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(54) Electronic control unit for household appliances, in particular for cooking ranges and ovens

(57) The present invention refers to the field of household appliances, in particular cooking ranges and ovens and more particular to a touch manipulated electronic control unit for household appliances, in particular for cooking ranges and ovens comprising either a metal or a glass control panel. It is provided, according to the invention, that an electronic control unit (1) comprises a front cover plate (2), said plate (2) covers the electronic control unit (1) on the side which faces the user when said plate (2) is installed, said control unit (1) comprises a display (1') and sensor fields (3) arranged behind the plate (2) and incorporated into said control unit (1).

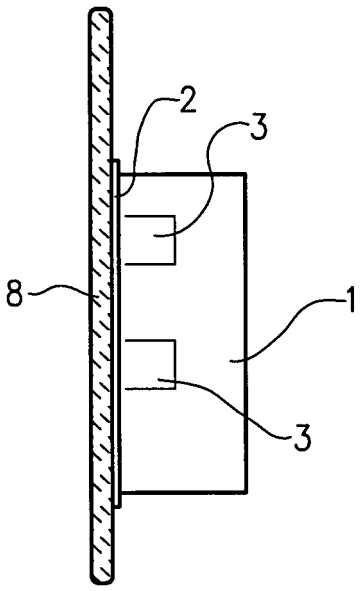

Fig. 4

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Description

[0001] The present invention refers to the field of household appliances, in particular cooking ranges and ovens and more particular to a touch manipulated electronic control unit for household appliances, in particular for cooking ranges and ovens comprising either a metal or a glass control panel.

[0002] Controlling the household appliances (e.g. a clock on the appliance) is basically provided in two ways. The first solution comprises an electronic control unit having mechanical keys by means of which a user may set and/or select an operating possibility. Such a control unit may be incorporated into the household appliance comprising either a metal or glass control panel, said control unit being arranged on the internal side of the household appliance not seen by the user. In case the household appliance comprises a metal control panel, the openings for the control keys are cut out of the said metal control panel. In case the household appliance comprises a glass control panel, then the corresponding openings are made by means of drilling.

[0003] The second solution of said controlling comprises a control unit having a plurality of sensor fields, and the user may set and/or select an operating possibility by touching said fields. The said control unit can be incorporated into a household appliance having a glass control panel. It can also be placed onto the metal control panel, however, a glass or similar material must be interposed between the cut-out in said panel and the control unit .

[0004] It is the object of the present invention to create an electronic control unit of the aforementioned kind that can be incorporated into a household appliance comprising either a metal control panel or a glass control panel, and will replace two different existing control units.

[0005] According to the invention, the object as set above has been solved by an electronic control unit comprising a front cover plate, said plate covers the electronic control unit on the side, which faces the user when said plate is installed, said control unit comprising a display and sensor fields being incorporated into said control unit. At the sections where the display is located the said front cover plate is made of a transparent material.

[0006] When said electronic control unit is installed on a metal control panel, a window is provided in said metal control panel, and within said window said electronic control unit being mounted from the internal side of said control panel, said control unit being attached by means of said front cover plate to said metal control panel. When on the other hand said electronic control unit is installed to the glass control panel, said front cover plate being installed directly to the internal surface of said control panel.

[0007] The invention will be more readily understood on reading the following description with reference to the accompanying drawing where

Fig. 1 shows a touch manipulated electronic control unit for household appliances according to the invention, said unit being attached to a metal control panel,

Fig. 2 shows a cross-section along the line II-II of an electronic control unit of Fig. 1,

Fig. 3 shows a touch manipulated electronic control unit for household appliances according to the invention, said unit being attached to a glass control panel,

Fig. 4 shows a cross-section along the line IV-IV of an electronic control unit of Fig. 3.

[0008] According to the invention, a touch manipulated electronic control unit is designed in a manner that it can be mounted either on a control panel made either of metal or glass. In order to fulfil this requirement said electronic control unit 1, which in fact is an ordinary electronic control unit being used for installation on the glass control panel, is provided with a front cover plate 2. Said plate 2 is a component part of the entire housing 1 where the electronic control unit is built in. Manipulating sensors are placed behind the front cover plate 2 and lie against said plate 2 from the back side thereof. Said front cover plate 2 covers said electronic control unit 1 on the side which, when said plate 2 being installed, faces a user, said plate 2 comprises a display 1' and sensor fields 3 built in said control unit 1. The user controls the electronic control unit according to the invention by touching sensor fields 3 marked on the front cover plate 2.

[0009] When the electronic control unit 1 according to the invention is intended for installation onto the metal control panel 4, then said panel 4 is provided with a window 5 in the area where the sensor fields 3 are accessible by the user. Preferably, said window 5 is formed smaller than the control unit 1, and, in either case, the dimensions of the window 5 are such that the sensor fields 3 are located within the window 5 and are always accessible to the user.

[0010] When said electronic control unit 1 according to the invention is intended for installation onto the glass control panel 8, then said unit 1 is fixed onto the glass control panel 8 from the rear side thereof tightly resting against it. In that case the user controls said electronic control unit 1 on the side of the glass control panel 8 facing the user in a manner that the user touches said sensor fields 3 marked on the front cover plate 2.

Claims

1. A touch manipulated electronic control unit for household appliances, in particular for cooking ranges and ovens comprising either a metal or a glass control panel, ***characterized in that*** an electronic control unit (1) comprises a front cover plate (2), said plate (2) covers the electronic control unit (1) on the side which faces the user when said plate (2) is in-

stalled, said control unit (1) comprises a display (1') and sensor fields (3) arranged behind the plate (2) and incorporated into said control unit (1).

2. An electronic control unit according to claim 1, ***characterized in that*** said front cover plate (2) is made of a transparent material in the area of said display.

3. An electronic control unit according to claim 1, ***characterized in that*** a window (5) is provided in a metal control panel (4) where within said window said electronic control unit (1) is fixed from the internal side of the control panel (4).

4. An electronic control unit according to claim 1, ***characterized in that*** in case of a glass control panel (8) said front cover plate (2) rests directly against the internal surface of said control panel (8).

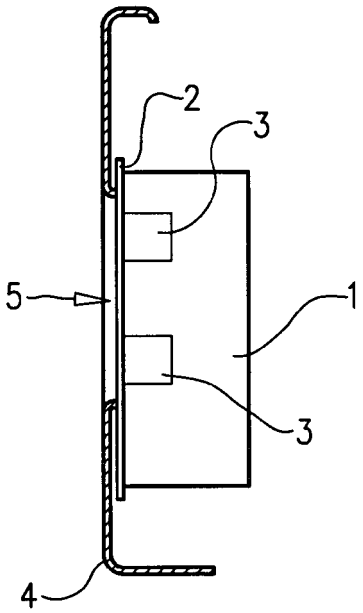

Fig. 2

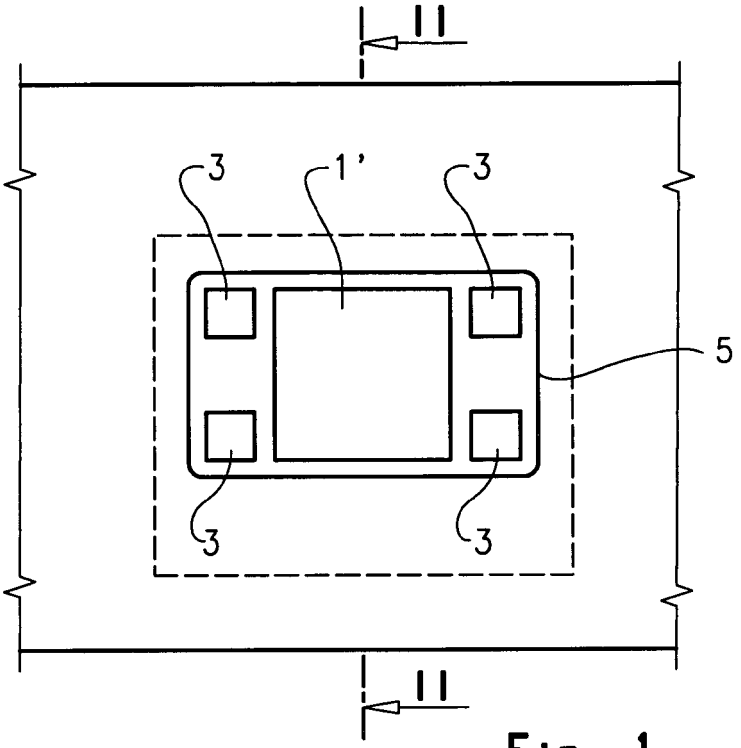

Fig. 1

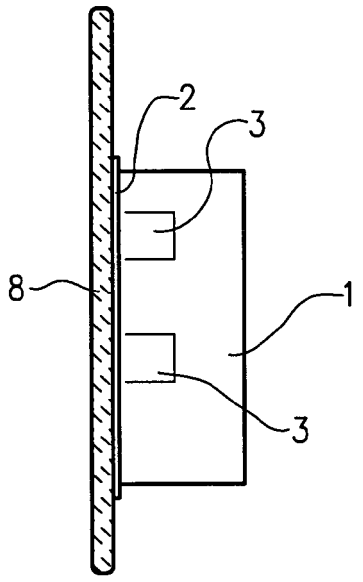

Fig. 4

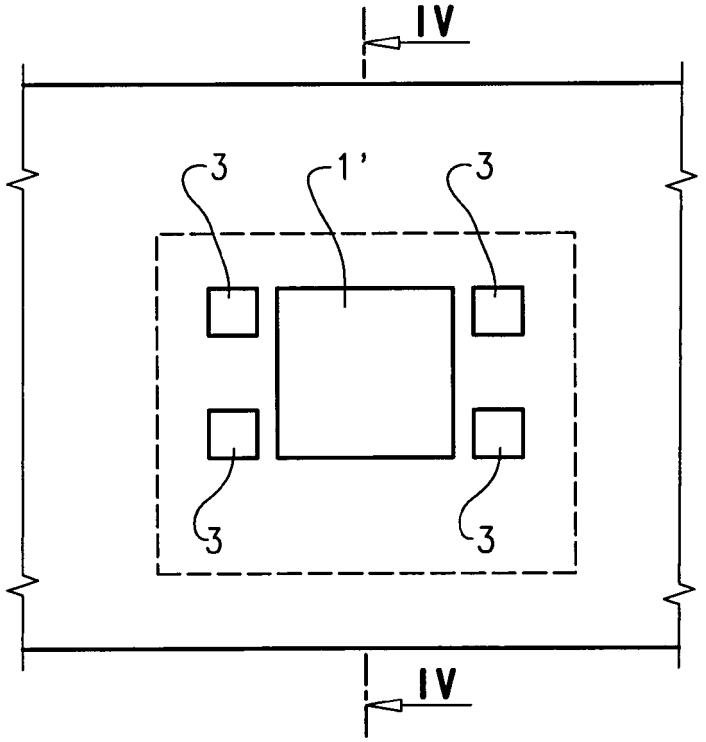

Fig. 3