(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 296 441 A1**

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

(43) Date of publication:
21.03.2018 Bulletin 2018/12

(21) Application number: **15891697.3**

(22) Date of filing: **23.11.2015**

(51) Int Cl.:
D06F 33/02 *(2006.01)*

(86) International application number:
PCT/CN2015/095299

(87) International publication number:
WO 2016/180001 (17.11.2016 Gazette 2016/46)

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

(30) Priority: **12.05.2015 CN 201510239617**

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

(72) Inventors:
- **YANG, Lin**
  Qingdao
  Shandong 266101 (CN)
- **YU, Liangliang**
  Qingdao
  Shandong 266101 (CN)
- **XUE, Kai**
  Qingdao
  Shandong 266101 (CN)
- **FANG, Dafeng**
  Qingdao
  Shandong 266101 (CN)
- **LU, Ying**
  Qingdao
  Shandong 266101 (CN)

(74) Representative: **Beck & Rössig**
European Patent Attorneys
Cuvilliésstraße 14
81679 München (DE)

(54) LAUNDRY DETERGENT RELEASE CONTROL METHOD AND WASHING MACHINE

(57) The invention provides a method for controlling pouring of laundry detergent. After being started, a washing machine calculates corresponding first pouring amount of the laundry detergent based on acquired information and displays the first pouring amount of the laundry detergent. The washing machine detects and judges a variable of the first pouring amount of the laundry detergent to form a second pouring amount of the laundry detergent, the washing procedure is started, and the washing machine pours the laundry detergent at a first pouring amount or a second pouring amount of the laundry detergent. The invention further provides a washing machine which includes an automatic pouring device, a computer board and a display screen, wherein the automatic pouring device pours based on the pouring amount of the laundry detergent calculated by the computer board, and the display screen is used for displaying the first pouring amount of the laundry detergent and/or the second pouring amount of the laundry detergent in real time. The method for controlling the pouring of laundry detergent and a washing machine provided by the invention can solve the problem that users cannot control the pouring amount of the laundry detergent by themselves when they use the existing washing machine with a function of automatic pouring of laundry detergent, thereby satisfying the individual laundry requirements of users.

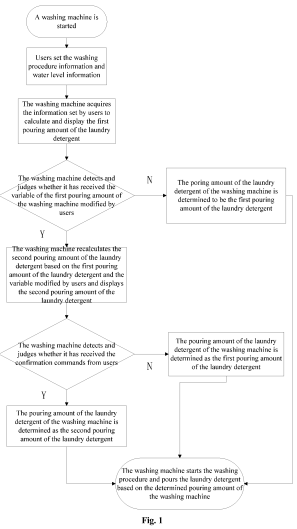

Fig. 1

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Description

Technical Field

[0001] The present invention relates to the technical field of washing machines, and specifically relates to a method for controlling pouring of laundry detergent and a washing machine.

Background

[0002] As users' requirement for standards and quality of life gradually improves, multiple models of washing machines available on the market now are provided with an automatic pouring function. However, for the pouring amount of laundry detergent used in each laundry, the pouring amount is often determined by a computer board based on water level or clothes smudginess degree selected by users. Users cannot visually watch the specific pouring amount during each laundry, nor can they set by themselves. Therefore, users often complain that the pouring amount of the laundry detergent defaulted by a washing machine does not satisfy their requirements.

[0003] A Chinese invention patent with the application number of 201010221057.6 and the title of Pouring Method of Laundry Detergent is available now. Through the step of selecting clothes smudginess degree, the laundry detergent of corresponding weight is poured based on the selected corresponding clothes smudginess degree, thereby accurately pouring at an amount corresponding to the clothes smudginess degree and facilitating the operation of users. Meanwhile, the steps of pouring laundry detergent by hand and adding laundry detergent by hand can facilitate users to select the suitable washing mode and use amount of the laundry detergent, thereby improving the convenience of operation.

[0004] However, the above patent has the following problems:

Firstly, in the above patent application, the pouring amount of laundry detergent cannot be displayed, users still cannot visually watch the pouring amount of the laundry detergent and cannot directly judge whether the pouring amount satisfies their requirements. Therefore, users can find out whether the pouring amount of the laundry detergent satisfies their requirements only after the washing machine starts to wash.

Secondly, users can judge whether laundry detergent needs to be added only after the washing machine begins to wash, and the washing procedure needs to be paused, thereby interrupting the washing procedure and influencing the washing efficiency.

Finally, laundry detergent needs to be added by hands by users, thereby being not beneficial for the use experience of users.

[0005] In view of these problems, the present invention is specifically provided.

Summary of the Invention

[0006] In order to solve the above problems, the present invention provides a method for controlling pouring of laundry detergent, and specifically adopts the following technical solutions:

A method for controlling pouring of laundry detergent includes the following steps: after being started, a washing machine calculates corresponding first pouring amount of a laundry detergent based on acquired information and displays the first pouring amount of the laundry detergent; the washing machine detects and determines a variable of the first pouring amount of the laundry detergent to form a second pouring amount of the laundry detergent, and the washing procedure is started and the washing machine pours the laundry detergent at a first pouring amount or a second pouring amount of the laundry detergent.

[0007] Furthermore, the first pouring amount of the laundry detergent is calculated by a computer board of a washing machine based on acquired washing procedure information, and/or set water level information, and/or clothes smudginess degree information.

[0008] Furthermore, the clothes smudginess degree is calculated by the computer board of the washing machine after the computer board acquires the clothes type information, clothes material information, clothes weight information and information of types of smudge on the clothes.

[0009] Furthermore, the variable of the first pouring amount of the laundry detergent is an increased or reduced pouring amount of the laundry detergent set by users, the computer board of the washing machine detects and judges the increased or reduced pouring amount of the laundry detergent and recalculates based on the first pouring amount of the laundry detergent to obtain the second pouring amount of the laundry detergent.

[0010] Furthermore, the variable of the first pouring amount of the laundry detergent is determined by users based on the clothes smudginess degree and the first pouring amount of the laundry detergent displayed on the washing machine:

when the variable of the first pouring amount of the laundry detergent is a positive value, the pouring amount of the laundry detergent is increased on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent; and

when the variable of the first pouring amount of the laundry detergent is a negative value, the pouring

amount of the laundry detergent is reduced on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent.

[0011] Furthermore, if the variable of the first pouring amount of the laundry detergent is zero, it indicates that the pouring amount of the laundry detergent is not increased or reduced, the computer board of the washing machine does not change the first pouring amount of the laundry detergent, and the second pouring amount of the laundry detergent is the first pouring amount of the laundry detergent.

[0012] Furthermore, the variable of the first pouring amount of the laundry detergent is calculated by the computer board of the washing machine based on the acquired clothes type information, clothes material information, clothes weight information and information of the type of smudge on the clothes in combination with the first pouring amount of the laundry detergent displayed on the washing machine.

[0013] Specifically, the method for controlling pouring of the laundry detergent of the present invention includes the following steps:

1) the washing machine is started;
2) the washing machine acquires the water level information and washing procedure information set by users, calculates and displays the first pouring amount of the laundry detergent;
3) the washing machine detects and judges whether the variable of the first pouring amount of the laundry detergent set by users is received;
4) if the judgment result is yes, then step 5) is executed, and if the judgment result is no, then the washing machine starts the washing procedure and pours the laundry detergent based on the first pouring amount of the laundry detergent;
5) the washing machine recalculates the second pouring amount of the laundry detergent based on the first pouring amount of the laundry detergent and the variable of the first pouring amount of the laundry detergent; and
6) the washing machine starts the washing procedure and pours the laundry detergent based on the second pouring amount of the laundry detergent.

[0014] Furthermore, step 5) further includes the following steps:

51) the washing machine displays the second pouring amount of the laundry detergent;
52) the washing machine judges whether the information that users confirm to pour the laundry detergent based on the second pouring amount is received; and
53) if the judgment result is yes, then step 6) is executed, and if the judgment result is no, the washing machine starts the washing procedure and pours the laundry detergent based on the first pouring amount of the laundry detergent.

[0015] The present invention further provides a washing machine using the above method for controlling pouring of laundry detergent. The washing machine includes an automatic pouring device, a computer board and a display screen, wherein the automatic pouring device pours based on the pouring amount of the laundry detergent calculated by the computer board, and the display screen is used for displaying the first pouring amount of the laundry detergent and/or the second pouring amount of the laundry detergent in real time.

[0016] In the method for controlling pouring of laundry detergent in the present invention, a washing machine firstly calculates the first pouring amount of the laundry detergent based on information set by users, and displays the pouring amount to users. Users judge visually based on the displayed first pouring amount of the laundry detergent. If users think that the first pouring amount of the laundry detergent satisfies their laundry requirements, the washing procedure is directly started, and the washing machine pours the laundry detergent based on the first pouring amount of the laundry detergent. If users think that the first pouring amount of the laundry detergent does not satisfy their laundry requirements, they can change the first pouring amount by setting a variable of the first pouring amount of the laundry detergent. The washing machine receives the variable of the first pouring amount of the laundry detergent set by users, and recalculates to obtain the second pouring amount of laundry detergent in combination with the first pouring amount of laundry detergent. After users confirm, the washing machine starts the washing procedure and pours the laundry detergent based on the second pouring amount of the laundry detergent.

[0017] Therefore, the method for controlling pouring of laundry detergent in the present invention has the following advantages:

1) By adopting the method for controlling pouring of laundry detergent in the present invention, users can select to pour the laundry detergent based on the defaulted pouring amount of the laundry detergent, or can change the pouring amount of the laundry detergent based on requirements, thereby satisfying individual laundry requirements.
2) By adopting the method for controlling pouring of laundry detergent in the present invention, the first pouring amount of the laundry detergent can be displayed to users visually, so that users can judge whether to increase the laundry detergent or not without considering the washing condition. Therefore, the present invention provides a direct basis for users to judge, and is simple and direct.
3) By adopting the method for controlling pouring of laundry detergent in the present invention, the wash-

ing procedure is started after users determine the pouring amount of the laundry detergent, the laundry detergent is poured based on the determined pouring amount of the laundry detergent. The washing procedure will not be interrupted and the washing efficiency is improved.

[0018] The washing machine in the present invention can visually display the pouring amount of laundry detergent to users, provide a direct basis for users to judge, and can also pour precisely based on the pouring amount of laundry detergent set by users and satisfy the laundry requirements of users.

[0019] The method for controlling pouring of laundry detergent and a washing machine provided by the present invention can solve the problem that users cannot control the pouring amount of laundry detergent by themselves when they use the existing washing machine with a function of automatic pouring of laundry detergent, thereby satisfying individual laundry requirements of users.

Brief Description of Drawings

[0020]

Fig. 1 is a flow chart of a method for controlling pouring of laundry detergent in the present invention;
Fig. 2 is a schematic diagram of a structural connection of a washing machine in the present invention.

Detailed Description of the Embodiments

[0021] The method for controlling pouring of laundry detergent and a washing machine in the present invention will be described in detail below in combination with the accompanying drawings.

[0022] A method for controlling pouring of laundry detergent in the present invention includes the following steps: after being started, a washing machine calculates corresponding first pouring amount of the laundry detergent based on acquired information and displays the first pouring amount of the laundry detergent; the washing machine detects and determines a variable of the first pouring amount of the laundry detergent to form a second pouring amount of the laundry detergent, the washing procedure is started, and the washing machine pours scrubbing solution at a first pouring amount or a second pouring amount of the laundry detergent.

[0023] In the method for controlling pouring of laundry detergent in the present invention, a washing machine calculates corresponding first pouring amount of the laundry detergent based on acquired information, and displays the first pouring amount of the laundry detergent, then users can directly obtain the defaulted pouring amount of the laundry detergent of the washing machine, namely, the first pouring amount of the laundry detergent. If users think that the first pouring amount of the laundry detergent cannot satisfy their laundry requirements, they can change the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent, after the washing machine starts the washing procedure, the washing machine pours the laundry detergent at the second pouring amount. If users think that the first pouring amount of laundry detergent can satisfy their laundry requirements, they will not change the first pouring amount of the laundry detergent. After the washing machine starts the washing procedure, the washing machine pours the laundry detergent at the first pouring amount defaulted by the washing machine.

[0024] By adopting the method for controlling pouring of laundry detergent in the present invention, users can select to pour the laundry detergent based on the defaulted pouring amount of the laundry detergent, or can change the pouring amount of the laundry detergent based on requirements, thereby satisfying individual laundry requirements.

[0025] In addition, by adopting the method for controlling pouring of laundry detergent in the present invention, the pouring amount of the laundry detergent calculated by the computer can be displayed in real time, and a visual reference basis is provided to users.

[0026] The first pouring amount of the laundry detergent in the present invention is equivalent to the defaulted amount of the existing washing machine with a function of automatic pouring. Therefore, the first pouring amount of the laundry detergent in the present invention is calculated by a computer board of a washing machine based on the acquired washing procedure information, and/or set water level information, and/or clothes smudginess degree information, wherein the washing procedure information and set water level information are often set by users. The first pouring amount of the laundry detergent is calculated by a washing machine voluntarily based on the set information of users and in combination with an internal database, thereby providing a more scientific theoretical basis for users.

[0027] The clothes smudginess degree information can be set by users and can also be calculated by a computer board of the washing machine after the computer board acquires the clothes type information, clothes material information, clothes weight information and information of the type of smudge on the clothes, wherein information such as the clothes type, clothes material, clothes weight and type of smudge on the clothes can be input into the computer board of the washing machine by users themselves. And corresponding detection sensors can also be arranged in the washing machine to acquire data and transmit the data to the computer board of the washing machine.

[0028] Clothes smudginess degree in the present invention involves various aspects including the clothes type, clothes material, clothes weight and type of smudge on the clothes. In order to integrate these aspects, a comprehensive judgment database of smudginess degree should be included in the computer board of the washing

machine. In the comprehensive judgment database of smudginess degree, such parameters as the clothes type, clothes material, clothes weight and type of smudge on the clothes are respectively corresponding to different values of smudginess degree, and then a total smudginess degree value is got after all the smudginess degree values are superimposed.

[0029] Therefore, the parameter of clothes smudginess degree is introduced in the present invention. The calculation of the first pouring amount of laundry detergent by the computer is more scientific and is close to the expected value of users easily, thereby reducing the frequency of changing the first pouring amount of laundry detergent by users and improving use experience of users.

[0030] In the method for controlling pouring of laundry detergent in the present invention, the variable of the first pouring amount of the laundry detergent is the increased or reduced pouring amount of laundry detergent set by users, and the computer board of the washing machine detects and judges the increased or reduced pouring amount of laundry detergent and recalculates on the basis of the first pouring amount of laundry detergent to obtain the second pouring amount of the laundry detergent.

[0031] The variable of the first pouring amount of the laundry detergent in the present invention can be a positive value and can also be a negative value. When the variable is a positive value, laundry detergent needs to be increased on the basis of the first pouring amount of the laundry detergent, and when the variable is a negative value, laundry detergent needs to be reduced on the basis of the first pouring amount of the laundry detergent. This is because the calculation mode of the first pouring amount of laundry detergent is fixed, while actual use conditions are very complex. If the calculation of the first pouring amount of the laundry detergent only involves the washing procedure information and/or the set water level information, the laundry requirement of users cannot be satisfied. For example, when set at the same water level with the same washing procedure, winter clothes usually require more laundry detergent than summer clothes, while the washing machine cannot change the calculation method of the first pouring amount of laundry detergent along with the change of seasons. Therefore, users may reduce a certain amount of laundry detergent when washing summer clothes, and correspondingly increase a certain amount of laundry detergent when winter clothes are washed.

[0032] Therefore, by adopting the method for controlling pouring of laundry detergent in the present invention, users can pour the laundry detergent from the reality, they can not only increase the laundry detergent on the basis of the first pouring amount of the laundry detergent, but also reduce the amount of the laundry detergent, so as to satisfy the laundry requirement of users.

[0033] It can be seen from the above content that the variable of the first pouring amount of laundry detergent in the present invention depends on the clothes smudginess degree to a great extent. Therefore, the variable of the first pouring amount of the laundry detergent in the present invention is determined by users based on the clothes smudginess degree and the first pouring amount of laundry detergent displayed on the washing machine:

when the variable of the first pouring amount of the laundry detergent is a positive value, the pouring amount of the laundry detergent is increased on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent; and

when the variable of the first pouring amount of the laundry detergent is a negative value, the pouring amount of the laundry detergent is reduced on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent.

[0034] The clothes smudginess degree is set by users themselves, and the variable of the first pouring amount of the laundry detergent is also determined by users based on their own experiences and in combination with the displayed first pouring amount value of laundry detergent. Then users can obtain the pouring amount of laundry detergent satisfying their psychological requirements, and individual laundry requirements of users are satisfied.

[0035] The first pouring amount of laundry detergent in the present invention may also directly satisfy the laundry requirements of users, then the first pouring amount of the laundry detergent does not need to be changed, the variable of the first pouring amount of the laundry detergent at this time is zero and users do not increase or reduce the pouring amount of the laundry detergent any more. The computer board of the washing machine does not change the first pouring amount of the laundry detergent, and the second pouring amount of the laundry detergent is the first pouring amount of the laundry detergent.

[0036] As another preferred implementation manner of the present invention, the variable of the first pouring amount of the laundry detergent in the present invention can also be calculated by the computer board of the washing machine based on the acquired clothes type information, clothes material information, clothes weight information and information of the type of smudge on the clothes in combination with the first pouring amount of the laundry detergent displayed on the washing machine.

[0037] This manner is applicable to the condition that users are not satisfied with the displayed first pouring amount of the laundry detergent, but cannot determine the pouring amount of laundry detergent to be increased or reduced. At this time, such information as the clothes type, clothes material, clothes weight and the type of smudge on the clothes is required to be input into the computer board of the washing machine, and the com-

puter board of the washing machine can determine a proper pouring amount of laundry detergent again based on these parameters, namely, the second pouring amount of the laundry detergent. The variable of the first pouring amount of laundry detergent is equal to the difference of the two values. It should be noted that the calculation of the first pouring amount of the laundry detergent in this manner does not involve the clothes smudginess degree , and only involves the washing procedure information and/or the set water level information. While satisfying the laundry requirements of users, this manner can greatly improve the working efficiency of a washing machine, and avoid the tediousness of repeatedly inputting such information as the clothes type, the clothes material, the clothes weight and the type of smudginess on clothes by users.

[0038] In conclusion, the method for controlling pouring of laundry detergent in the present invention has the following advantages:

1) By adopting the method for controlling pouring of laundry detergent in the present invention, users can select to pour the laundry detergent based on the defaulted pouring amount of the laundry detergent, or can change the pouring amount of the laundry detergent based on requirements, thereby satisfying individual laundry requirements.

2) By adopting the method for controlling pouring of laundry detergent in the present invention, the first pouring amount of the laundry detergent can be displayed to users visually, such that users can judge whether to increase the laundry detergent or not without considering the washing condition. Therefore, the present invention provides a direct basis for users to judge, and is simple and direct.

3) By adopting the method for controlling pouring of laundry detergent in the present invention, the washing procedure is started after users determine the pouring amount of the laundry detergent, the laundry detergent is poured based on the determined pouring amount of the laundry detergent. The washing procedure will not be interrupted, and the washing efficiency is improved.

Embodiment 1

[0039] As shown in Fig. 1, the method for controlling the pouring of the laundry detergent in the present embodiment specifically includes the following steps:

1) the washing machine is started;

2) the washing machine acquires the water level information and washing procedure information set by users, calculates and displays the first pouring amount of the laundry detergent;

3) the washing machine detects and judges whether the variable of the first pouring amount of the laundry detergent set by users is received;

4) if the judgment result is yes, then step 5) is executed, and if the judgment result is no, then the washing machine starts the washing procedure and pours the laundry detergent based on the first pouring amount of the laundry detergent;

5) the washing machine recalculates the second pouring amount of the laundry detergent based on the first pouring amount of the laundry detergent and the variable of the first pouring amount of the laundry detergent; and

6) the washing machine starts the washing procedure and pours the laundry detergent based on the second pouring amount of the laundry detergent.

[0040] By adopting the method for controlling the pouring of laundry detergent in the present invention, users can select to pour the laundry detergent based on the defaulted pouring amount of the laundry detergent, or change the pouring amount of the laundry detergent based on requirements, thereby satisfying individual laundry requirements.

[0041] By adopting the method for controlling pouring of laundry detergent in the present invention, the first pouring amount of the laundry detergent can be displayed to users visually, so that users can judge whether to increase the laundry detergent or not without considering the washing condition, and the method is simple and direct.

[0042] In addition, step 5) further includes the following steps:

51) the washing machine displays the second pouring amount of the laundry detergent;

52) the washing machine judges whether the information that users confirm to pour the laundry detergent based on the second pouring amount is received; and

53) if the judgment result is yes, then step 6) is executed, and if the judgment result is no, the washing machine starts the washing procedure and pours the laundry detergent based on the first pouring amount of the laundry detergent.

[0043] In the method for controlling pouring of laundry detergent of the present embodiment, the second pouring amount of laundry detergent can be displayed in real time, and a reference is given to users. If users confirm, it indicates that the second pouring amount of the laundry detergent can satisfy the laundry requirements. If users do not confirm, it indicates that users cannot determine which pouring amount of laundry detergent is proper, then the defaulted pouring amount of the washing machine is suggested to be adopted, namely, the first pouring amount of the laundry detergent is used as the final pouring amount of the laundry detergent.

Embodiment 2

[0044] As shown in Fig. 2, the washing machine in the present embodiment uses the method for controlling pouring of laundry detergent in the present invention, and includes an automatic pouring device, a computer board and a display screen, wherein the automatic pouring device pours based on the pouring amount of the laundry detergent calculated by the computer board, and the display screen is used for displaying the first pouring amount of the laundry detergent and/or the second pouring amount of the laundry detergent in real time.

[0045] In addition, a flow sensor is arranged in the automatic pouring device of the washing machine in the present embodiment, and then the poured amount of the laundry detergent can be transported to the computer board of the washing machine in real time, thereby realizing precise pouring of the laundry detergent.

[0046] The above embodiments are merely preferred embodiments of the present invention, rather than limiting the present invention in any form. Although the present invention has been disclosed as above through the preferred embodiments, these embodiments are not used for limiting the present invention. Within the range of not departing from the technical solution of the present invention, those skilled in the art can utilize the above prompted technical contents to make some alterations or modifications which can be deemed as equivalent embodiments with equivalent changes. Any simple modifications, equivalent changes and modifications made to the above embodiments based on the technical essence of the present invention without departing from the technical solution of the present invention shall all fall within the scope of the solution in the present invention.

Claims

1. A method for controlling pouring of laundry detergent, comprising:

   after being started, a washing machine calculating corresponding first pouring amount of a laundry detergent based on acquired information and displaying the first pouring amount of the laundry detergent,
   the washing machine detecting and judging a variable of the first pouring amount of the laundry detergent to form a second pouring amount of the laundry detergent,
   starting washing procedure, and the washing machine pouring the laundry detergent at the first pouring amount or the second pouring amount of the laundry detergent.

2. The method for controlling pouring of laundry detergent according to claim 1, wherein the first pouring amount of the laundry detergent is calculated by a computer board of the washing machine based on acquired washing procedure information, and/or set water level information, and/or clothes smudginess degree information.

3. The method for controlling pouring of laundry detergent according to claim 2, wherein the clothes smudginess degree is calculated by the computer board of the washing machine after the computer board acquires clothes type information, clothes material information, clothes weight information and information of a type of smudge on the clothes.

4. The method for controlling the pouring of laundry detergent according to claim 1, wherein the variable of the first pouring amount of the laundry detergent is an increased or reduced pouring amount of the laundry detergent set by users,
   the computer board of the washing machine detects and judges the increased or reduced pouring amount of the laundry detergent and recalculates based on the first pouring amount of the laundry detergent to obtain the second pouring amount of the laundry detergent.

5. The method for controlling the pouring of laundry detergent according to claim 4, wherein the variable of the first pouring amount of the laundry detergent is determined by users based on the clothes smudginess degree and the first pouring amount of the laundry detergent displayed on the washing machine:

   when the variable of the first pouring amount of the laundry detergent is a positive value, the pouring amount of the laundry detergent is increased on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent, and
   when the variable of the first pouring amount of the laundry detergent is a negative value, the pouring amount of the laundry detergent is reduced on the basis of the first pouring amount of the laundry detergent to form the second pouring amount of the laundry detergent.

6. The method for controlling the pouring of laundry detergent according to claim 4, wherein when the variable of the first pouring amount of the laundry detergent is zero, it indicates that users do not increase or reduce the pouring amount of the laundry detergent,
   the computer board of the washing machine does not change the first pouring amount of the laundry detergent, and the second pouring amount of the laundry detergent is equal to the first pouring amount of the laundry detergent.

7. The method for controlling the pouring of laundry de-

tergent according to claim 1, wherein the variable of the first pouring amount of the laundry detergent is calculated by the computer board of the washing machine based on the acquired clothes type information, clothes material information, clothes weight information and information of the type of smudge on the clothes in combination with the first pouring amount of the laundry detergent displayed on the washing machine.

8. The method for controlling the pouring of laundry detergent according to claim 1, comprising:

1) starting the washing machine;
2) the washing machine acquiring a water level information and washing procedure information set by users, and calculating and displaying the first pouring amount of the laundry detergent;
3) the washing machine detecting and judging whether a variable of the first pouring amount of the laundry detergent set by users is received;
4) if the judgment result is yes, then executing step 5), and
if the judgment result is no, then the washing machine starting the washing procedure and pouring the laundry detergent based on the first pouring amount of the laundry detergent;
5) the washing machine recalculating the second pouring amount of the laundry detergent based on the first pouring amount of the laundry detergent and the variable of the first pouring amount of the laundry detergent; and
6) the washing machine starting the washing procedure and pouring the laundry detergent based on the second pouring amount of the laundry detergent.

9. The method for controlling the pouring of laundry detergent according to claim 8, wherein step 5) further includes:

51) the washing machine displaying the second pouring amount of the laundry detergent;
52) the washing machine judging whether the information that users confirm to pour the laundry detergent based on the second pouring amount is received; and
53) if the judgment result is yes, then executing step 6), and if the judgment result is no, the washing machine starting the washing procedure and pouring the laundry detergent based on the first pouring amount of the laundry detergent.

10. A washing machine using the method for controlling pouring of laundry detergent according to any of claims 1-9, comprising:

an automatic pouring device, a computer board and a display screen, wherein,
the automatic pouring device pours based on the pouring amount of the laundry detergent calculated by the computer board, and
the display screen is used for displaying the first pouring amount of the laundry detergent and/or the second pouring amount of the laundry detergent in real time.

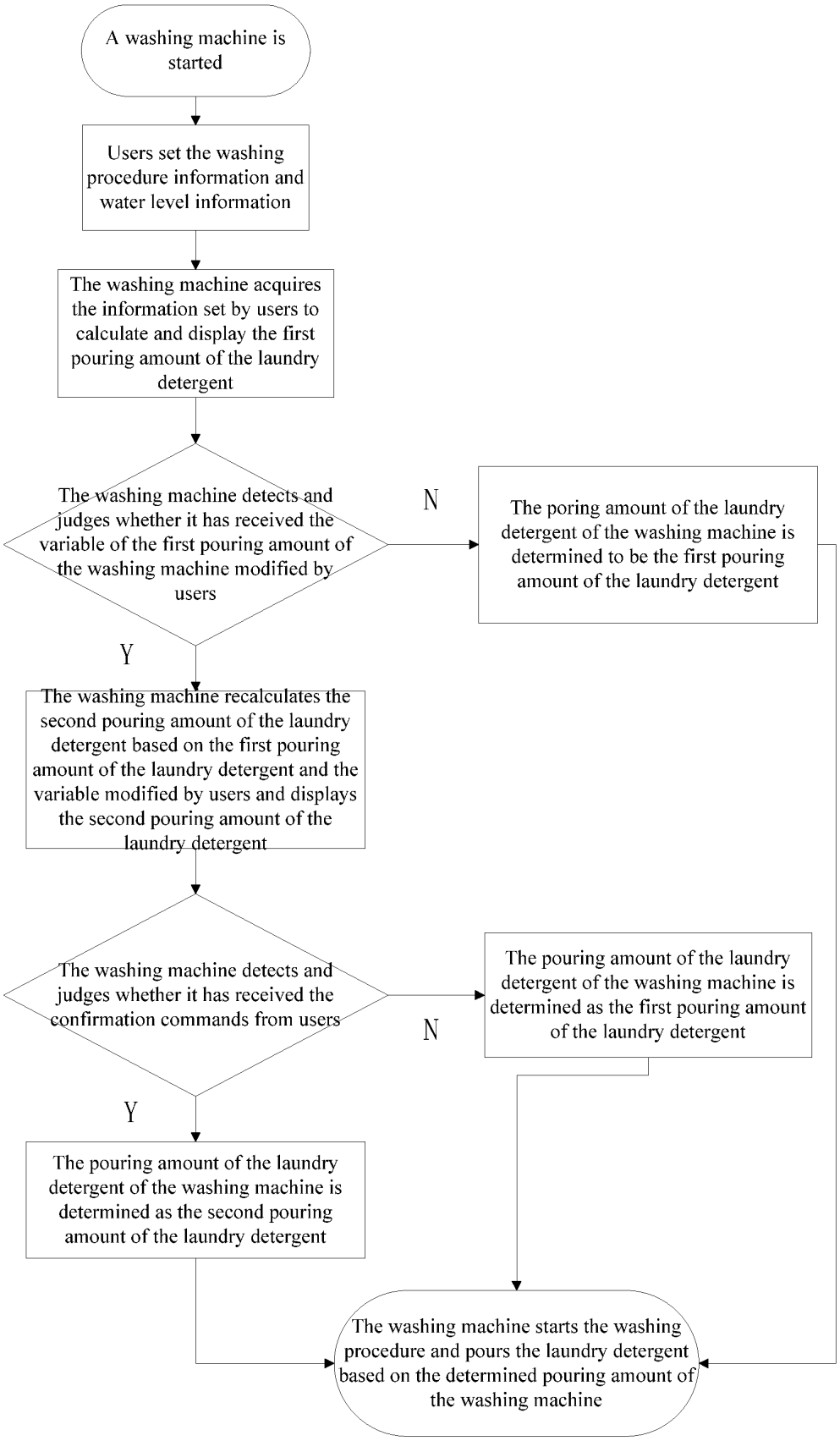
A washing machine is started
Users set the washing procedure information and water level information
The washing machine acquires the information set by users to calculate and display the first pouring amount of the laundry detergent
The washing machine detects and judges whether it has received the variable of the first pouring amount of the washing machine modified by users
N
The poring amount of the laundry detergent of the washing machine is determined to be the first pouring amount of the laundry detergent
Y
The washing machine recalculates the second pouring amount of the laundry detergent based on the first pouring amount of the laundry detergent and the variable modified by users and displays the second pouring amount of the laundry detergent
The washing machine detects and judges whether it has received the confirmation commands from users
N
The pouring amount of the laundry detergent of the washing machine is determined as the first pouring amount of the laundry detergent
Y
The pouring amount of the laundry detergent of the washing machine is determined as the second pouring amount of the laundry detergent
The washing machine starts the washing procedure and pours the laundry detergent based on the determined pouring amount of the washing machine

Fig. 1

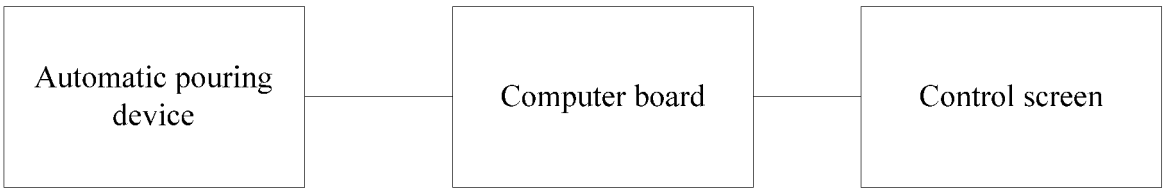

Fig. 2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2015/095299

A. CLASSIFICATION OF SUBJECT MATTER

D06F 33/02 (2006.01) i

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

D06F; A47L

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)

CNTXT; CNABS; VEN; CNKI: HAIER, detergent, soap, liquid detergent, put in, variate, amend, change, again, calibration, feed+, suppl+, provid+, dispens+, distribut+, add???, put, putt???, throw+, in, detergent, abstergent, abluent, wash??? 3w agent, display+, indicat+, show+, volume, amount, quantity, weight, operator, user

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2671994 A1 (ELECTROLUX HOME PROD CORP.), 11 December 2013 (11.12.2013), description, paragraphs [0090]-[0092], and figure 8	1-3, 7, 10
A	CN 101886323 A (NANJING LG PANDA APPLIANCES CO., LTD.), 17 November 2010 (17.11.2010), the whole document	1-10
A	CN 102634958 A (HAIER ELECTRONICS GROUP CO., LTD. et al.), 15 August 2012 (15.08.2012), the whole document	1-10
A	CN 101381939 A (HAIER ELECTRONICS GROUP CO., LTD. et al.), 11 March 2009 (11.03.2009), the whole document	1-10
A	KR 20040046930 A (LG ELECTRONICS INC.), 05 June 2004 (05.06.2004), the whole document	1-10
A	JP 2006025826 A (TOSHIBA CORP. et al.), 02 February 2006 (02.02.2006), the whole document	1-10

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

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Date of the actual completion of the international search	Date of mailing of the international search report
14 February 2016 (14.02.2016)	**29 February 2016 (29.02.2016)**
Name and mailing address of the ISA/CN: State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088, China Facsimile No.: (86-10) 62019451	Authorized officer **LIU, Jing** Telephone No.: (86-10) **62084545**

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2015/095299

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
EP 2671994 A1	11 December 2013	AU 2013273542 A1	18 December 2014
		EP 2859141 A1	15 April 2015
		CN 104619902 A	13 May 2015
		WO 2013182630 A1	12 December 2013
		US 2015152584 A1	04 June 2015
CN 101886323 A	17 November 2010	CN 101886323 B	31 August 2011
CN 102634958 A	15 August 2012	None	
CN 101381939 A	11 March 2009	CN 101381939 B	09 May 2012
KR 20040046930 A	05 June 2004	None	
JP 2006025826 A	02 February 2006	None	

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- CN 201010221057 **[0003]**