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(54) **A DISHWASHER**

GESCHIRRSPÜLER

LAVE-VAISSELLE

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Description

[0001] The present invention relates to a dishwasher comprising a body, a door providing access into the body, and a detergent dispenser situated at the inner side of the door, wherein detergent is filled.

The control and operation of present dishwashers is performed by means of a fixed control panel disposed thereon. The user operates the machine by selecting the desired program from the control panel. In the state of the art dishwashers, the detergent dispenser is also situated at the inner side of the door.

In order to fill in detergent into the dishwashers, generally the dishwasher door is opened entirely, powder or tablet detergent is put into the detergent dispenser and the door is closed. Afterwards, the desired program is selected from a fixed control surface and the dishwasher is enabled to operate.

[0002] French Patent Application FR 2 593 697 A1 discloses a vertically oriented storage chamber for detergent that is arranged in the door of a dishwasher and that can be filled from the top edge of the door. Detergent is delivered from said chamber into the dishwasher via an automatic transportation mechanism.

[0003] European Patent Applications EP 1 236 431 A2 and EP 2 143 366 A1 each disclose a dispensing device for detergent that is arranged in the door of a dishwasher and that is filled from the top edge of the door.

[0004] European Patent Application EP 1 281 346 A1 discloses a dispensing device for detergent that is arranged in the frame of the door of a dishwasher and that is filled from the top edge of the door.

[0005] The aim of the present invention is the realization of a dishwasher that enables the users to easily fill in detergent into the detergent dispenser, easily select programs from the control panel, to easily monitor and control the selected program and the operational status of the dishwasher. The dishwasher realized in order to attain the aim of the present invention and explicated in the attached claims, comprises a door having an opening at a higher position than the detergent dispenser and wherein detergent is filled and a channel that joins the said opening with the detergent dispenser and that enables the detergent filled through the opening to be delivered into the detergent dispenser with the effect of gravity. Thus, the users are enabled to fill in detergent into the machine from the opening on the door without having to bend over to the detergent dispenser inside the machine.

[0006] In another embodiment of the present invention, the opening is placed at the inner side of a movable panel disposed on the door in order that the dishwasher has an elegant appearance. In this embodiment, the user is enabled to open the panel of the dishwasher and fill in the detergent from the detergent opening without bending over towards the machine.

[0007] In the embodiments of the present invention, the opening is preferably placed at just the inner side of the panel so as to face upwards. Thus, the user is enabled to partially open the door and to fill the detergent into the opening that faces upwards.

[0008] In the embodiments of the present invention, the opening is preferably placed at just the inner side of the panel and preferably at the uppermost end. Thus, the gap required for partially opening the door or the panel for loading the detergent is minimized.

[0009] In the embodiments of the present invention, the cross-section of the opening is slightly larger than the size of a standard tablet detergent and additionally is rectangular. Thus, the tablet detergent is enabled to fit in the detergent filling opening and to be delivered to the detergent dispenser without getting stuck.

[0010] In the embodiments of the present invention, the channel is placed into the door so as to join the detergent filling opening and the detergent dispenser preferably vertically in the closed position of the door and the panel. Thus, the tablet detergent is enabled to be delivered to the detergent dispenser with the least resistance.

[0011] In the embodiments of the present invention, the channel opens to an inlet port preferably disposed at the upper side of the detergent dispenser. Thus, the detergent is enabled to be delivered into the detergent dispenser in a safe manner.

[0012] In the embodiments of the present invention, a preferably movable lid is disposed to the inlet port at the upper side of the detergent dispenser, which opens into the detergent dispenser. Thus, when the detergent dispenser is loaded from the inner side of the door with especially powder detergent, the detergent is prevented from going back into the channel. Thus, the user is enabled to see the amount of powder detergent filled and to easily adjust by measuring.

[0013] In the embodiments of the present invention, the cross-section of the channel is realized to be preferably rectangular and slightly larger than the size of a standard tablet detergent. Thus, the tablet detergent is prevented from being stuck while passing through the channel.

[0014] In the embodiments of the present invention, the front side of the door corresponding to the region of the channel is preferably covered by a partially transparent material so that the detergent falling through the channel can be seen. Thus, the user is enabled to view the detergent loaded into the detergent dispenser.

[0015] In the embodiments of the present invention, preferably a light source is disposed to the door so that the transparent section is illuminated. One or more than one sensor preferably disposed inside the channel detects the passage of the detergent and controls the activation of the said light source. Thus, the user is enabled to understand whether or not the detergent is loaded from the state of the light even if the detergent is not seen falling. Furthermore, the user is not required to open the door and afterwards the lid of the detergent dispenser unnecessarily upon forgetting putting in the detergent.

[0016] In the embodiments of the present invention,

the control panel is disposed to the door or the panel so as to move together with the door or the panel. Additionally, the detergent opening is preferably arranged adjacent to the control surface. Thus, loading of the detergent and operation of the machine from the control panel on the panel can be realized very quickly.

[0017] In the embodiments of the present invention, the control panel is disposed at the upper facing side of the door or the panel so as to be controlled from above. Thus, the user is enabled to reach the control surface from above without bending over.

[0018] In the embodiments of the present invention, the control surface preferably comprises a display that displays the selected program and/or the program step.

[0019] In the embodiments of the present invention, the control surface preferably comprises a warning light that shows whether or not detergent is loaded. Thus, the user is enabled to easily understand whether or not detergent is loaded from the state of the light.

[0020] By means of the present invention, the users are enabled to easily add the detergent into the machine from the opening on the door, without having any difficulty and bending over. Thus, loading of the detergent from the door and operation of the dishwasher from the control panel located on the door can be realized very quickly. Furthermore, with the developed design of the panel, loading of detergent from the panel and operation of the dishwasher from the control panel located on the panel can be realized very quickly. These features provide ease of utilization for the users.

[0021] The model embodiments relating to the dishwasher realized in order to attain the aim of the present invention are illustrated in the attached figures, where:

Figure 1 - is a perspective view of the dishwasher in the closed position of the door and the panel in an embodiment of the present invention.

Figure 2 - is a perspective view of the dishwasher wherein the door is in the closed and the panel is in the open position in an embodiment of the present invention.

Figure 3 - is a perspective view of the dishwasher in the open position of the door and the closed position of the detergent dispenser in an embodiment of the present invention.

Figure 4 - is the perspective view of the dishwasher in the open position of both the door and the detergent dispenser in an embodiment of the present invention.

Figure 5 - is a perspective view of the panel, the channel and the detergent dispenser in an embodiment of the present invention.

Figure 6 - is the perspective view of the panel, the channel and the detergent dispenser from another angle in an embodiment of the present invention.

Figure 7 - is a schematic view of the panel, the channel and the detergent dispenser while tablet detergent is loaded into the detergent dispenser in an embodiment of the present invention.

Figure 8 - is a perspective view of the door after the tablet detergent is delivered to the detergent dispenser in an embodiment of the present invention.

Figure 9 - is the detailed view of Figure 8.

Figure 10 - is a perspective view of the door and the panel while detergent is being loaded into the opening in an embodiment of the present invention.

Figure 11 - is the detailed view of Figure 10.

[0022] The elements illustrated in the figures are numbered as follows:

1. Dishwasher
2. Body
3. Door
4. Panel
5. Display
6. Detergent dispenser
7. Opening
8. Channel
9. Inlet port

[0023] The dishwasher (1) comprises a body (2), a door (3) providing access into the body (2) and a detergent dispenser (6) disposed at the inner side of the door (3), wherein detergent (D) is filled (Figure 3 and Figure 4).

[0024] The door (3) furthermore comprises an opening (7) situated at a higher position than the detergent dispenser (6), wherein detergent (D) is filled and a channel (8) that joins the opening (7) with the detergent dispenser (6) and that delivers the detergent (D) filled from the opening (7) to the detergent dispenser (6) with the effect of gravity (Figure 2). Thus, the users are enabled to fill in detergent (D) into the machine (1) from the opening (7) on the door (3) without bending over to the detergent dispenser (6) inside the machine (1).

[0025] In an embodiment of the present invention, the opening (7) is placed preferably at the inner side of the panel (4), so as not to be seen and reached from outside the body (2) in the closed position of the panel (4) in order that the dishwasher (1) has an elegant appearance. Thus, the user is enabled to fill in the detergent (D) from the opening (7) by opening the panel (4) of the dishwasher (1) without bending over towards the machine (1) (Figure 1 and Figure 2).

[0026] In an embodiment which does not form part of the present invention without the panel (4), not shown in the figures, the opening (7) is placed preferably at the inner side of the door (3) so as not to be seen and reached from outside the body (2) in the closed position of the door (3) in order that the dishwasher (1) has an elegant appearance. Thus, the user is enabled to fill in the detergent (D) from the opening (7) into the machine (1) by opening the door (3) of the dishwasher (1) without bending over.

[0027] In an embodiment which does not form part of the present invention without the panel (4), not shown in

the figures, the opening (7) is preferably placed at the front side of the door (3). The opening (7) is preferably closed by a slide-in lid in order that the door (3) has an elegant appearance. In an embodiment of the present invention not shown in the figures, it is possible for the user to fill in the detergent (D) from the opening (7) into the machine (1) without opening the door (3) of the dishwasher (1) and bending over.

[0028] In the embodiments of the present invention, the opening (7) is disposed at just the inner side of the panel (4) and preferably to face upwards (Figure 2). Thus, the user is enabled to partially open the panel (4) and fill the detergent (D) towards the interior from the opening (7) facing upwards. Thus, the user can see the opening (7) from above and easily fill therein.

[0029] In the embodiments of the present invention, the opening (7) is disposed at the inner side of the panel (4) and preferably at the uppermost end (Figure 5 and Figure 6). Thus, the gap required for partially opening the panel (4) for loading the detergent (D) is minimized. Thus, reaching the opening (7) is made easier.

[0030] In the embodiments of the present invention, the cross-section of the opening (7) is preferably slightly larger than the size of a standard tablet detergent (D) and additionally is rectangular (Figure 5). Thus, the tablet detergent (D) is enabled to fit into the detergent (D) loading opening (7) and to be delivered to the detergent dispenser (6) without getting stuck. In the embodiments of the present invention, the channel (8) is disposed inside the door (3) so as to join the detergent (D) loading opening (7) with the detergent dispenser (6) preferably vertically (in the Z-axis direction) in the closed position of the door (3) and the panel (4) (Figure 6). Thus, the tablet detergent (D) is enabled to be delivered to the detergent dispenser (6) via the shortest path and with minimum resistance. Additionally, being situated inside the door (3), the channel (8) does not decrease the interior volume of the body (2).

[0031] In the embodiments of the present invention, the channel (8) opens into an inlet port (9) that is preferably disposed at the upper side of the detergent dispenser (6) (Figure 7). Thus, the detergent (D) is enabled to be delivered directly to the detergent dispenser (6) in a safe manner.

[0032] In the embodiments of the present invention, a preferably movable lid, not shown in the figures, which opens into the detergent dispenser (6), is disposed to the inlet port (9) at the upper side of the detergent dispenser (6). Thus, when the detergent dispenser (6) is loaded from the inner side of the door (3) with especially powder detergent (D), the detergent (D) is prevented from going back into the channel (8). Thus, the user is enabled to see the amount of powder detergent (D) filled in and to easily adjust by measuring. However, the said lid is not essential. For example, a separate housing can be provided in the detergent dispenser (6) for powder detergent (D). The said detergent dispenser (6) has the technical characteristics of a standard detergent dispenser in addition to the above features, for example, has a lid and electronic components required to open the lid.

[0033] In the embodiments of the present invention, the cross-section of the channel (8) is rectangular and slightly larger than the size of a standard tablet detergent (D). Thus, the tablet detergent (D) is prevented from being stuck while passing through the channel (8)(Figure 7).

[0034] In the embodiments of the present invention, the front side of the door (3) corresponding to the section where the channel (8) is located, is preferably covered by a partially transparent material so that the detergent (D) passing through the channel (8) can be seen. Thus, the user is enabled to monitor the loading of the detergent (D) into the detergent dispenser (6). In the embodiments of the present invention, the channel (8) can be preferably U-shaped. In this situation, the portion of the channel (8) facing the front side of the door (3) can be covered by a partially transparent, for example glass or artificial, material. The channel (8) can be produced as single or multiple piece for providing ease of assembly. Additionally, the channel (8) can be produced from preferably a white material in order that the dishwasher (1) has an elegant appearance.

[0035] In the embodiments of the present invention, preferably a light source is disposed to the door (3) so that the transparent region is illuminated. One or more than one sensor, preferably disposed inside the channel (8), detects the falling of the detergent (D) and activates the said light. Thus, the user can understand whether or not the detergent (D) is loaded from the state of the light even if the detergent (D) is not seen falling. Thus, the user is not required to open the door (3) and afterwards the lid of the detergent dispenser (6) unnecessarily upon forgetting putting in the detergent (D). The light can be controlled so as to be turned on when detergent (D) is not loaded. The said light can be preferably red for having a warning effect. Thus, the user will realize that he/she has forgotten to put in detergent (D) from, for example, the red light being turned on. Alternatively, the light can be controlled to be turned on when the detergent (D) is loaded as well. Thus, the user will realize that he/she has put in the detergent (D) from, for example, the green light being turned on. Thus, the detergent (D) is prevented from being unnecessarily reloaded. The light can be enabled to be on continuously or intermittently. The above described control features can be used together. In this case, the light source can be formed from lights of more than one color. Sound sources instead of or together with the light source can also be used.

[0036] In the embodiments of the present invention, the control surface is disposed to the door (3) or the panel (4) so as to move together with the door (3) (Figure 2). In addition, the opening (7) is situated just adjacent to the control panel. Thus, loading of detergent (D) from the panel (4) and operation of the machine (1) from the control surface situated on the panel (4) can be realized very quickly.

[0037] In the embodiments of the present invention,

the control panel is disposed at the upper facing side of the door (3) or the panel (4) so as to be controlled from above (Figure 2). Thus, the user is enabled to reach the control panel from above without bending over. In the embodiments of the present invention, the on/off button is preferably situated at a location near the detergent (D) opening (7). Thus, loading of detergent (D) and operation of the machine (1) can be realized quickly.

[0038] In the embodiments of the present invention, the control surface preferably comprises a display (5) that displays the selected program and/or the program step (Figure 2).

[0039] In the embodiments of the present invention, the control surface preferably comprises a warning light that shows whether or not detergent (D) is loaded. Thus, the user is enabled to easily understand whether or not detergent (D) is loaded from the state of the light. The said light can be controlled by one or more than one sensor described above. The light on the control panel can also be used together with the light source illuminating the above described transparent section. Thus, the user is enabled to easily understand whether or not detergent (D) is loaded from the state of the light in the control panel even if the light from the light source illuminating the transparent section is not seen.

[0040] By means of the present invention, the users are enabled to easily add the detergent (D) into the machine (1) from the opening (7) located on the door (3), without having any difficulty and bending over. Thus, loading of the detergent (D) from the door (3) and operation of the dishwasher (1) from the control panel located on the door (3) can be realized very quickly. Furthermore, with the developed design of the panel (4), loading of detergent (D) from the panel (4) and operation of the dishwasher (1) from the control panel located on the panel (4) can be realized very quickly. These features provide ease of utilization for the users.

[0041] In addition, the transparent section enabling the detergent (D) loading process to be seen from outside the body (2) and the light source at the front side of the door (3) showing successful completion of the detergent (D) loading process provide the dishwasher (1) with an elegant appearance.

Claims

1. A dishwasher (1) comprising
a body (2),
a door (3) that provides access into the body (2),
a detergent dispenser (6) disposed at the inner side of the door (3) and wherein detergent (D) is filled,
the door (3) having
an opening (7) situated at a higher position than the detergent dispenser (6) and wherein the detergent (D) is filled and
a channel (8) that joins the opening (7) with the detergent dispenser (6) and delivering the detergent (D) filled from the opening (7) to the detergent dispenser (6) with the effect of gravity,
characterized in that the dishwasher (1) further comprises

- a panel (4) disposed at the door (3) so as to move together with the door (3), the panel being movable with respect to the door between a closed position and an open position, wherein the opening (7) is disposed on the panel (4), wherein the opening (7) cannot be reached from outside the body (2) in the closed position of the panel (4), and wherein the opening (7) can be reached from outside the body (2) in the open position of the panel (4) while the door (3) is in a closed position.

2. A dishwasher (1) as in Claim 1, **characterized by** the opening (7) being disposed at the inner side of the panel (4).

3. A dishwasher (1) as in Claim 2, **characterized by** the opening (7) being disposed at the upper end of the inner side of the panel (4).

4. A dishwasher (1) as in any one of the Claims 1 to 3, **characterized by** the opening (7) facing upwards so as to enable the detergent (D) to be filled from above in the partially opened position of the panel (4).

5. A dishwasher (1) as in any one of the above claims, **characterized by** the opening (7) having a rectangular cross-section and the cross section being larger than the size of a standard tablet detergent (D).

6. A dishwasher (1) as in any one of the above claims, **characterized by** the channel (8) that is situated inside the door (3) and that vertically joins the detergent (D) filling opening (7) with the detergent dispenser (6) in the closed position of the door (3).

7. A dishwasher (1) as in any one of the above claims, **characterized by** the channel (8) that opens into an inlet port (9) situated at the upper side of the detergent dispenser (6).

8. A dishwasher (1) as in any one of the above claims, **characterized by** a movable lid that is situated on the inlet port (9) and that opens into the detergent dispenser (6).

9. A dishwasher (1) as in any one of the above claims, **characterized by** the channel (8) having a rectangular cross-section and the cross section being larger than the size of a standard tablet detergent (D).

10. A dishwasher (1) as in any one of the above claims, **characterized by** the door (3), the front side of which

is covered by a partially transparent material so that the detergent (D) passing through the channel (8) can be seen.

11. A dishwasher (1) as in Claim 10, **characterized by** at least one sensor that detects the detergent (D) passing through the channel (8) and a light source disposed to the door (3) such that a transparent section is illuminated with the fall of the detergent (D) depending on the signal delivered from the sensor.

12. A dishwasher (1) as in any one of the above claims, **characterized by** a control panel situated at the upper facing side of the door (3) or the panel (4) so as to be controlled from above.

13. A dishwasher (1) as in Claim 12, **characterized by** the control panel comprising a display (5) that displays the selected program and/or the program step.

14. A dishwasher (1) as in Claim 12 or 13, **characterized by** the control panel comprising a warning light that shows whether or not the detergent (D) is loaded.

Patentansprüche

1. Geschirrspülmaschine (1) umfassend
einen Körper (2),
eine Tür (3), die Zugang zum Körper (2) ermöglicht, einen Waschmittelspender (6), der an der Innenseite der Tür (3) angeordnet ist und wobei Waschmittel (D) gefüllt ist,
die Tür (3) aufweisend
eine Öffnung (7), die sich auf einer höheren Position als der Waschmittelspender (6) befindet und wobei Waschmittel (D) gefüllt ist, und einen Kanal (8), der die Öffnung (7) mit dem Waschmittelspender (6) verbindet und den von der Öffnung (7) gefüllte Waschmittel (D) mit der Wirkung der Schwerkraft zum Waschmittelspender (6) liefert,
dadurch gekennzeichnet, dass Geschirrspülmaschine (1) ferner folgendes umfasst:

- ein Paneel (4), das an der Tür (3) angeordnet ist, um sich zusammen mit der Tür (3) bewegen zu können, wobei das Paneel in Bezug auf die Tür zwischen einer geschlossenen Position und einer offenen Position bewegbar ist,

wobei die Öffnung (7) an dem Paneel (4) angeordnet ist, wobei die Öffnung (7) von außerhalbdes Körpers (2) in der geschlossenen Position des Paneels (4) nicht erreichbar ist und wobei die Öffnung (7) von außerhalbdes Körpers (2) in der geöffneten Position des Paneels (4) erreichbar ist, während die Tür (3) in einer geschlossenen Position ist.

2. Geschirrspülmaschine (1) nach Anspruch 1 **gekennzeichnet durch** die Öffnung (7), die an der Innenseite des Paneels (4) angeordnet ist.

3. Geschirrspülmaschine (1) nach Anspruch 2 **gekennzeichnet durch** die Öffnung (7), die an dem oberen Ende der Innenseite des Paneels (4) angeordnet ist.

4. Geschirrspülmaschine (1) nach einem der Ansprüche 1 bis 3, **gekennzeichnet durch** eine Öffnung (7) die nach oben zeigt, sodass der Waschmittel (D) von oben in der teilweise geöffneten Position des Paneels (4) gefüllt werden kann.

5. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** die Öffnung (7), die einen rechteckigen Querschnitt aufweist und wobei der Querschnitt größer als die Größe eines tablettenförmigen Waschmittels (D) aufweist.

6. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Kanal (8), der sich innerhalb der Tür (3) befindet und der die Waschmittel (D) -Einfüllöffnung (7) mit dem Waschmittelspender (6) in der Schließstellung der Tür (3) vertikal verbindet.

7. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Kanal (8), der sich in eine Einlassöffnung (9) öffnet, die an der oberen Seite des Waschmittelspenders (6) angeordnet ist.

8. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen bewegbaren Deckel, der sich auf der Einlassöffnung (9) befindet und der sich in den Waschmittelspender (6) öffnet.

9. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Kanal (8) mit einem rechteckigen Querschnitt und wobei der Querschnitt größer als die Größe eines tablettenförmigen Waschmittels (D)aufweist.

10. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** eine Tür (3), deren Frontseite durch einem teilweise durchsichtigen Material bedeckt ist, sodass der Waschmittel (D), der durch den Kanal (8) fließt, gesehen werden kann.

11. Geschirrspülmaschine (1) nach Anspruch 10, **gekennzeichnet durch** mindestens einen Sensor, der das den Kanal (8) passierende Waschmittel (D) detektiert und eine Lichtquelle die an der Tür (3) ange-

ordnet ist, sodass ein transparenter Abschnitt mit dem Abfallen des Waschmittels (D) in Abhängigkeit von dem Signal, das von dem Sensor geliefert ist.

12. Geschirrspülmaschine (1) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** ein Bedienfeld, das an der oberen zugewandten Seite der Tür (3) oder des Paneels (4) angeordnet ist, um von oben gesteuert zu werden.

13. Geschirrspülmaschine (1) nach Anspruch 12, **gekennzeichnet durch** das Bedienfeld mit einer Anzeige (5), die das ausgewählte Programm und / oder den Programmschritt anzeigt.

14. Geschirrspülmaschine (1) nach Anspruch 12 oder 13, **gekennzeichnet durch** das Bedienfeld mit einem Warnlicht, das anzeigt, ob das Waschmittel (D) geladen ist oder nicht.

Revendications

1. Lave-vaisselle (1) comprenant
un corps (2),
une porte (3) donnant accès au corps (2),
un distributeur de détergent (6) disposé sur le côté intérieur de la porte (3) et dans lequel le détergent (D) est rempli,
la porte (3) ayant
une ouverture (7) située dans une position plus élevée que le distributeur de détergent (6) et dans laquelle le détergent (D) est rempli et
un canal (8) qui relie l'ouverture (7) au distributeur de détergent (6) et fournit le détergent (D) rempli par l'ouverture (7) au distributeur de détergent (6) sous l'effet de la gravité,
caractérisé en ce que le lave-vaisselle (1) comprend en outre

- un panneau (4) disposé au niveau de la porte (3) de manière à se déplacer avec la porte (3), le panneau pouvant être déplacé par rapport à la porte entre une position fermée et une position ouverte,

dans lequel l'ouverture (7) est disposée sur le panneau (4), dans lequel l'ouverture (7) ne pouvant pas être atteinte depuis l'extérieur du corps (2) dans la position fermée du panneau (4) et dans lequel l'ouverture (7) peut être atteinte depuis l'extérieur du corps (2) dans la position ouverte du panneau (4) pendant que la porte (3) est dans une position fermée.

2. Lave-vaisselle (1) selon la revendication 1, **caractérisé par** l'ouverture (7) est disposée du côté intérieur du panneau (4).

3. Lave-vaisselle (1) selon la revendication 2, **caractérisé par** l'ouverture (7) est disposée à l'extrémité supérieure du côté intérieur du panneau (4).

4. Lave-vaisselle (1) selon l'une quelconque des revendications 1 à 3, **caractérisé par** l'ouverture (7) tournée vers le haut pour permettre le remplissage du détergent (D) par le haut dans la position partiellement ouverte du panneau (4).

5. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** l'ouverture (7) a une section transversale rectangulaire et la section transversale est plus grande que la taille d'un détergent à comprimés standard (D).

6. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** le canal (8) situé à l'intérieur de la porte (3) et qui relie verticalement l'ouverture (7) de remplissage du détergent (D) au distributeur de détergent (6) dans la position fermée de la porte (3).

7. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** le canal (8) qui débouche dans un orifice d'entrée (9) situé sur la face supérieure du distributeur de détergent (6).

8. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** un couvercle mobile qui est situé sur l'orifice d'entrée (9) et qui débouche dans le distributeur de détergent (6).

9. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** le canal (8) a une section transversale rectangulaire et la section transversale est plus grande que la taille d'un détergent à tablette standard (D).

10. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** la porte (3) dont le côté avant est recouvert d'un matériau partiellement transparent de sorte que le détergent (D) passant à travers le canal (8) peut être vu.

11. Lave-vaisselle (1) selon la revendication 10, **caractérisé par** au moins un capteur qui détecte le détergent (D) passant à travers le canal (8) et une source de lumière disposée sur la porte (3) de telle sorte qu'une section transparente est éclairée avec le chute du détergent (D) en fonction du signal délivré par le capteur.

12. Lave-vaisselle (1) selon l'une quelconque des revendications précédentes, **caractérisé par** un panneau de commande situé du côté supérieur de la porte (3) ou du panneau (4) de manière à être commandé depuis le dessus.

13. Lave-vaisselle (1) selon la revendication 12, **caractérisé par** le panneau de commande comprend un affichage (5) qui affiche le programme sélectionné et / ou l'étape de programme.

14. Lave-vaisselle (1) selon la revendication 12 ou 13, **caractérisé par** le panneau de commande comprend un voyant qui indique si le détergent (D) est chargé ou non.

Figure 1

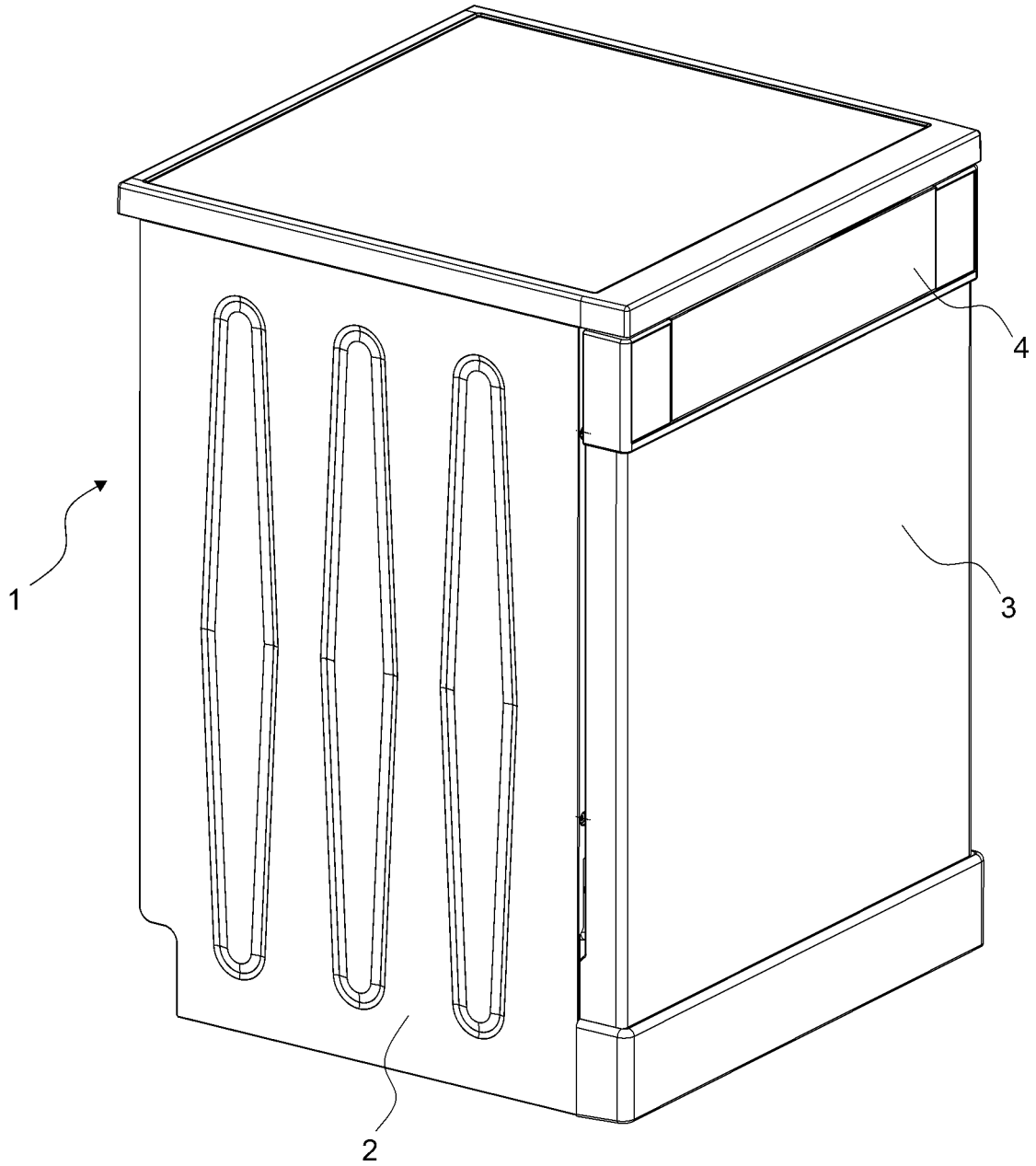


Figure 2

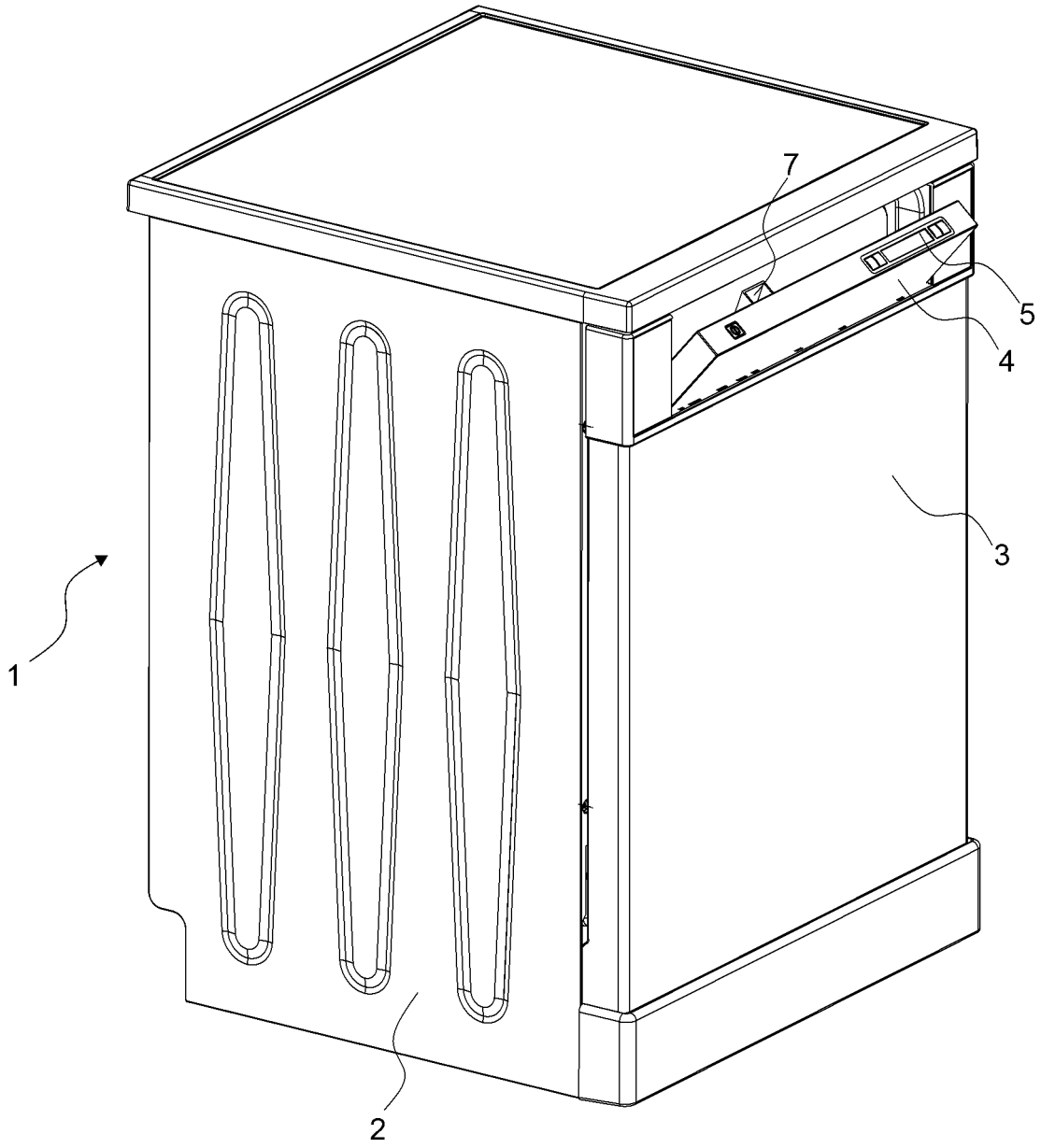


Figure 3

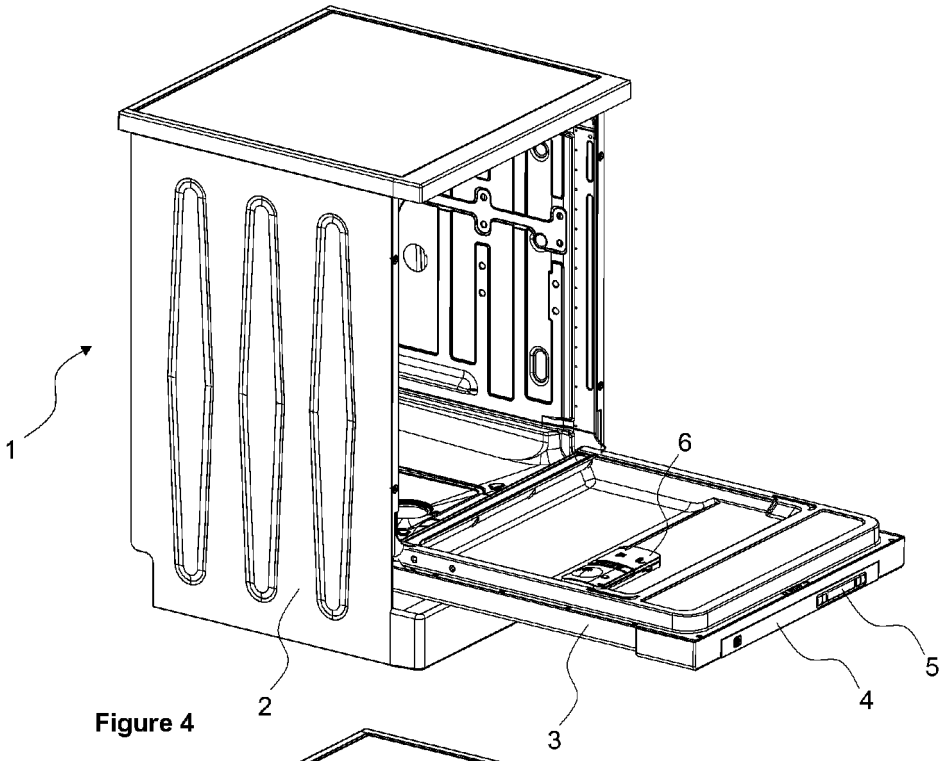


Figure 4

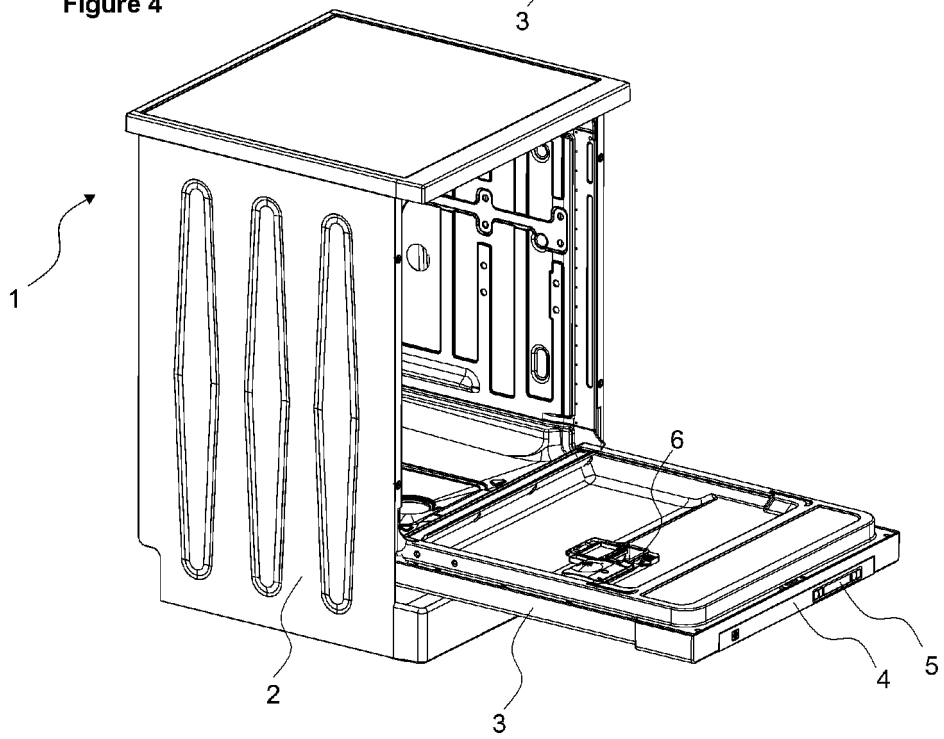


Figure 5

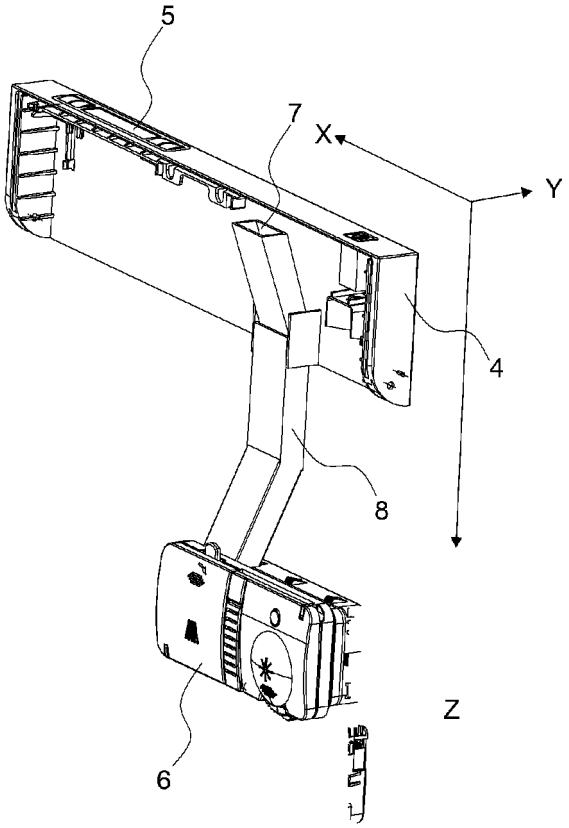


Figure 6

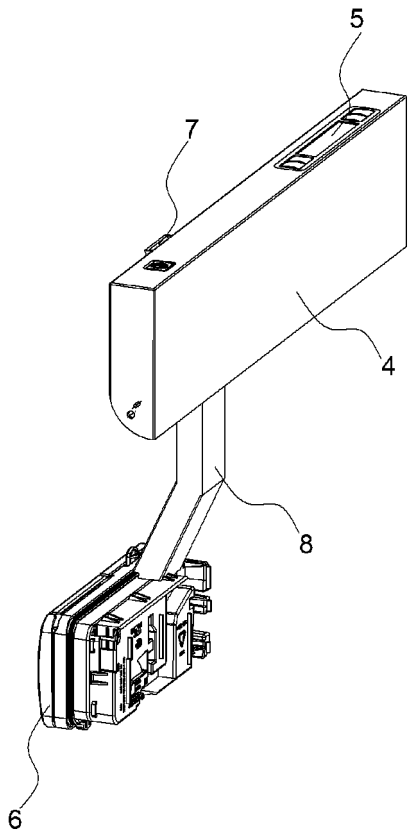


Figure 7

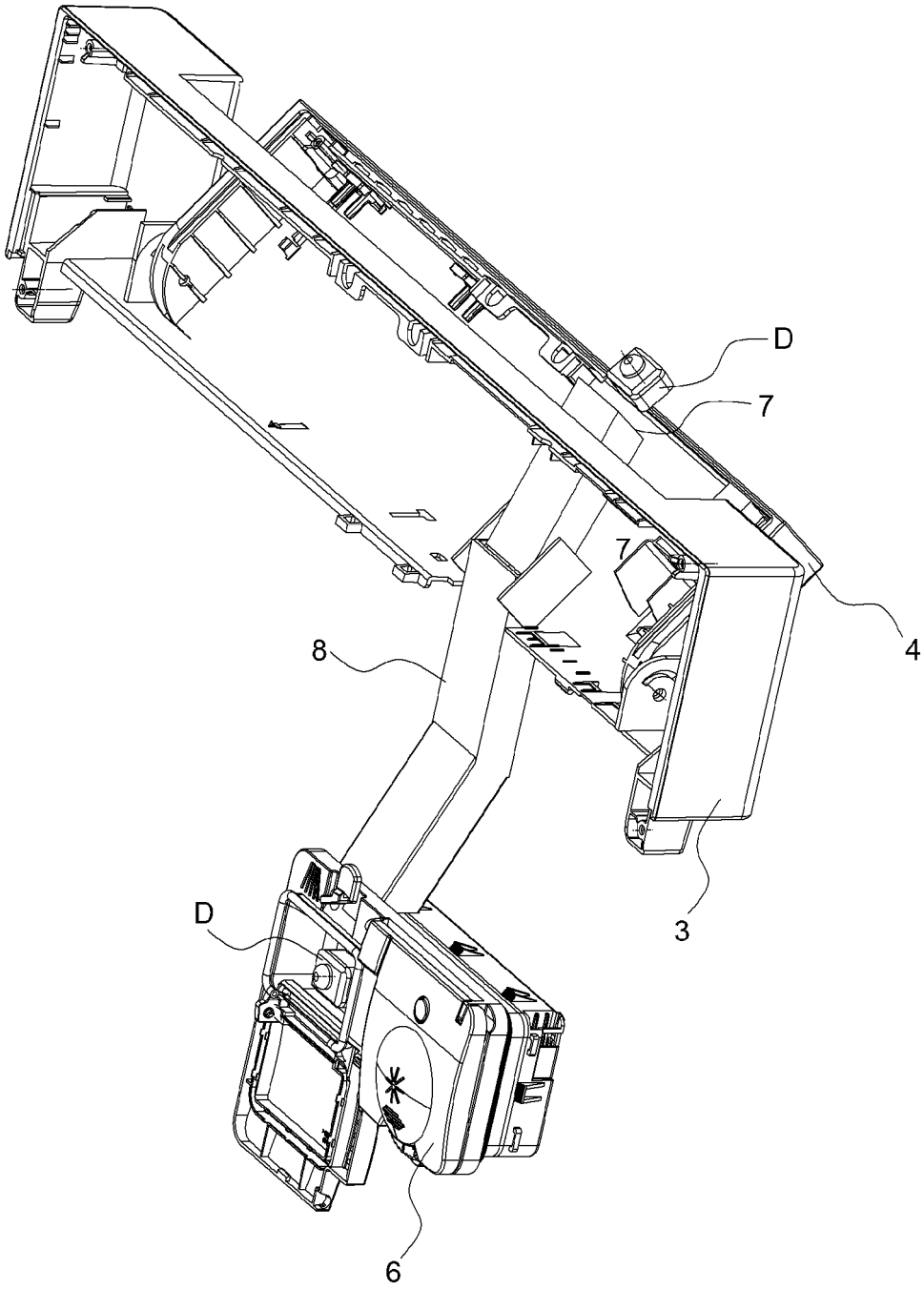


Figure 8

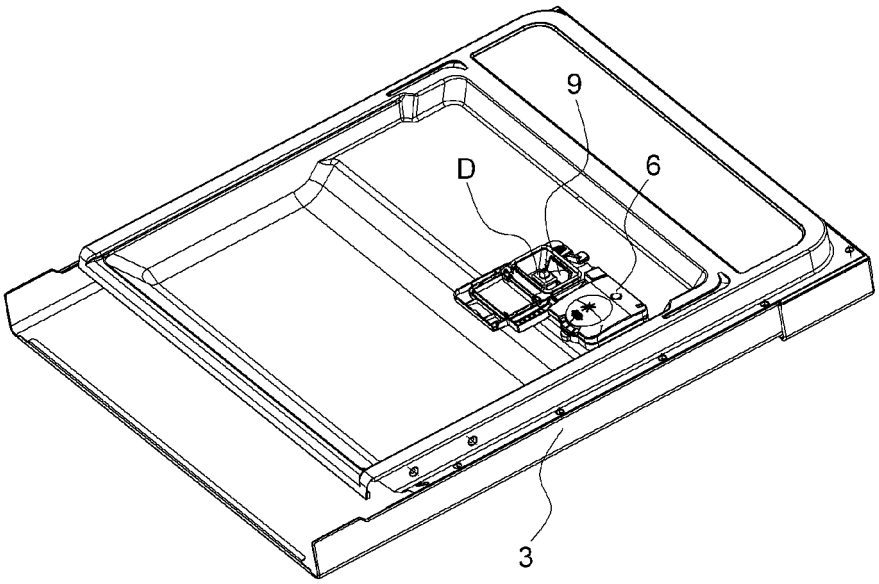


Figure 9

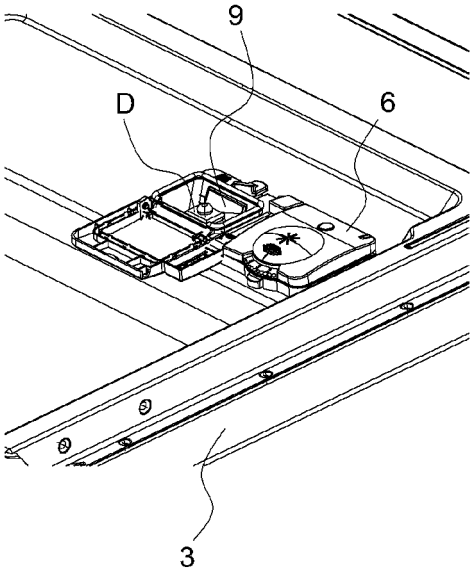


Figure 10

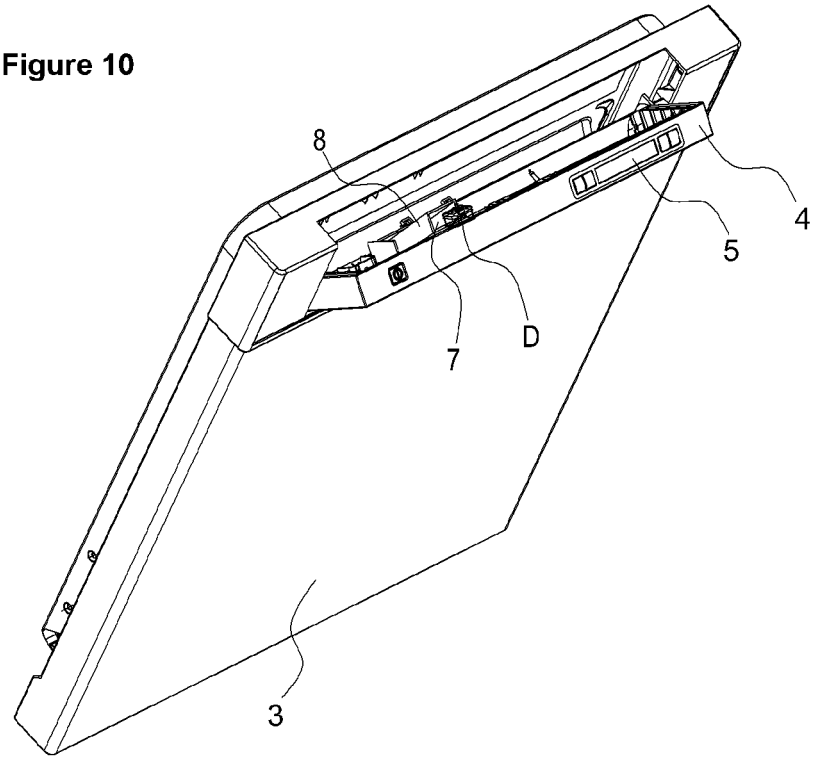
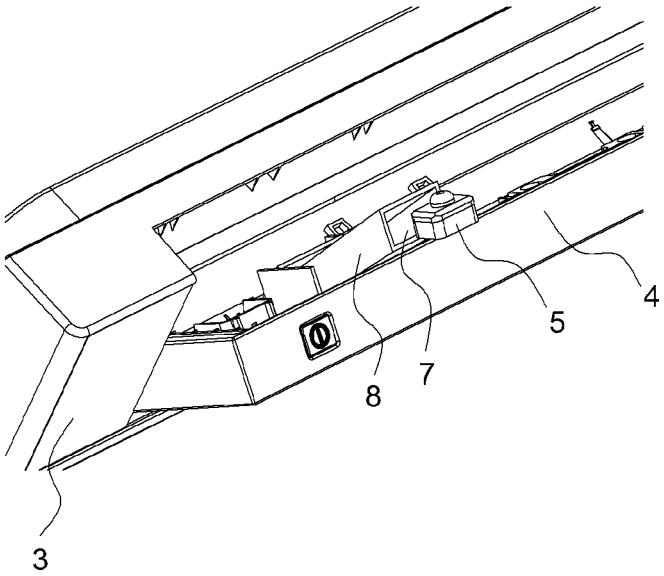


Figure 11



REFERENCES CITED IN THE DESCRIPTION

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