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(54) **Detergent compartment**

(57) Detergent compartment (1) of the invention which is used in dishwashers comprises a lid (2) which is closed thereon by turning on the axis of a spring hinge (10) on its one end and attached to the catches (11') on the compartment with the catches (11) on its other end; a pin (4) which is beared into the hole in its base (7) and can be pushed towards the inside of the base (7), is returned through the spring and located such that one end

thereof is above the surface of the base (7); a tablet holder (3) formed such that it extends towards the inside of the detergent compartment (1) and enlarges towards the base (7), with which the tablets in different sizes can be tightened and attached to the compartment (1). Additionally, there is provided a switch (6) which is located on the rear of the detergent compartment (1) and placed such that it interacts with the pin (4) only when the pin (4) is pushed.

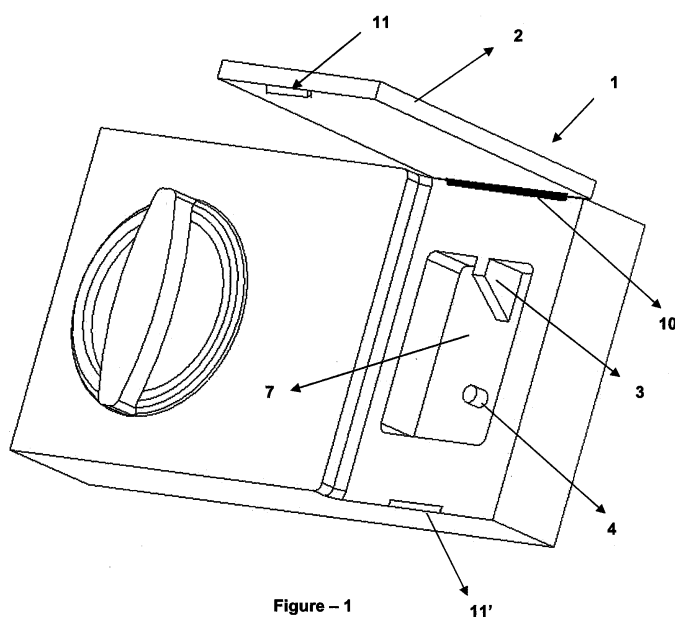


Figure - 1

Description

Technical Field

[0001] This invention relates to a detergent compartment developed for the use of tablet detergent in dishwashers.

Prior Art

[0002] Currently, tablet detergents are now used instead of powder detergent in dishwashers. However, a number of problems are encountered during the use of tablet detergent since tablet detergent wash program and normal detergent wash program are different from each other. Therefore, a new option is added to the control panel in some dishwashers. This option is used to activate a wash program which is suitable for tablet detergent when the user uses a tablet detergent. However, in this system, the user is able to activate a wash program which is suitable for tablet detergent even if the user does not use a tablet detergent, thus causing the dishwasher to wash the dishes in a program which is suitable for tablet detergent, and in this way washing efficiency is decreased.

[0003] In another system, dishwasher detects the presence of a tablet detergent through the color change occurred during washing with the help of a sensor placed therein, and the dishes are washed in a program which is suitable for tablet detergent. However, in this system, dishwasher, which starts to run in its normal program when the user uses a tablet detergent, detects the presence of the detergent depending on the prewash time and the detergent dissolution time after a while following the involvement of a tablet detergent into the system and activates the suitable wash program. This is an undesired situation.

[0004] In order to solve these problems, detergent compartment of the invention can be used. A movable part which is placed into said detergent compartment and a tablet detergent which produces a signal according to the location of the movable part and is placed into the detergent compartment by means of a switch under the compartment are detected. The tablet pushes the movable part forward by means of a pressure applied onto the tablet detergent which is placed on the movable part located in the detergent compartment by the lid when the detergent compartment lid is closed, and a signal is produced by the interaction of the movable part, of which the location is changed, with the switch, and it is understood that a tablet detergent is placed into the compartment. Thus, dishwasher starts to run in a program which is suitable for tablet detergent through a signal produced by the switch.

Object of the Invention

[0005] An object of this invention is to ensure the dish-

washer to detect a tablet detergent which is placed into the compartment before the washing process starts and then run in a program which is suitable for tablet.

[0006] Another object of the invention is to ensure the dishwasher to start running in a program which is suitable for powder or tablet detergent with no need for the activation of any button by the user.

Description of Figures

[0007] Detergent compartment of the invention is shown in the attached drawings, wherein:

Fig. 1 is a front perspective view of the detergent compartment in an opened position.

Fig. 2 is a top perspective view of the tablet detergent placed into the detergent compartment.

Fig. 3 is a rear perspective view of the detergent compartment.

[0008] The parts in the figures are numbered one by one and the corresponding terms of these numbers are given below.

Detergent compartment (1)

Lid (2)

Tablet holder (3)

Pin (4)

Tablet detergent (5)

Switch (6)

Compartment base (7)

Spring hinge (10)

Catch (11, 11')

Description of Invention

[0009] In dishwashers, the wash program varies depending on the detergent used, i.e. in the form of tablet or powder. Detergent compartment of the invention is used to allow the activation of a suitable program during the use of tablet detergent.

[0010] Detergent compartment of the invention (1) which is located in dishwasher, of which the front perspective view in its opened position is provided in fig. 1, comprises a lid (2) which is closed thereon by turning on the axis of a spring hinge (10) on its one end and attached to the catches (11') on the compartment with the catches (11) on its other end; a pin (4) which is beared into the hole in its base (7) and can be pushed towards the inside of the base (7), is returned through the spring and located such that one end thereof is above the surface of the base (7); a tablet holder (3) formed such that it extends towards the inside of the detergent compartment (1) and enlarges towards the base (7), with which the tablets in different sizes can be tightened and attached to the compartment (1). The detergent compartment (1) also comprises a switch (6), of which the rear perspective view is provided in fig. 3, located on the rear of the detergent compartment (1) and placed such that it interacts with

the pin (4) only when the pin (4) is pushed. The switch (6) used herein may have mechanical, electronic, magnetic, optic or infrared properties.

[0011] Fig. 2 provides a top perspective view of a tablet detergent (5) placed into the detergent compartment (1). The tablet detergent (5) which is placed into the detergent compartment (1) is tightened with the tablet holder (3) and its movement is prevented within the compartment (1) when the lid (2) is closed. Pin (4) does not interact with the switch (6) by any means when the detergent compartment (1) is empty. The tablet detergent (5) pushes the pin (4) forward, lid (2) pushes tablet detergent (5) when the tablet detergent (5) is placed into the detergent compartment (1) and the lid (2) is closed, the pin (4) interacts with the switch (6), thus activating the switch (6). Upon activating the switch (6), a signal is sent to an electronic card which is located in the control unit of the dishwasher, thus ensuring that dishwasher starts running in a program which is suitable for tablet detergent (5).

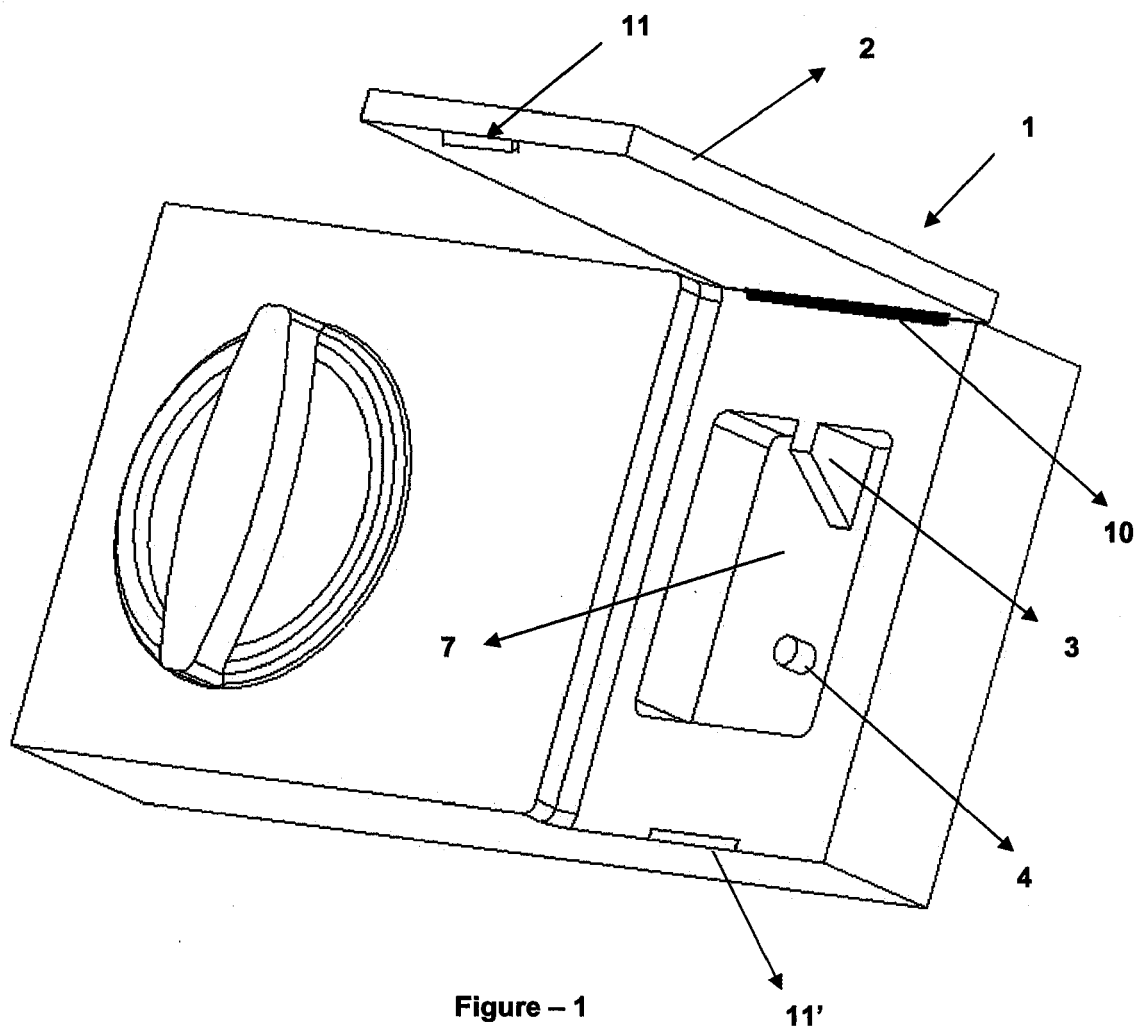
[0012] In case where the powder detergent is placed into the detergent compartment (1), since the powder detergent will not apply any force onto the pin (4), pin (4) does not interact with the switch (6), and therefore dishwasher washes in a program which is suitable for powder detergent.

[0013] It will be recognized that the above described invention may be embodied in other specific forms without departing from the spirit or essential characteristics of the disclosure. Thus, it is understood that the invention is not to be limited by the foregoing illustrative details, but rather is to be defined by the appended claims.

Claims

1. A detergent compartment (1), which is used in dishwashers and into which the detergents having different properties are placed, comprising a lid (2) which is closed thereon by turning on the axis of a spring hinge (10) on its one end and attached to the catches (11') on the compartment (1) with the catches (11) on its other end, **characterized in that** in order to detect automatically the placement of a tablet detergent (5) therein and run a wash program which is suitable for tablet (5) by sending a signal to the electronic card which is located in the control unit of the dishwasher, it comprises a pin (4) which is beared into the hole in its base (7) and can be pushed towards the inside of the base (7), is returned through the spring and located such that one end thereof is above the surface of the base (7), and a switch (6) which is located on the rear of the detergent compartment (1) and placed such that it interacts with the pin (4) only when the pin (4) is pushed; and the tablet detergent (5) pushes the pin (4) forward when it is placed into the compartment (1), the pin (4) interacts with the switch (6), and activates the switch (6) for said signal.

2. A detergent compartment according to the claim 1, wherein it also comprises a tablet holder (3) formed such that it extends towards the inside of the detergent compartment (1) and enlarges towards the base (7), with which the tablets in different sizes can be tightened and attached to the compartment (1).
3. A detergent compartment according to the claim 1, wherein the switch (6) used herein is a mechanic switch.
4. A detergent compartment according to the claim 1, wherein the switch (6) used herein is an electronic switch.
5. A detergent compartment according to the claim 1, wherein the switch (6) used herein is a magnetic switch.
6. A detergent compartment according to the claim 1, wherein the switch (6) used herein is an optic switch.
7. A detergent compartment according to the claim 1, wherein the switch (6) used herein is an infrared switch.



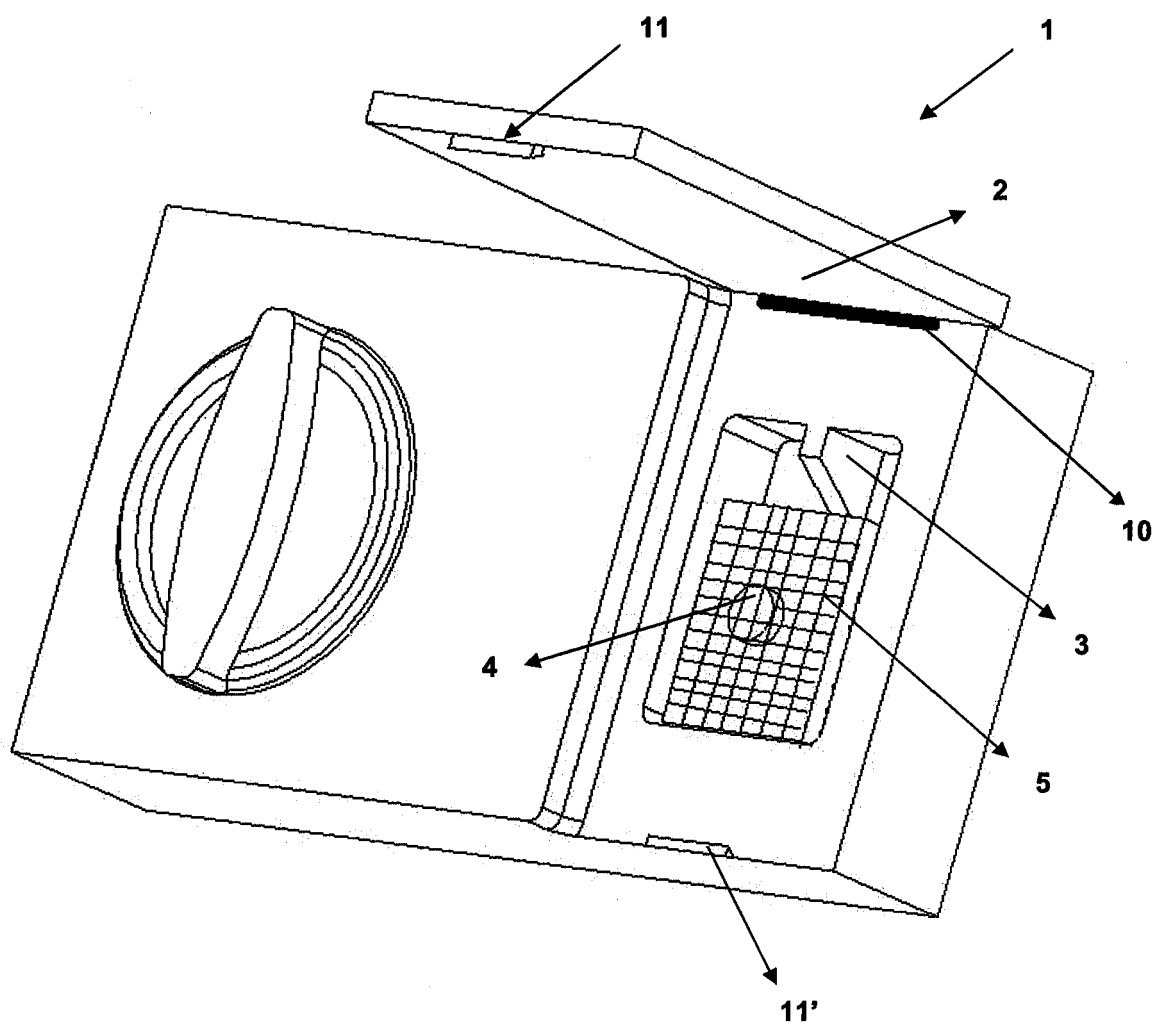


Figure - 2

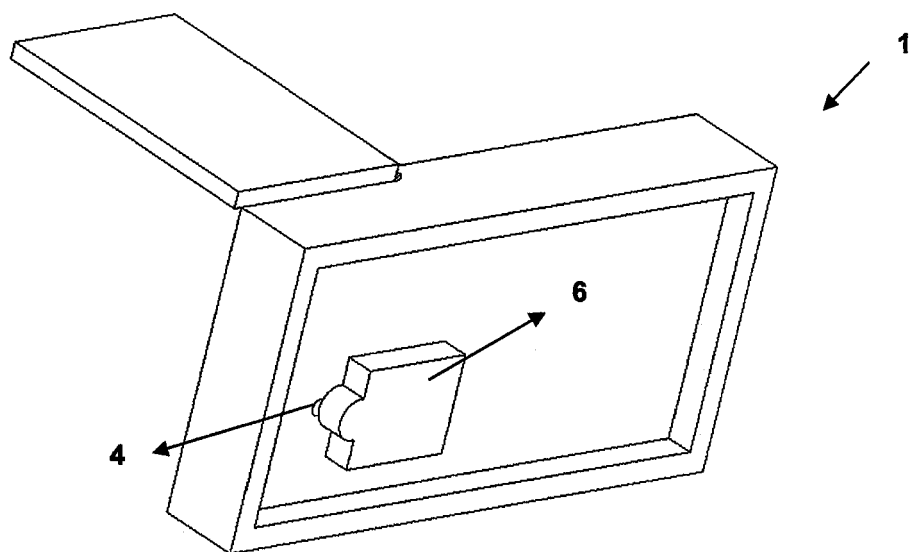


Figure – 3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 11 4577

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 557 122 A (ELECTROLUX HOME PRODUCTS CORPORATION N.V) 27 July 2005 (2005-07-27) * paragraphs [0002] - [0006]; figures * -----	1	INV. A47L15/44
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			TECHNICAL FIELDS SEARCHED (IPC)
			A47L
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 25 September 2006	Examiner Lopez Vega, Javier
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 11 4577

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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25-09-2006

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