

The invention relates to a device for supporting control means for a household appliance which, movable, serves to change the aesthetic of the appliance depending on whether or not it is in operation and to ensure a correct ventilation for its cooling in operation.

In the case of tables for cooking by induction, the power electronic unit must be cooled and, in order to do this, it is known to place it in a ventilation circuit which extends under the cooking table from the back of the appliance (hygiene cavity) to the front where orifices are provided for the hot air outlet. Some of these tables are integrated into a body and it is in the latter that the ventilation circulation is produced. Others are termed retractable into a separate support and the ventilation duct will be more or less well constructed by the installer, particularly where the discharge of hot air is concerned.

This state of the art is described, for example, in FR-A-2,340,513.

The invention makes it possible in all cases to preserve a correct construction of the ventilation circuit, particularly in the case of retractable appliances, owing to a special assembly and a special construction of the support panel of the control means (buttons, keys...) of the appliance. This assembly further serves to change the aesthetic of the appliance by masking these means when the appliance is not in operation.

To this end, the invention provides a device for supporting control means for a household appliance enclosed at least in part in a casing provided with an internal ventilation circuit having an outlet orifice in the vicinity of the control means, this device comprising a body mounted on the casing and having a surface on which the control means are arranged, this body being movable between a first position, wherein the control means are accessible, and a second position, wherein they are not accessible, and constituting an opening member

for the outlet orifice in its first position, and a closing member for the outlet orifice in its second position.

According to one feature of the invention, the
5 body comprises a passage having a first end opening into the casing and a second end opening in the vicinity of the surface where the control means are arranged and opening to the outside when the body is in the first position, this second end constituting the outlet
10 orifice.

Other features and advantages of the invention will become apparent upon reading the following description of three embodiments of the invention, given by way of example and without limitative intentions.
15 Reference will be made to the accompanying drawings in which:

- Figure 1 is a diagrammatic side view, in partial cross-section, of a cooking table retracted into a support unit, in operation;

20 - Figure 2 is a diagrammatic partial side view, in cross-section, of the device for supporting the control means of the table shown in Figure 1, not in operation;

- Figures 3 and 4 are diagrammatic partial side views of a second device for supporting the control means of a cooking table, not in operation (Fig. 3) and in operation (Fig. 4);

25 - Figures 5, 6, 7 are diagrammatic partial side views of a third device for supporting the control means of a cooking table, not in operation (Fig. 5) and in operation (Figs. 6, 7).

Figure 1 shows a table 1 for cooking by induction heating retracted into a unit 2 comprising a hygiene cavity 3 in its back part. The cooking table 1 comprises
35 a support plate 4 supporting several heating plates 5 connected, in a manner known per se, to an electronic power system constituted by circuit boards 6 extending under the plates 5. The assembly is enclosed in a casing

7, whose support plate 4 forms the upper wall.

The cooking table 1 further comprises a ventilation circuit for cooling the electronic system. This circuit includes a fan 8 mounted in the vicinity of the back wall of the casing 7 and ducted so as to drive air in a direction substantially parallel to the electronic circuit boards 6. At the level of the fan 8, the bottom of the casing 7 comprises an orifice 9 which is therefore located straight above the hygiene cavity 3, and through which pulsed air is sucked into the casing 7.

On the front of the cooking table 1, between the front edge of the support plate 4 and the front wall of the casing 7, are arranged control means 10 (buttons, keys or the like) which serve to adjust the intensity of the heating of the plates 5. The control means are supported by the device according to the invention, which comprises a control panel 11 constituted by a surface of an elongate body 12 mounted on the casing 7 so as to be capable of pivoting through about 90° about its longitudinal axis, between a position wherein the panel 11 is totally visible (Figure 1) and a position wherein it is not visible (Figure 2). Advantageously, the body 12 is returned into the one and the other of these positions by resilient means (not shown). The body 12 comprises cavities into which the control means are retracted in part, as are also the connections of these control means to the cables which link them to the electronic system.

The body 12 also comprises a clearance 13, the bottom of which extends substantially perpendicular to the front edge of the control panel 11. This clearance delimits a passage, a first end of which always opens to the inside of the casing 7 and the second end of which opens either to the outside of the casing 7, when the body 12 is rocked into the position shown in Figure 1, or to the inside of the casing, when the body 12 is rocked into the position shown in Figure 2. This second end constitutes the outlet orifice of the ventilation

circuit, which is therefore open or closed depending on whether the body is rocked into one or other of its two positions.

By this arrangement, the bringing into operation
5 of the cooking table 1, which can be done only if the control means 10 are accessible, necessarily entails the opening of the outlet orifice permitting the air pulsed by the fan 8 to escape, that is to say also permitting the essential flow of the ventilation air around the
10 electronic power system.

In order to avoid the troublesome consequences which would arise if, the cooking table being in operation, the body 12 were rocked into the position shown in Figure 2, provision is made to associate this
15 position with the opening of a switch arranged on the supply circuit of the cooking table.

Figures 3 and 4 show a second embodiment of the support device according to the invention. This device comprises an elongate body 15 of rectangular cross-section having an upper face constituting the control
20 panel 11. The body 15 is guided in translation against the front wall of the casing 7, in a direction perpendicular to the support plate 4. The body 15 is movable between a position wherein the control panel 11 is retracted with respect to the support plate 4 (Figure 3) and a position wherein the control panel projects with respect to the support plate (Figure 4). It comprises a clearance 16 opening onto its lower surface and onto its surface contiguous to the casing 7, so that, when it is
25 in the projecting position with respect to the support plate 4, one end of this clearance opens to the outside and constitutes the outlet orifice of the ventilation circuit. The body 15 is subject to the action of a resilient member (not shown) which tends to return it into this position. A flat cover 17 is mounted so as to
30 pivot on the casing 7 by lateral L-shaped tabs 18 having a segment parallel to the cover, the pivoting axis being parallel to the upper surface of the body 15 and passing
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to the level of the free end of the tabs 18. The closure of this cover causes the retraction of the body 15 into the casing 7 and its locking in retracted position.

Figures 5, 6, 7 show a third embodiment of the device according to the invention. In this embodiment, a protective screen 20 is securely attached to an elongate body 21, one surface of which constitutes the control panel 11 of a cooking table. This screen, which extends along the back part of the body 21 and is inclined by about 90° with respect to the control panel 11, is designed to protect the latter from running liquid due to the upsetting or to the overflowing of a pan. The body 21 is mounted so as to pivot on the casing 7 about an axis parallel to the edge of the front wall of the casing 7 and which is substantially merged with the back edge of the screen 20. The body 21 comprises a passage 22 extending transversely to the screen 20, along this screen, and opening on the one hand into the casing 7 and, on the other hand, at the level of the back edge of the control panel 11. The body 21 is subject to the action of a resilient member associated with a set of stops (not shown) tending to return the body 21 and the screen 20 into one of the three positions shown in Figures 5, 6, 7. In the first position, (cooking table not in operation), the screen 20 closes the casing 7 and the control panel 11 is not visible. In the second position (cooking table in operation), the screen 20 is raised to the maximum extent, the control panel 11 is visible and the front part of the body 21 is stopped against the front wall of the casing 7: the passage 22 then places the inside of the casing 7 in communication with the outside. In the third position (cooking table in operation), the screen 20 occupies an intermediate position, and operation of the control means is not possible; however, the cooking table can operate, the ventilation air being able to escape from the casing 7 along the paths represented by the arrows. This third position ensures a maximal protection of the control

panel 11 while it prohibits changing of the setting of the heating of the plates.

5 Like the device shown in Figures 1, 2, the devices shown respectively in Figures 3, 4 and 5, 6, 7 may be fitted with a safety device cutting the supply to the cooking table when the cover 17 or the screen 20 are turned down in the plane of the support plate 4, that is to say when the outlet orifice of the ventilation circuit is closed.

10 The operation of the device for supporting the control means 10 associated with the cooking table 1, shown in Figure 1, is as follows. In order for the cooking table to be used, the body 12 is rocked so as to cause the control panel 11 to appear. The switch placed
15 on the supply circuit of the cooking table is then closed. By operation of one of the control means 10, the fan 8 is caused to start up and at the same time the corresponding plate 5 is caused to heat up. The fan 8 sucks air from the hygiene cavity 3 through the suction
20 aperture 9. The air pulsed by the fan in the casing 7 flows along the electronic circuit boards 6 and then, after being heated and having cooled the said boards, escapes through the outlet orifice constituted by the end of the clearance 13 of the body 10 opening to the out-
25 side. If, in the course of operation, the body 12 were inadvertently rocked in the opposite direction, the supply to the cooking table would be automatically cut out.



CLAIMS

1. Device for supporting control means (10) for a household appliance (1) enclosed at least in part in a casing (7) provided with an internal ventilation circuit having an outlet orifice (13, 16, 22) in the vicinity of the control means (10), characterised in that it comprises a body (12, 15, 21) mounted on the casing (7) and having a surface (11) on which the control means (10) are arranged, this body being movable between a first position, wherein the control means (10) are accessible, and a second position, wherein they are not accessible, and constituting an opening member for the outlet orifice (13, 16, 22) in its first position, and a closing member for the outlet orifice (13, 16, 22) in its second position.
2. Device according to Claim 1, characterised in that the body (12, 15, 21) comprises a passage (13, 16, 22) having a first end opening into the casing (7) and a second end opening in the vicinity of the surface (11) and opening to the outside when the body (12, 15, 21) is in the first position, this second end constituting the outlet orifice.
3. Device according to one of Claims 1 and 2, characterised in that the body (12, 21) is movable by pivoting about an axis parallel to the surface (11).
4. Device according to Claim 3, characterised in that it comprises resilient means in order to return the body (12, 21) into the first position and into the second position.
5. Device according to one of Claims 1 and 2, characterised in that the body (15) is movable in translation along an axis extending through the casing (7), the second position of the body (15) corresponding to its being retracted into the casing (7).
6. Device according to Claim 5, characterised in that a cover (17) is mounted so as to pivot on the casing (7) in order to cover the surface (11) when the body (15) is in the second position.



7. Device according to Claim 6, characterised in that it comprises resilient means in order to return the body (15) into the first position and in that the cover (17) functions as a locking means to hold the body (15) in the second position.
- 5 8. Device according to one of Claims 1 to 7, characterised in that the household appliance (1) is a table for cooking by induction.
- 10 9. Device according to Claim 8, characterised in that the body (12, 15, 21) constitutes the control panel of the cooking table.