the first water supply stage, water is supplied to the clothing accommodating apparatus 101 through the first water supply pipeline 103, and the water flow passes through the filter screen 106, so that the lint and impurities on the filter screen 106 can be effectively cleaned. Next, before the drying assembly 104 performs the drying treatment, if no water is supplied to the clothing accommodating apparatus 101 through the second water supply pipeline 107, no water flow passes through the filter screen 106. In this way, the filter screen 106 does not form a water film, the ventilation area of the filter screen 106 remains unchanged, and the circulating airflow passes through the filter screen 106 normally, so that the drying effect is not affected.

[0121] Therefore, a water supply process of the clothing treatment device 100 is divided into the first water supply stage and the second water supply stage. The first water supply stage is earlier than the second water supply stage. The interval between the first water supply stage and the drying treatment is longer than that between the second water supply stage and the drying treatment. In one embodiment, the second water supply stage is a final water supply stage before the drying treatment.

[0122] Specifically, the time from the first water supply stage to the drying treatment is longer, and even if a water film is formed, the water film may break in a short time, which does not affect the passage of the circulating airflow after a long period of time, and thus does not adversely affect the drying effect.

[0123] The time from the second water supply stage to the drying treatment is short. If water is still supplied through the first water supply pipeline 103, a water film is formed on the filter screen 106, and the water film still exists when the circulating airflow passes through. Therefore, in the second drying stage, water is supplied only through the second water supply pipeline 107. The water flow of the second water supply pipeline 107 does not flow through the filter screen 106, the filter screen 106 no longer generates a water film, and the circulating airflow can pass through the filter screen 106 without interference, so that the drying effect is not affected.

[0124] After the filter screen 106 is cleaned in the first water supply stage, the surface of the filter screen 106 may still have the possibility of forming a water film due to the relatively closed environment inside the clothing treatment device 100. To address this, in one embodiment of the present disclosure, when it is detected that the filter screen 106 is seriously blocked, the second water supply pipeline 107 may be activated to flush the filter screen 106.

[0125] According to the above technical solution, the filter screen 106 is effectively cleaned in the first water supply stage, and in the second water supply stage, that

is, the final water supply stage before drying, the first water supply pipeline 103 passing through the filter screen 106 is not used for supplying water, and the second water supply pipeline 107 not passing through the filter screen 106 is used for supplying water, so as to prevent the formation of a water film when the water flow passes through the filter screen 106. This not only achieves effective cleaning of the filter screen 106 and protects the drying effect against the influence of the water film, but also maintains the safe operation of a plurality of components including the fan, thereby prolonging the service life of the plurality of components.

[0126] In one embodiment of the present disclosure, in the first water supply stage, a ratio of a total water supply duration of the second water supply pipeline 107 to a total water supply duration of the first water supply pipeline 103 is greater than or equal to zero.

[0127] In some actual clothing treatment scenarios where the clothing treatment agent is not required to be used, only the first water supply pipeline 103 is used to supply water to the clothing accommodating apparatus 101 during the first water supply stage. In this case, the ratio of the total water supply duration of the second water supply pipeline 107 to the total water supply duration of the first water supply pipeline 103 is zero.

[0128] In one embodiment of the present disclosure, the first water supply sub-treatment further includes: supplying water to the clothing accommodating apparatus 101 through the second water supply pipeline 107.

[0129] Specifically, to ensure that the amount of water supplied is sufficient, and/or when the clothing treatment agent is required in the clothing treatment, the first water supply pipeline 103 and the second water supply pipeline 107 are enabled to jointly supply water during the execution of the clothing treatment mode indicated by the clothing treatment. In this case, the ratio of the total water supply duration of the second water supply pipeline 107 to the total water supply duration of the first water supply pipeline 103 is greater than zero.

[0130] It should be noted that the ways in which the first water supply pipeline 103 and the second water supply pipeline 107 jointly supply water include: the first water supply pipeline 103 supplies water first, and the second water supply pipeline 107 supplies water later; the second water supply pipeline 107 supplies water first, and the first water supply pipeline 103 supplies water later; the first water supply pipeline 103 and the second water supply pipeline 107 supply water simultaneously; and the first water supply pipeline 103 and/or the second water supply pipeline 107 supplies water separately, and the first water supply pipeline 103 and the second water supply pipeline 107 may also supply water simultaneously, and the like.

[0131] In one embodiment of the present disclosure, optionally, the first water supply stage includes an initial rinsing stage, and a ratio of the total water supply duration of the second water supply pipeline 107 in the initial rinsing stage to the total water supply duration of the first

water supply pipeline 103 in the initial rinsing stage is greater than or equal to zero.

[0132] If the ratio is zero, it indicates that only the first water supply pipeline 103 is used for supplying water in the initial rinsing stage.

[0133] If the ratio is greater than zero, it indicates that both the first water supply pipeline 103 and the second water supply pipeline 107 can be used for supplying water in the initial rinsing stage.

[0134] In one embodiment of the present disclosure, the step that the second water supply sub-treatment is performed includes: when entering a final rinsing stage of the second water supply stage, the second water supply pipeline 107 is activated to supply water; and the water supply through the second water supply pipeline 107 is stopped when the water supply amount in the final rinsing stage reaches a designated amount or the water supply duration in the final rinsing stage reaches the fourth preset duration.

[0135] In one embodiment of the present disclosure, the designated amount is 2 L, and the fourth preset duration is 35 s. Certainly, the designated amount and the fourth preset duration may be any value set according to actual clothing treatment needs, and are not limited to the above example.

[0136] The final rinsing stage is a final water supply stage before the drying treatment. In the final rinsing stage, the first water supply pipeline 103 is not used for supplying water, and the second water supply pipeline 107 is used for supplying water, so as to prevent the formation of a water film when the water flow passes through the filter screen 106. The designated amount refers to the amount of water required for normal operation of the clothing treatment device in the final rinsing stage, and the fourth preset duration refers to the water input duration required for the clothing treatment device to obtain the amount of water required for the normal operation in the final rinsing stage. When the current water supply amount reaches the designated amount or the water supply duration reaches the fourth preset duration, it indicates that the amount of water required for final rinsing is sufficient, and the water supply through the second water supply pipeline 107 can be stopped.

[0137] FIG. 12 is a block diagram of a water supply control apparatus according to one embodiment of the present disclosure.

[0138] As shown in FIG. 12, a water supply control apparatus 1200 according to one embodiment of the present disclosure includes:

a water supply treatment unit 1202 configured to perform, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment. The first water supply treatment is performed before and/or after the second water supply treatment. The first water supply treatment includes supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline is in communication with the cloth-

ing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment is disposed in the air outlet channel; and the second water supply treatment includes supplying water to the clothing accommodating apparatus through a second water supply pipeline, and the second water supply pipeline is in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device.

[0139] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a first clothing treatment mode acquiring unit configured to acquire, based on the clothing treatment instruction, a first clothing treatment mode before the first water supply treatment and the second water supply treatment are performed. The first clothing treatment mode is a second clothing treatment mode indicated by the clothing treatment instruction or a third clothing treatment mode operated prior to the operation of the second clothing treatment mode.

[0140] The water supply treatment unit 1202 is configured to:

when the first clothing treatment mode is a designated mode, during the operation of the second clothing treatment mode, enter the step of performing the first water supply treatment and the second water supply treatment, where the designated mode is a clothing treatment mode including the drying treatment; and

[0141] The water supply treatment unit 1202 is further configured to:

when the first clothing treatment mode is not the designated mode, perform the second water supply treatment.

[0142] In one embodiment of the present disclosure, optionally, the water supply treatment unit 1202 is configured to:

if the first clothing treatment mode is the third clothing treatment mode operated prior to the operation of the second clothing treatment mode, perform the first water supply treatment first and then perform the second water supply treatment.

[0143] In one embodiment of the present disclosure, optionally, the water supply treatment unit 1202 is configured to:

if the first clothing treatment mode is the second clothing treatment mode indicated by the clothing treatment instruction, perform the second water supply treatment first and then perform the first water supply treatment.

[0144] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a first drainage treatment unit configured to perform, after the first water supply treatment is performed and before the second water supply treatment is performed, a first drainage treatment in an initial drainage stage. The first drainage treatment includes discharging the water supplied by the first water supply treatment through a first

drainage pipeline, a first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and a second end of the first drainage pipeline is in communication with the outside world.

[0145] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a first setting unit configured to set the drainage duration of the first drainage treatment to be a first preset duration.

[0146] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a second drainage unit configured to perform, after the first water supply treatment is performed and before the second water supply treatment is performed, a second drainage treatment in the initial drainage stage. The second drainage treatment includes discharging the water supplied by the first water supply treatment through a second drainage pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through the filter screen, a first end of the second drainage pipeline is in communication with the clothing accommodating apparatus, and a second end of the second drainage pipeline is in communication with the outside world.

[0147] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a second setting unit configured to set the drainage duration of the second drainage treatment to be a second preset duration.

[0148] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a third setting unit configured to set the water supply duration of the first water supply treatment to be a third preset duration. The third preset duration is less than the drainage duration of the initial drainage stage.

[0149] In one embodiment of the present disclosure, optionally, the second water supply treatment further includes supplying water to the clothing accommodating apparatus through the first water supply pipeline.

[0150] In one embodiment of the present disclosure, optionally, the water supply treatment unit 1202 includes:

a first water supply sub-treatment unit configured to perform a first water supply sub-treatment in a first water supply stage of the second water supply treatment. The first water supply sub-treatment includes supplying water to the clothing accommodating apparatus through the first water supply pipeline; and a second water supply sub-treatment unit configured to perform a second water supply sub-treatment in a second water supply stage of the second water supply treatment. The second water supply stage occurs after the first water supply stage, and the second water supply sub-treatment includes supply-

ing water to the clothing accommodating apparatus only through the second water supply pipeline.

[0151] In one embodiment of the present disclosure, optionally, the first water supply sub-treatment unit is further configured to:

supply water to the clothing accommodating apparatus through the second water supply pipeline, where in the first water supply stage, the ratio of the total water supply duration of the second water supply pipeline to the total water supply duration of the first water supply pipeline is greater than or equal to zero.

[0152] In one embodiment of the present disclosure, optionally, the first water supply stage includes an initial rinsing stage, and a ratio of a total water supply duration of the second water supply pipeline in the initial rinsing stage to a total water supply duration of the first water supply pipeline in the initial rinsing stage is greater than or equal to zero.

[0153] In one embodiment of the present disclosure, optionally, the second water supply sub-treatment unit is configured to:

when entering a final rinsing stage of the second water supply stage, activate the second water supply pipeline to supply water; and stop the water supply through the second water supply pipeline when the water supply amount in the final rinsing stage reaches a designated amount or the water supply duration in the final rinsing stage reaches a fourth preset duration.

[0154] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a third drainage unit configured to perform, after the first water supply treatment is performed, a third drainage treatment in a final drainage stage. The third drainage treatment includes discharging the water supplied by the first water supply treatment through the first drainage pipeline, the first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and the second end of the first drainage pipeline is in communication with the outside world.

[0155] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a fourth setting unit configured to set the drainage duration of the third drainage treatment to be a fifth preset duration.

[0156] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a fourth drainage unit configured to perform, after a fourth water supply treatment is completed, a fourth drainage treatment in the final drainage stage. The fourth drainage treatment includes discharging the water supplied by the first water supply treatment through the second drainage pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through

the filter screen, the first end of the second drainage pipeline is in communication with the clothing accommodating apparatus, and the second end of the second drainage pipeline is in communication with the outside world.

[0157] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a fifth setting unit configured to set the drainage duration of the fourth drainage treatment to be a sixth preset duration.

[0158] In one embodiment of the present disclosure, optionally, the water supply control apparatus 1200 further includes:

a sixth setting unit configured to set the water supply duration of the first water supply treatment to be a seventh preset duration. The seventh preset duration is less than the drainage duration of the final drainage stage.

[0159] The water supply control apparatus 1200 uses the solution described in any one of the above embodiments, and thus has all the above technical effects, which will not be repeated herein.

[0160] In addition, in one embodiment, the present disclosure provides a computer device. The computer device may be a server, and an internal structure diagram thereof may be shown in FIG. 13. The computer device includes a processor, a memory, a network interface, and a database that are connected through a system bus. The processor of the computer device is configured to provide computing and control capabilities. The memory of the computer device includes a non-volatile and/or volatile storage medium and an internal memory. The non-volatile storage medium stores an operating system, a computer program, and a database. The internal memory provides an environment for running the operating system and the computer program in the non-volatile storage medium. The network interface of the computer device is configured to communicate with an external client through a network connection. The computer program, when executed by the processor, may implement the water supply control method according to any of the above embodiments to control the operation of the clothing treatment device.

[0161] In one embodiment, the present disclosure further provides a computer device. The computer device may be a client, and an internal structure diagram thereof may be shown in FIG. 14. The computer device includes a processor, a memory, a network interface, a display screen, and an input apparatus that are connected through a system bus. The processor of the computer device is configured to provide computing and control capabilities. The memory of the computer device includes a non-volatile storage medium and an internal memory. The non-volatile storage medium stores an operating system and a computer program. The internal memory provides an environment for running the operating system and the computer program in the non-volatile storage medium. The network interface of the com-

puter device is configured to communicate with an external server through a network connection. The computer program, when executed by the processor, may implement the water supply control method according to any of the above embodiments to control the operation of the clothing treatment device.

[0162] Any one of the above computer devices according to the embodiments of the present disclosure exists in a plurality of forms, including but not limited to:

(1) Mobile communication devices: Such devices feature a mobile communication function and are primarily intended to provide voice and data communication services. Such terminals include: smart phones (such as iPhone), multimedia phones, feature phones, and low-end phones.

(2) Ultra-mobile personal computer devices: Such devices, belonging to the category of personal computers, have computing and processing functions, and generally also incorporate a mobile Internet access feature. Such terminals include: PDAs, MIDs, and UMPC devices, such as iPad.

(3) Portable entertainment devices: Such devices can display and play multimedia content. Such devices include: audio and video players (such as iPod), handheld game consoles, e-books, smart toys, wearable devices, and portable vehicle-mounted navigation devices.

(4) Servers: Devices that provide a computing service. The server is composed of a processor, a hard disk, a memory, a system bus, and the like, and the server is similar to a general-purpose computer in architecture. However, since a highly reliable service needs to be provided, high requirements are imposed on aspects such as processing capability, stability, reliability, security, scalability, and manageability.

(5) Other electronic apparatuses with data interaction functions.

[0163] In addition, one embodiment of the present disclosure provides a storage medium storing a computer-executable instruction. The computer-executable instruction is configured to implement the following steps:

[0164] A first water supply treatment and a second water supply treatment are performed based on a clothing treatment instruction. The first water supply treatment is performed before and/or after the second water supply treatment. The first water supply treatment includes supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment is disposed in the air outlet channel; and the second water supply treatment includes supplying water to the clothing accommodating apparatus through a sec-

ond water supply pipeline, and the second water supply pipeline is in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device.

[0165] It should be noted that the above functions or steps that can be implemented by the storage medium or computer device may correspondingly refer to the relevant descriptions in the aforementioned method embodiments. To avoid repetition, the functions or steps will not be elaborated here.

[0166] The technical solutions of the present disclosure are described in detail above with reference to the drawings. According to the technical solutions of the present disclosure, the filter screen is cleaned before the water supply required for the clothing treatment, so as to improve the effect of the current clothing treatment; the filter screen is cleaned again after the water supply required for the clothing treatment, so as to improve the effect of the next and all subsequent clothing treatments; and the filter screen is cleaned both before and after the water supply required for the clothing treatment, so that the ventilation area of the filter screen can be improved, and the drying effect during the clothing treatment can be improved.

[0167] It should be understood that the term "and/or" as used herein is merely a description of an association relationship between associated objects, indicating that three possible relationships may exist. For example, "A and/or B" can represent: the presence of A alone, the simultaneous presence of A and B, and the presence of B alone. In addition, the character "/" herein generally indicates an "or" relationship between the associated objects before and after the "/".

[0168] It should be understood that although the terms such as "first" and "second" may be used in the embodiments of the present disclosure to describe the water supply pipelines, these water supply pipelines should not be limited to these terms. These terms are only used to distinguish the water supply pipelines from each other. For example, without departing from the scope of the embodiments of the present disclosure, the first water supply pipeline may also be referred to as the second water supply pipeline, and similarly, the second water supply pipeline may also be referred to as the first water supply pipeline.

[0169] It should be noted that although several modules or units of the device for action execution are mentioned in the above detailed description, such division is not mandatory. In practice, according to the embodiments of the present disclosure, the features and functions of two or more modules or units described above may be embodied in one module or unit. Conversely, the features and functions of one module or unit described above may be further divided and embodied by a plurality of modules or units.

[0170] In addition, although the steps of the method in the present disclosure are described in a specific order in the drawings, this does not require or imply that these

steps are necessarily performed in this specific order, or that all of the steps shown are necessarily performed to achieve the desired results. Additionally or alternatively, some steps may be omitted, a plurality of steps may be combined into one step for execution, and/or one step may be divided into a plurality of steps for execution, among other variations.

[0171] Based on the description of the foregoing embodiments, a person skilled in the art can easily understand that the exemplary embodiments described herein may be implemented by software, or may be implemented by software in combination with necessary hardware. Therefore, the technical solutions according to the embodiments of the present disclosure may be embodied in the form of a software product. The software product may be stored in a non-volatile storage medium (which may be a CD-ROM, a USB flash drive, a mobile hard disk, or the like) or on a network, and includes several instructions that enable a computing device (which may be a personal computer, a server, a mobile terminal, a network device, or the like) to perform the method according to the embodiments of the present disclosure.

[0172] Other embodiments of the present disclosure are apparent to those skilled in the art from consideration of the specification and practice of the present disclosure disclosed herein. The present disclosure is intended to cover any variations, uses, or adaptations of the present disclosure following the general principles of the present disclosure and including known common knowledge or customary technical means undisclosed in the art of the present disclosure. The specification and embodiments are only considered as exemplary, and the true scope and spirit of the present disclosure are indicated in the appended claims.

Claims

1. A water supply control method, comprising:

performing, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment, the first water supply treatment being performed before and/or after the second water supply treatment, where-

in the first water supply treatment comprises supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline being in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen being configured to filter air-flow during a drying treatment being disposed in the air outlet channel; and

the second water supply treatment comprises supplying water to the clothing accommodating

- apparatus through a second water supply pipeline, and the second water supply pipeline being in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device. 5
2. The water supply control method according to claim 1, wherein before performing the first water supply treatment and the second water supply treatment, the method further comprises:
- acquiring, based on the clothing treatment instruction, a first clothing treatment mode, wherein the first clothing treatment mode is a second clothing treatment mode indicated by the clothing treatment instruction or a third clothing treatment mode operated prior to an operation of the second clothing treatment mode; 10
- in response to determining that the first clothing treatment mode is a designated mode, during the operation of the second clothing treatment mode, entering the step of performing the first water supply treatment and the second water supply treatment, wherein the designated mode is a clothing treatment mode comprising the drying treatment; and 15
- in response to determining that the first clothing treatment mode is not the designated mode, performing the second water supply treatment. 20
3. The water supply control method according to claim 2, wherein performing the first water supply treatment and the second water supply treatment comprises: 25
- in response to determining that the first clothing treatment mode is the third clothing treatment mode operated prior to the operation of the second clothing treatment mode, performing the first water supply treatment first and then performing the second water supply treatment. 30
4. The water supply control method according to claim 2, wherein performing the first water supply treatment and the second water supply treatment comprises: 35
- in response to determining that the first clothing treatment mode is the second clothing treatment mode indicated by the clothing treatment instruction, performing the second water supply treatment first and then performing the first water supply treatment. 40
5. The water supply control method according to claim 3, wherein after performing the first water supply treatment and before performing the second water supply treatment, the method further comprises: 45
- performing a first drainage treatment in an initial drainage stage, wherein 50
- the first drainage treatment comprises discharging the water supplied by the first water supply treatment through a first drainage pipeline, a first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and a second end of the first drainage pipeline being in communication with outside world.
6. The water supply control method according to claim 5, further comprising: 55
- setting a drainage duration of the first drainage treatment to be a first preset duration.
7. The water supply control method according to claim 3, wherein 60
- after performing the first water supply treatment and before performing the second water supply treatment, the method further comprises:
- performing a second drainage treatment in an initial drainage stage, wherein 65
- the second drainage treatment comprises discharging the water supplied by the first water supply treatment through a second drainage pipeline, the first water supply pipeline being in communication with the clothing accommodating apparatus through the filter screen, a first end of the second drainage pipeline being in communication with the clothing accommodating apparatus, and a second end of the second drainage pipeline being in communication with outside world.
8. The water supply control method according to claim 7, further comprising: 70
- setting a drainage duration of the second drainage treatment to be a second preset duration.
9. The water supply control method according to any one of claims 5 to 8, further comprising: 75
- setting a water supply duration of the first water supply treatment to be a third preset duration, wherein the third preset duration is less than a drainage duration of the initial drainage stage.
10. The water supply control method according to any one of claims 1 to 8, wherein the second water supply treatment further comprises supplying water to the clothing accommodating apparatus through the first water supply pipeline.
11. The water supply control method according to claim 10, wherein performing the second water supply treatment comprises: 80
- in response to determining to enter a first water supply stage of the second water supply treatment

- ment, performing a first water supply sub-treatment, the first water supply sub-treatment comprising supplying water to the clothing accommodating apparatus through the first water supply pipeline; and
- in response to determining to enter a second water supply stage of the second water supply treatment, performing a second water supply sub-treatment, the second water supply stage occurring after the first water supply stage, and the second water supply sub-treatment comprising supplying water to the clothing accommodating apparatus only through the second water supply pipeline.
12. The water supply control method according to claim 11, wherein the first water supply sub-treatment further comprises:
- supplying water to the clothing accommodating apparatus through the second water supply pipeline, wherein in the first water supply stage, a ratio of a total water supply duration of the second water supply pipeline to a total water supply duration of the first water supply pipeline is greater than or equal to zero.
13. The water supply control method according to claim 12, wherein the first water supply stage comprises an initial rinsing stage, and a ratio of a total water supply duration of the second water supply pipeline in the initial rinsing stage to a total water supply duration of the first water supply pipeline in the initial rinsing stage is greater than or equal to zero.
14. The water supply control method according to claim 13, wherein performing the second water supply sub-treatment comprises:
- in response to determining to enter a final rinsing stage of the second water supply stage, activating water supply through the second water supply pipeline; and
- in response to determining that a water supply amount in the final rinsing stage reaches a designated amount or a water supply duration in the final rinsing stage reaches a fourth preset duration, stopping the water supply through the second water supply pipeline.
15. The water supply control method according to claim 4, wherein after performing the first water supply treatment, the method further comprises:
- performing a third drainage treatment in a final drainage stage, wherein
- the third drainage treatment comprises discharging the water supplied by the first water supply treatment through a first drainage pipeline, a first end of the first drainage pipeline is in communication with the first water supply pipeline through the filter screen, and a second end of the first drainage pipeline being in communication with outside world.
16. The water supply control method according to claim 15, further comprising:
- setting a drainage duration of the third drainage treatment to be a fifth preset duration.
17. The water supply control method according to claim 4, wherein after a fourth water supply treatment is completed, the method further comprises:
- performing a fourth drainage treatment in a final drainage stage, wherein
- the fourth drainage treatment comprises discharging the water supplied by the first water supply treatment through a second drainage pipeline, the first water supply pipeline being in communication with the clothing accommodating apparatus through the filter screen, a first end of the second drainage pipeline being in communication with the clothing accommodating apparatus, and a second end of the second drainage pipeline being in communication with outside world.
18. A water supply control apparatus, comprising:
- a water supply treatment unit, configured to perform, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment, the first water supply treatment being performed before and/or after the second water supply treatment, wherein
- the first water supply treatment comprises supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline being in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment being disposed in the air outlet channel; and
- the second water supply treatment comprises supplying water to the clothing accommodating apparatus through a second water supply pipeline, and the second water supply pipeline being in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device.
19. A clothing treatment device, comprising:
- a clothing accommodating apparatus, configured to accommodate clothing to be treated;

a clothing treatment agent box, in communication with the clothing accommodating apparatus, configured to accommodate a clothing treatment agent to be dispensed into the clothing accommodating apparatus; 5

a drying assembly, in communication with the clothing accommodating apparatus, configured to dry an airflow introduced from the clothing accommodating apparatus;

an air outlet channel, enabling the clothing accommodating apparatus to be in communication with the drying assembly and configured to allow the airflow to pass through; 10

a filter screen, disposed in the air outlet channel and configured to filter the airflow; 15

a first water supply pipeline, in communication with the clothing accommodating apparatus through the filter screen, configured to supply water to the clothing accommodating apparatus through the filter screen; 20

a second water supply pipeline, in communication with the clothing accommodating apparatus through the clothing treatment agent box, configured to supply water to the clothing accommodating apparatus through the clothing treatment agent box; and 25

a water supply control portion, connected to the first water supply pipeline and the second water supply pipeline and configured to perform, when receiving a clothing treatment instruction, the water supply control method according to any one of claims 1 to 17, to cause the first water supply pipeline and the second water supply pipeline to supply water. 30

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20. A storage medium storing a computer program, wherein the computer program, when executed by a processor, implements the water supply control method according to any one of claims 1 to 17. 40

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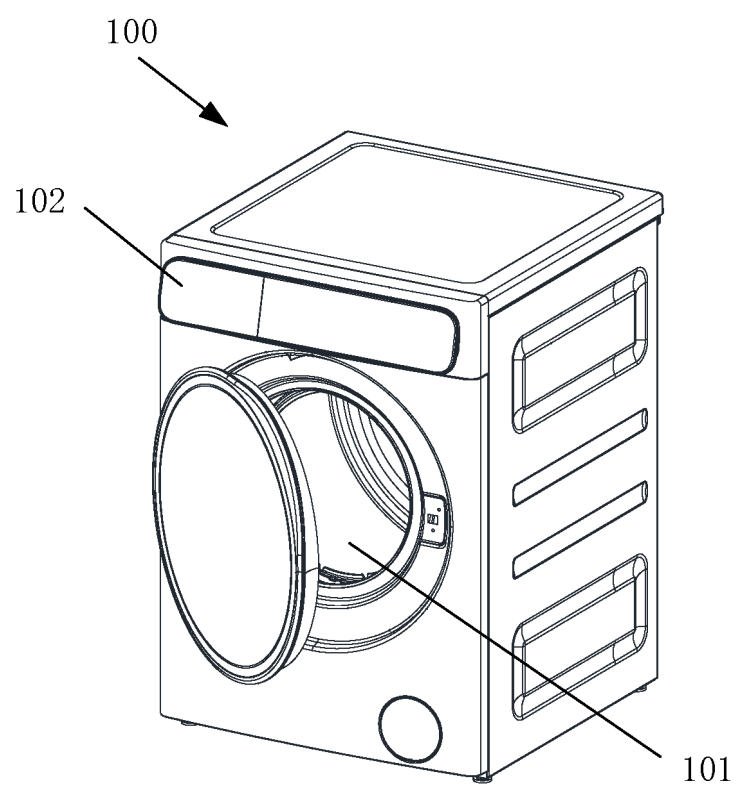


FIG. 1

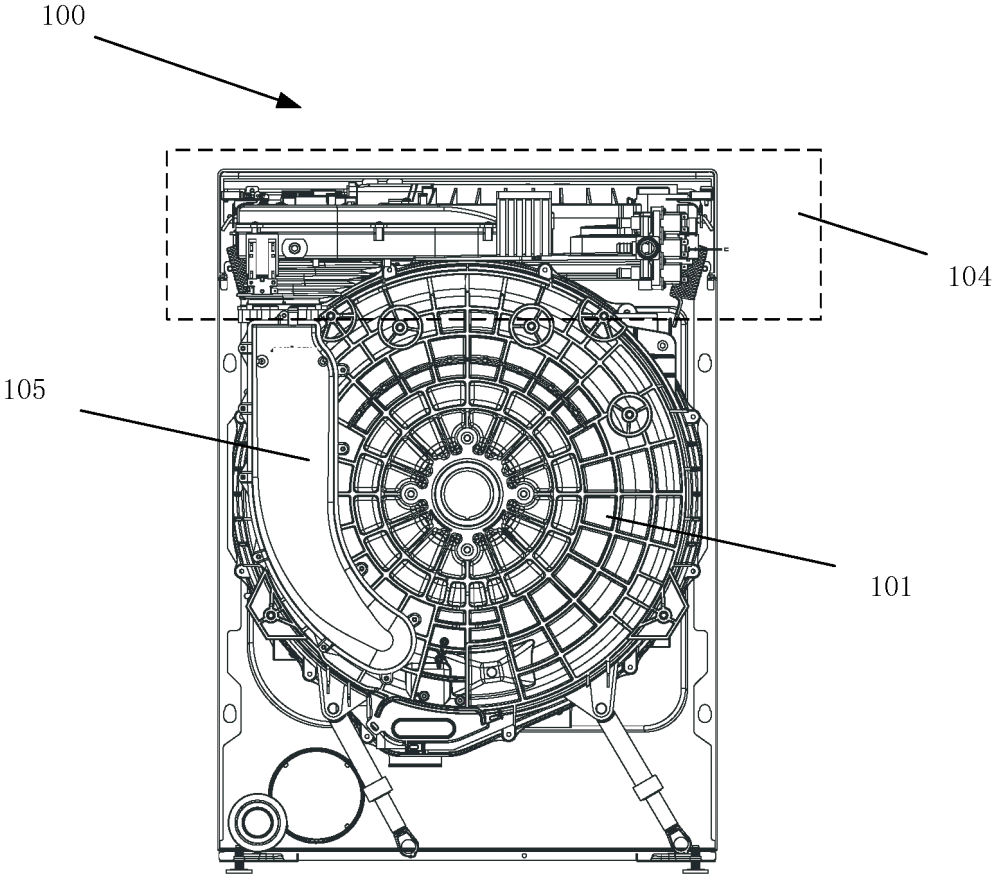


FIG. 2

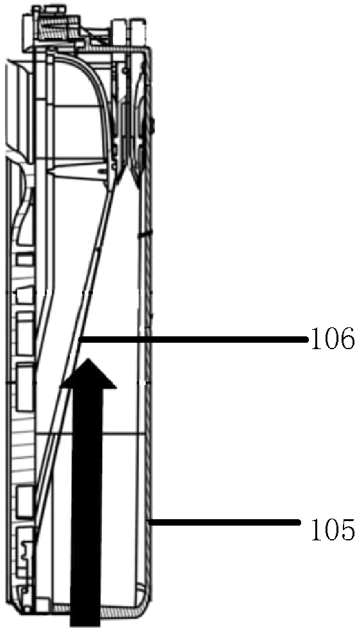


FIG. 3

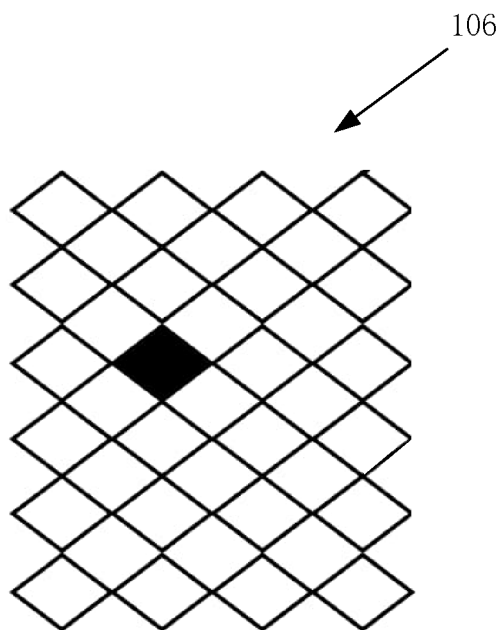


FIG. 4

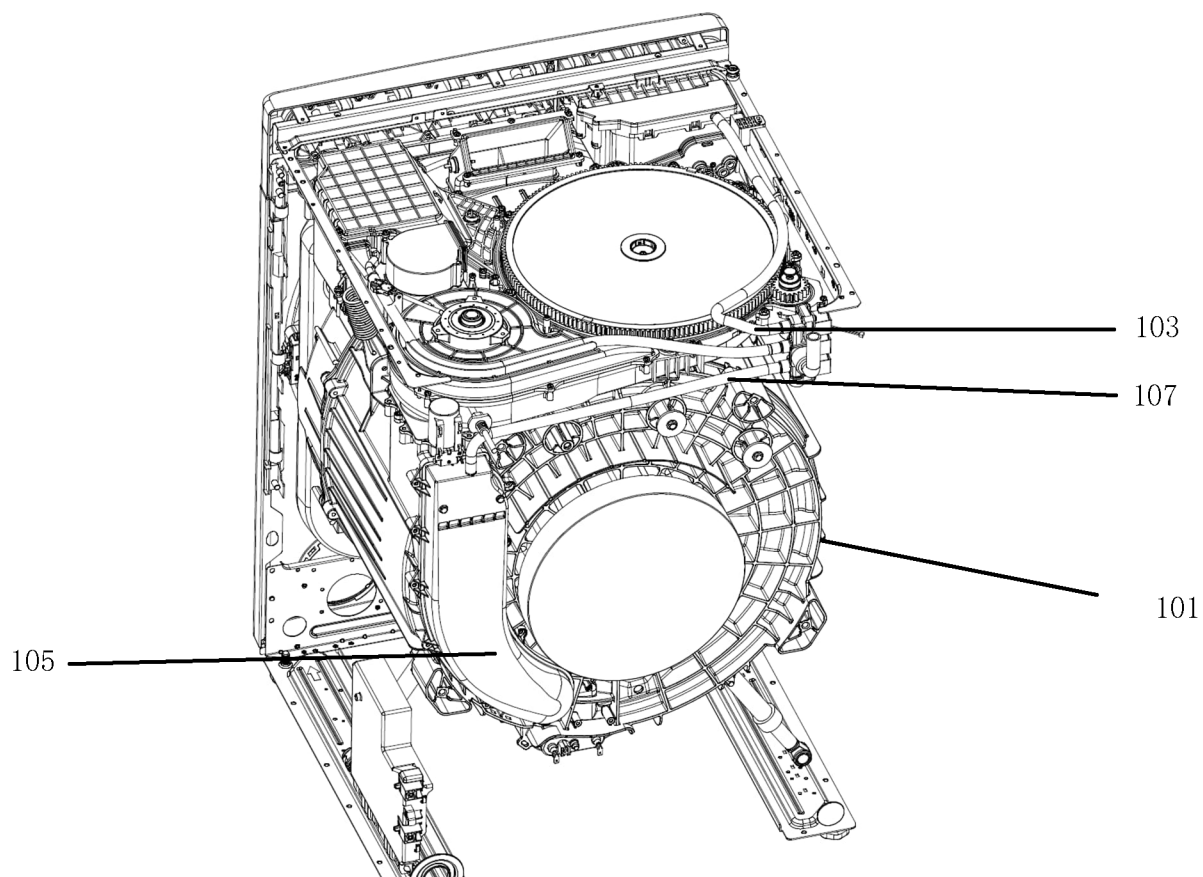


FIG. 5

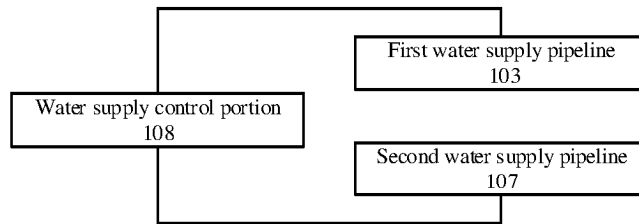


FIG. 6

Perform, based on a clothing treatment instruction, a first water supply treatment and a second water supply treatment, the first water supply treatment being performed before and/or after the second water supply treatment, where the first water supply treatment includes supplying water to a clothing accommodating apparatus of a clothing treatment device through a first water supply pipeline, the first water supply pipeline is in communication with the clothing accommodating apparatus through an air outlet channel of the clothing treatment device, and a filter screen configured to filter airflow during a drying treatment is disposed in the air outlet channel; and the second water supply treatment includes supplying water to the clothing accommodating apparatus through a second water supply pipeline, and the second water supply pipeline is in communication with the clothing accommodating apparatus through a clothing treatment agent box of the clothing treatment device

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FIG. 7

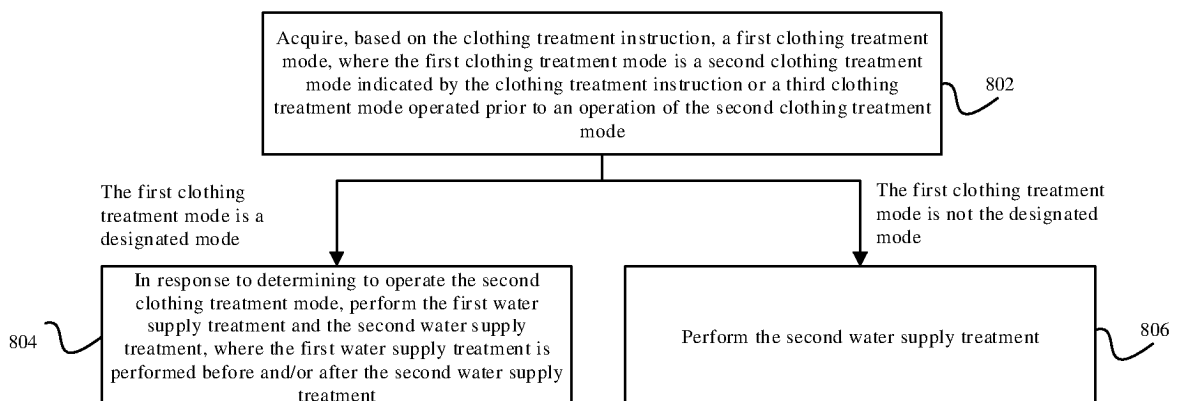


FIG. 8

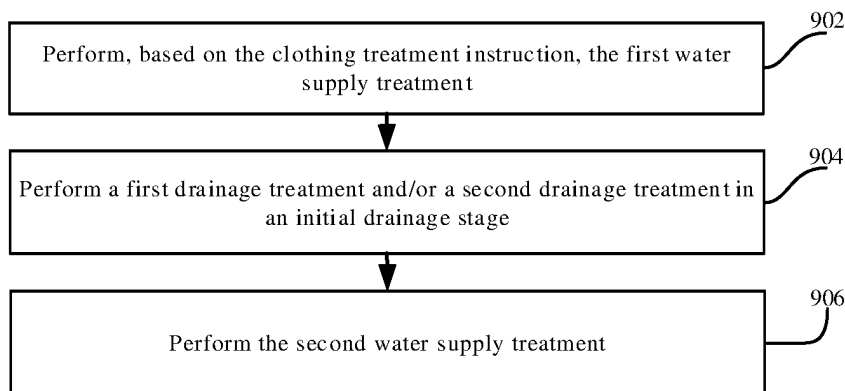


FIG. 9

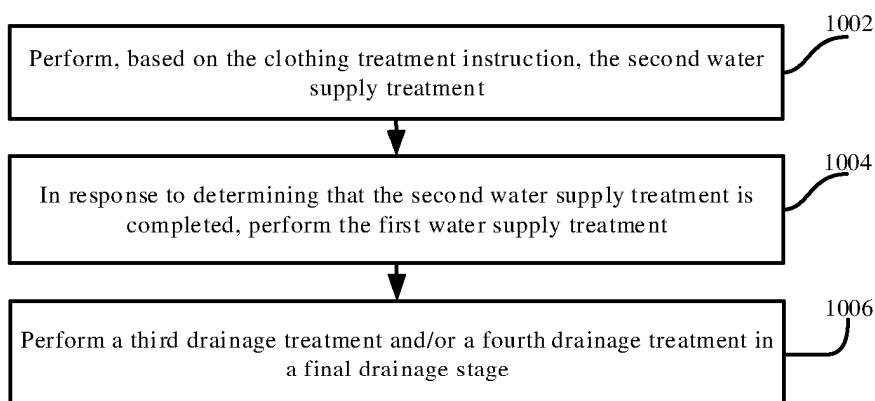


FIG. 10

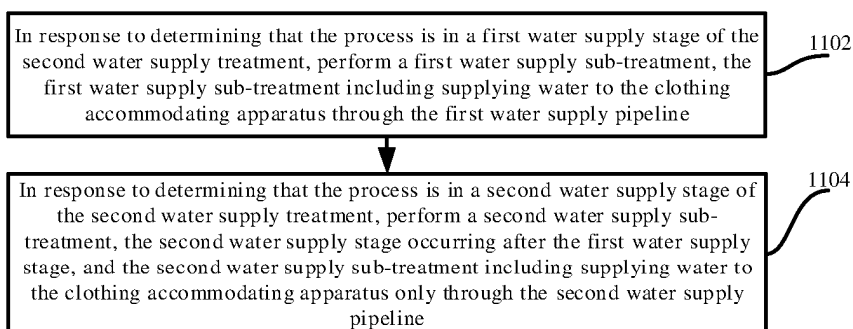


FIG. 11

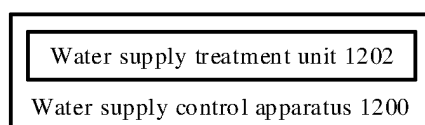


FIG. 12

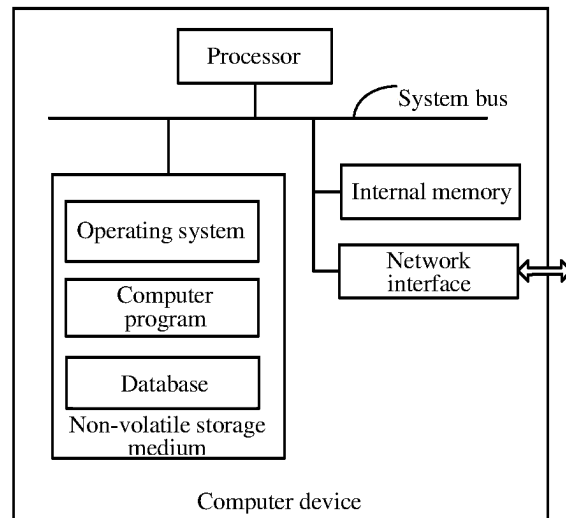


FIG. 13

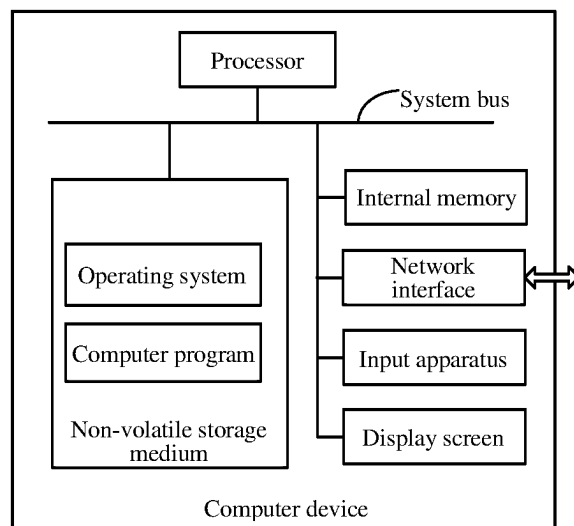


FIG. 14

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2024/113398

A. CLASSIFICATION OF SUBJECT MATTER

D06F33/69(2020.01)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)

IPC: D06F

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)

CNXTX, ENTXTX, WPABSC, ENTXT, VEN, CNKI: 水路, 水通道, 水流通道, 滤网, 过滤, 过滤器, 过滤组件, 过滤部件, 冲洗, 清洗, 清理, 喷淋, 出风, 气流, 烘干, 排风, 干燥, 洗涤剂, 洗涤剂盒, 处理剂盒, 添加剂盒, 洗剂腔, 洗涤剂腔, 处理剂腔, 添加剂腔, 洗剂室, 洗涤剂室, 处理剂室, 添加剂室, waterways, water channels, water flow channels, screens, filters, filter assemblies, filter components, flushing, washing, cleaning, spraying, outgassing, air flow, drying, draining, lotion cartridge, detergent cartridge, treatment agent cartridge, additive cartridge, lotion chamber, detergent chamber, treatment agent chamber, additive chamber

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 218812690 U (SHENZHEN ROBOROCK INNOVATION TECHNOLOGY CO., LTD.) 07 April 2023 (2023-04-07) description, specific embodiments, and figures 1-4	1-10, 15-20
A	CN 116065321 A (WUXI LITTLE SWAN ELECTRIC CO., LTD.) 05 May 2023 (2023-05-05) entire document	1-20
A	JP 2013128527 A (PANASONIC CORP.) 04 July 2013 (2013-07-04) entire document	1-20
A	CN 116024769 A (ZHUHAI GREE ELECTRIC APPLIANCES INC.) 28 April 2023 (2023-04-28) entire document	1-20

☒ 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	"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
"D" document cited by the applicant in the international application	"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
"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
"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)	
"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	

Date of the actual completion of the international search 06 November 2024	Date of mailing of the international search report 16 November 2024
Name and mailing address of the ISA/CN China National Intellectual Property Administration (ISA/CN) China No. 6, Xitucheng Road, Jimenqiao, Haidian District, Beijing 100088	Authorized officer Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2024/113398

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 116065342 A (ZHUHAI GREE ELECTRIC APPLIANCES INC.) 05 May 2023 (2023-05-05) entire document	1-20
A	WO 2014146400 A1 (HAIER GROUP TECHNIQUE R&D CENTER; HAIER GROUP CORP.:) 25 September 2014 (2014-09-25) entire document	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/CN2024/113398

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN	218812690	U	07 April 2023	None	
CN	116065321	A	05 May 2023	None	
JP	2013128527	A	04 July 2013	None	
CN	116024769	A	28 April 2023	None	
CN	116065342	A	05 May 2023	None	
WO	2014146400	A1	25 September 2014	None	

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CN 202311129993 [0001]