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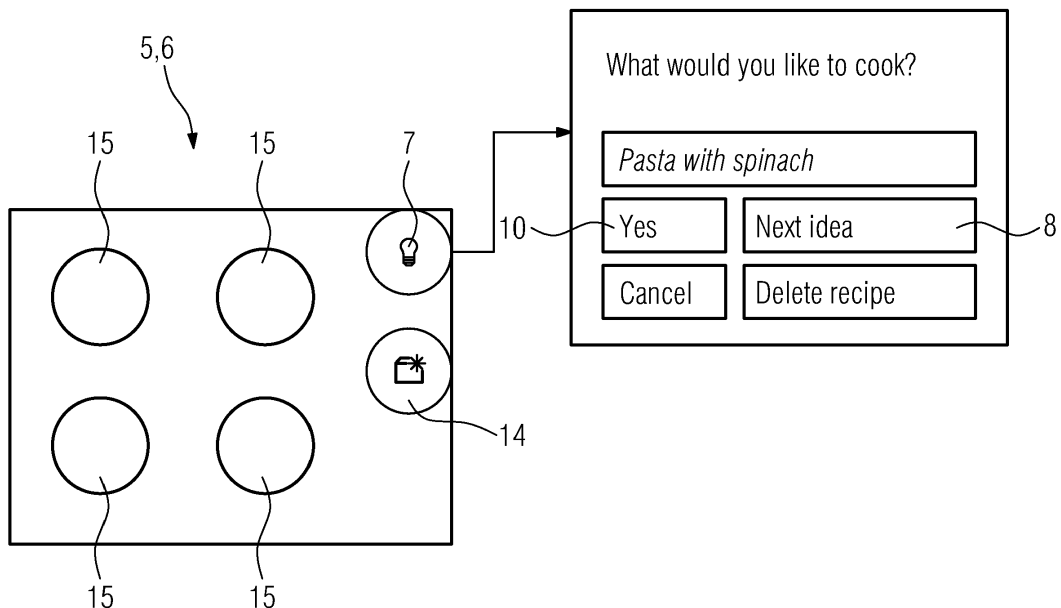
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(54) **Method for operating a cooking appliance and cooking appliance**

(57) The invention relates to a method for operating a cooking appliance, in particular a cooking oven, and to a cooking appliance, in particular a cooking oven, wherein the cooking appliance has a control device (3) with dish name storage means (4), wherein a data entry device (5) and a display (6) is connected to the control device (3). To facilitate the decision of a user to select a dish to be cooked the method comprises the steps: a) before using the cooking appliance (1): storing of a plurality of names of preferred dishes by the user by entry

of the names of the preferred dishes into the control device (3) via the data entry device (5) and storing of the names of the preferred dishes by the control device (3) in the dish name storage means (4); b) when using the cooking appliance (1): pressing of a proposal button (7) which is part of the data entry device (5) by the user; c) recalling of the name of a preferred dish which is stored in the dish name storage means (4) by the control device (3); d) displaying the name of the recalled name of a preferred dish on the display (6). Furthermore, the invention relates to a cooking appliance.

FIG 4



Description

[0001] The invention relates to a method for operating a cooking appliance, in particular a cooking oven, and to a cooking appliance, in particular a cooking oven.

[0002] The daily decision what to cook is unpleasant and difficult for many consumers. Often, the question is: What to cook today? Usually, a certain number of preferred dishes exist which number is often between 30 and 40. It is not the question how to cook the respective dish because the person, who prepares the dish, normally knows by rote how to cook it without any instruction and recipe.

[0003] Multiple assistance functions are well known in the field of domestic ovens.

[0004] US 6 180 934 B1 discloses a cooker, guiding the user through the cooking process with detailed information on how to process which the cooking and when which ingredients are required.

[0005] US 2002/0121514 A1 discloses a microwave oven, comprising the functionality of grouping most favourite recipes, remaining recipes and updating them via an internet interface.

[0006] US 2003/0000947 A1 refers to a microwave oven, which can store new recipes.

[0007] US 6 549 818 B1 describes a cooking appliance which is able to download new recipes from the internet. Furthermore, the device has the ability to order food online.

[0008] US 2004/0107178 A1 discloses a cooking appliance in a server-terminal-setup, which is also able to recommend cooking data to the user.

[0009] US 6 949 729 B2 describes an information exchange system between a household appliance and a shop, enabling the appliance to suggest recipes in accordance with special offers at the shop.

[0010] US 2007/0141540 A1 and US 2010/0292998 A1 refer to a system for generating recipes, taking into account information about the customer and promotions in a shop and to a system which takes into account the users health, dietary guidelines or food preferences respectively.

[0011] It is an object of the invention to assist the user of a cooking appliance to decide on what dish is selected on a certain day when the user has no concrete suggestion what to cook.

[0012] The solution of this object is achieved by a method for operating a cooking appliance, wherein the cooking appliance has a control device with dish name storage means, wherein a data entry device and a display is connected to the control device, wherein the method comprises the steps:

a) before using the cooking appliance, preferably only once before the cooking appliance is used for the daily cooking: storing of a plurality of names of preferred dishes by the user by entry of the names of the preferred dishes into the control device via the

data entry device and storing of the names of the preferred dishes by the control device in the dish name storage means;

b) later, when using the cooking appliance for daily cooking: pressing of a proposal button which is part of the data entry device by the user;

c) recalling of the name of a preferred dish which is stored in the dish name storage means by the control device;

d) displaying the name of the recalled name of a preferred dish on the display.

[0013] The mentioned steps c) and d) are preferably repeated and another name of a further preferred dish is recalled from the dish name storage means and displayed on the display if the user has pressed a disapproval button after displaying the name of a preferred dish according to step d).

[0014] In this case preferably the name of a further preferred dish is taken from a stored list which defines the order of the stored preferred dishes. The name of a preferred dish is set to the end of the stored list when a displayed name of a preferred dish is accepted by the user by pressing an approval button. By those proceedings it is made sure that a made proposal for a dish is not repeated again in the near future so that a certain degree of alternation in the proposals made by the cooking appliance is guaranteed.

[0015] Alternatively, the name of a further preferred dish can be taken from the dish name storage means by chance. In this case the oven makes a proposal for a dish randomly.

[0016] Additional information concerning the preferred dish can be displayed on the display in the case that the user has accepted a proposed preferred dish by pressing the approval button, which information is loaded from an information storage means. This information can contain the listing of the ingredients which are necessary for cooking the dish. So, the user can check if the necessary ingredients are available. Furthermore, the additional information can comprise information concerning the recipe of the preferred dish.

[0017] Also, at least one stored cooking parameter of a preferred dish can be loaded from parameter storage means by the control device and can be displayed on the display if the user has pressed the approval button. Those parameters can be the cooking time and temperature at which the selected dish must be cooked; also the operation mode of the cooking appliance can be part of the parameters (i. e. circulating air cooking, used cooking zone of the oven, pot, amount of food for the specific household, etc.).

[0018] To enable the cooking appliance to automatically prepare a selected dish the following preferred concept is suggested when it comes to the entry and storage

of additional information and parameters in the information storage means or in the parameter storage means respectively: The user may enter the setting manually, e. g. before or when the respective dish is cooked the first time and the system asks if the data is to be recorded. If the oven records the data the same are available the next time when the respective dish is selected to automatically cook the dish.

[0019] The proposed cooking appliance comprises a control device with dish name storage means, a data entry device and a display being connected to the control device. According to the invention the cooking appliance further comprises a proposal button, a disapproval button and an approval button for selecting, disapproving and/or approving a displayed preferred dish which is recalled from the dish name storage means and which is displayed on the display.

[0020] The data entry device and the display are preferably formed as an integral unit being designed as a touch screen. The proposal button, the disapproval button and the approval button are preferably integrated into the touch screen.

[0021] The control device can comprise a random generator to select by chance a data set of the dish name storage means.

[0022] The control unit can further comprise information storage means for additional information concerning the preferred dishes as well as parameter storage means for cooking parameters of preferred dishes.

[0023] The touch screen is preferably integrated into the cooktop.

[0024] According to the invention the cooking appliance is equipped with a functionality which proposes a stored number of favourite dishes to the user to allow an easier decision to the question what to cook today. Those proposals are not focussed on specific information concerning a certain dish but simply to the name of the dish so that the user is assisted in his or her decision what to cook. Thus, the invention proposes to establish a pool with recipes or dish names for selecting one of them by the user.

[0025] So, the user can make his or her decision what to cook on the basis of most favourite dishes in an easy way.

[0026] Thus, the invention comprises a computer program for cooking appliance, in particular cooking ovens or hobs, which stores the names of a certain number of preferred or favourite dishes in an editable manner and suggests them to the user.

[0027] The concept also comprises the functionality of learning which dishes are preferred by the user and manage the order of proposals and also to assist in cooking them, i. e. to cook them automatically by providing the respective above mentioned additional information.

[0028] In this connection a further operation mode should be explained: Selected recipes can - as already mentioned above - be set to the end of the stored list when a displayed name of a preferred dish is accepted

by the user by pressing an approval button. Alternatively, a selection of a recipe from the dish name storage means can take place by chance. A further developed concept proposes that the occurrence of the selection of a recipe is taken into account, i. e. the preference of certain dishes which are selected by the user. If a specific dish is selected quite frequently it can be set at a higher position in the stored list. As a consequence such a recipe is proposed to the user of the system more often. The position in the stored list can be determined by the number of selection of the respective dish e. g. during a week or a month.

[0029] Advantageously, to select a dish no access to a running PC is necessary. The spare time while waiting in front of the cooking appliance could be used to enter recipe names what is cooked today.

[0030] The invention takes advantage of the fact that the decision what to cook is often taken in the kitchen, while checking what ingredients are available. For most of the favourite recipes the user does not need any cooking instruction.

[0031] Thus, cooking appliance settings and preparation time can be recorded and stored for better planning and to create an automatic cooking process.

[0032] The cooking appliance is preferably a cooking oven, in particular domestic cooking oven, and/or comprises a cooktop.

[0033] In the drawings an embodiment of the invention is depicted.

Fig. 1 shows a schematic illustration of a domestic oven with a cooktop,

Fig. 2 shows a control device of the domestic oven and a touch screen connected to the control device,

Fig. 3 shows schematically the entry of preferred dishes into the control device,

Fig. 4 shows schematically the selection of a function to propose a preferred dish and

Fig. 5 shows schematically an assistance function of the domestic oven during cooking.

[0034] In Fig. 1 a cooking appliance is depicted having a domestic oven 1 which has a cooktop 2. The cooktop 2 comprises an integrated data entry device 5 and a display 6 which are connected to a control device 3.

[0035] In Fig. 2 it is shown what components are arranged in the control device 3 and the unit comprising the data entry device 5 and the display 6, wherein the two elements 5 and 6 are realized by a touch screen which can be used to input data and to display the same.

[0036] The mentioned components are mostly designed as usual elements of a modern domestic oven. In addition, the following components are arranged:

The control device comprises dish name storage means 4 in which only the name of preferred dishes are stored. The dish name storage means 4 are connected with a random generator 13 which can select one of the entries in the dish name storage means 4 for displaying it on the display 6.

[0037] Furthermore, the control device 3 comprises a stored list 9 in which the names of dishes are stored; specifically the name of the dishes are stored at the end of the list which have been proposed to the user recently and which have been accepted by him. Also information storage means 11 and parameter storage means 12 are supplied in which recipe information and cooking data can be stored respectively.

[0038] The unit 5, 6 also comprises a proposal button 7, a disapproval button 8 and an approval button 10. Those buttons are established as touch screen buttons, i. e. a respective sensitive area is displayed on the touch screen and the buttons are activated when touching the screen at the respective location.

[0039] In Fig. 3 the situation is depicted when data are input into the system before the use of the domestic oven itself. At the left half of Fig. 3 a part of the touch screen is shown where several normal operation buttons 15 are arranged for the normal operation of the domestic oven.

[0040] Additionally, a data entry button 14 is arranged on the touch screen which is pressed by the user if he would like to input new or additional preferred dishes. When pressing the data entry button 14 on the touch screen the display switches to the graphic as shown in the right half of Fig. 3.

[0041] So, a keyboard opens and the user is triggered to enter a new recipe or specifically a new favourite or preferred dish which he would like to store in the system. By using this function all desired preferred dishes are input into the dish name storage means 4.

[0042] Lateron, during normal use of the domestic oven, the operation of the device is shown in Fig. 4. At the left half of Fig. 4 again a part of the touch screen is shown with the normal operation buttons 15. For using the inventive concept the user presses the proposal button 7. When doing so, the touch screen changes to the display as shown in the right half of Fig. 4. Thus, a display appears asking "What would you like to cook?" From the dish name storage means 4 or from the stored list 9 an entry is recalled and shown, in the present example "Pasta with Spinach". This is a proposal from the system to the user which can be accepted by him by pressing the approval button 10; it can also be disapproved by him by pressing the disapproval button 8 ("Next idea").

[0043] In the stored list 9 all preferred dishes from the dish name storage means 4 are listed. When making a proposal and when the user approves it this dish is set to the last position in the list. New proposals are taken from the beginning of the stored list 9. By doing so it is made sure that approved dishes are not proposed again in the near future to get a certain degree of alternation in

the dishes to be cooked.

[0044] In the right half of Fig. 4 a further operation modus becomes apparent. Here, also a button "Delete recipe" appears. By pressing this button the displayed dish - in the depicted case "Pasta with Spinach" - can be deleted from the stored list 9.

[0045] In Fig. 5 it is shown that during the use of the domestic oven an assistance function can open to assist the user with information for cooking his dish. Also, the system can ask to entry data to complete the preferred dishes to be stored in the dish name storage means 4.

[0046] In the present case the system asks what dish is cooked by the user. The name of the dish can be entered into the system ("Enter new recipe"); after pressing this button the keyboard opens as shown in the right half of Fig. 3.

[0047] On the other hand, an assistance function will be given when pressing the button "Select recipe". Then, data from the information storage means 11 or from the parameter storage means 12 are recalled which help the user during cooking. So, information concerning the ingredients of the dish or concerning the cooking data (temperatures etc.) can be displayed to avoid searching this information in a cookbook.

List of reference numerals

[0048]

30	1	Domestic oven
	2	Cooktop
	3	Control device
35	4	Dish name storage means
	5	Data entry device
40	6	Display
	7	Proposal button
	8	Disapproval button
45	9	Stored list
	10	Approval button
50	11	Information storage means
	12	Parameter storage means
	13	Random generator
55	14	Data entry button
	15	Normal operation button

Claims

1. Method for operating a cooking appliance, in particular a cooking oven (1), wherein the cooking appliance has a control device (3) with dish name storage means (4), wherein a data entry device (5) and a display (6) is connected to the control device (3), wherein the method comprises the steps:
 - a) before using the cooking appliance (1): storing of a plurality of names of preferred dishes by the user by entry of the names of the preferred dishes into the control device (3) via the data entry device (5) and storing of the names of the preferred dishes by the control device (3) in the dish name storage means (4);
 - b) when using the cooking appliance (1): pressing of a proposal button (7) which is part of the data entry device (5) by the user;
 - c) recalling of the name of a preferred dish which is stored in the dish name storage means (4) by the control device (3);
 - d) displaying the name of the recalled name of a preferred dish on the display (6).
2. Method according to claim 1, **characterized in that** steps c) and d) of claim 1 are repeated and another name of a further preferred dish is recalled from the dish name storage means (4) and displayed on the display (6) if the user has pressed a disapproval button (8) after displaying the name of a preferred dish according to step d) of claim 1.
3. Method according to claim 2, **characterized in that** the name of a further preferred dish is taken from a stored list (9) which defines the order of the stored preferred dishes.
4. Method according to claim 3, **characterized in that** the name of a preferred dish is set to the end of the stored list (9) when a displayed name of a preferred dish is accepted by the user by pressing an approval button (10).
5. Method according to claim 2, **characterized in that** the name of a further preferred dish is taken from the dish name storage means (4) by chance.
6. Method according to one of claims 1 to 5, **characterized in that** additional information concerning the preferred dish is displayed on the display (6) in the case that the user has accepted a proposed preferred dish by pressing the approval button (10), which information is loaded from an information storage means (11).
7. Method according to claim 6, **characterized in that** the additional information comprises information concerning the receipt of the preferred dish.
8. Method according to one of claims 1 to 7, **characterized in that** at least one stored cooking parameter of a preferred dish is loaded from parameter storage means (12) by the control device (3) and displayed on the display (6) if the user has pressed the approval button (10).
9. Cooking appliance (1), comprising a control device (3) with dish name storage means (4), a data entry device (5) and a display (6) being connected to the control device (3), for carrying out the method according to one of claims 1 to 8, **characterized in that** the cooking appliance (1) further comprises a proposal button (7), a disapproval button (8) and an approval button (10) for selecting, disapproving and/or approving a displayed preferred dish which is recalled from the dish name storage means (4) and is displayed on the display (6).
10. Cooking appliance according to claim 9, **characterized in that** the data entry device (5) and the display (6) are formed as an integral unit being designed as a touch screen.
11. Cooking appliance according to claim 10, **characterized in that** the proposal button (7), the disapproval button (8) and the approval button (10) are integrated into the touch screen.
12. Cooking appliance according to one of claims 9 to 11, **characterized in that** the control device (3) comprises a random generator (13) to select by chance a data set of the dish name storage means (4) and/or **in that** the control unit (3) further comprises information storage means (11) for additional information concerning the preferred dishes.
13. Cooking appliance according to one of claims 9 to 13, **characterized in that** the control unit (3) further comprises parameter storage means (12) for cooking parameters of preferred dishes.
14. Cooking appliance according to one of claims 10 to 13, **characterized in that** the touch screen is integrated into the cooktop (2).
15. Cooking appliance according to one of the claims 9 to 14, designed as a cooking oven and/or comprising a cooking hob.

FIG 1

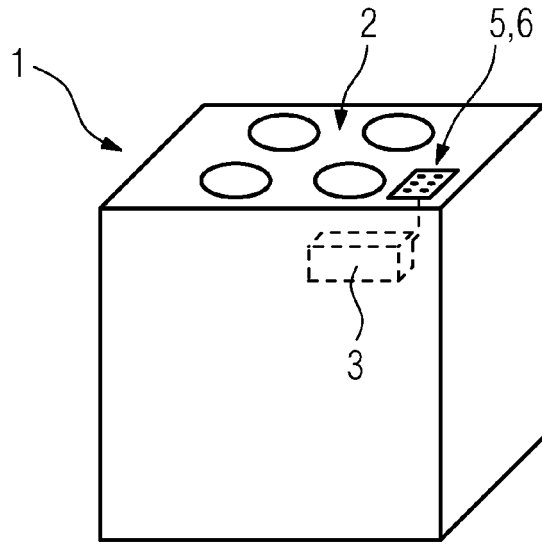


FIG 2

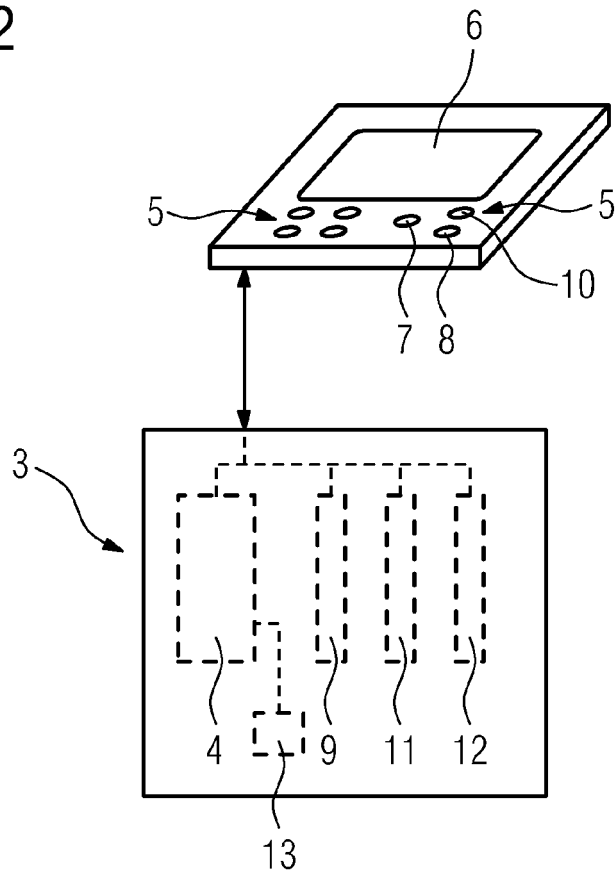


FIG 3

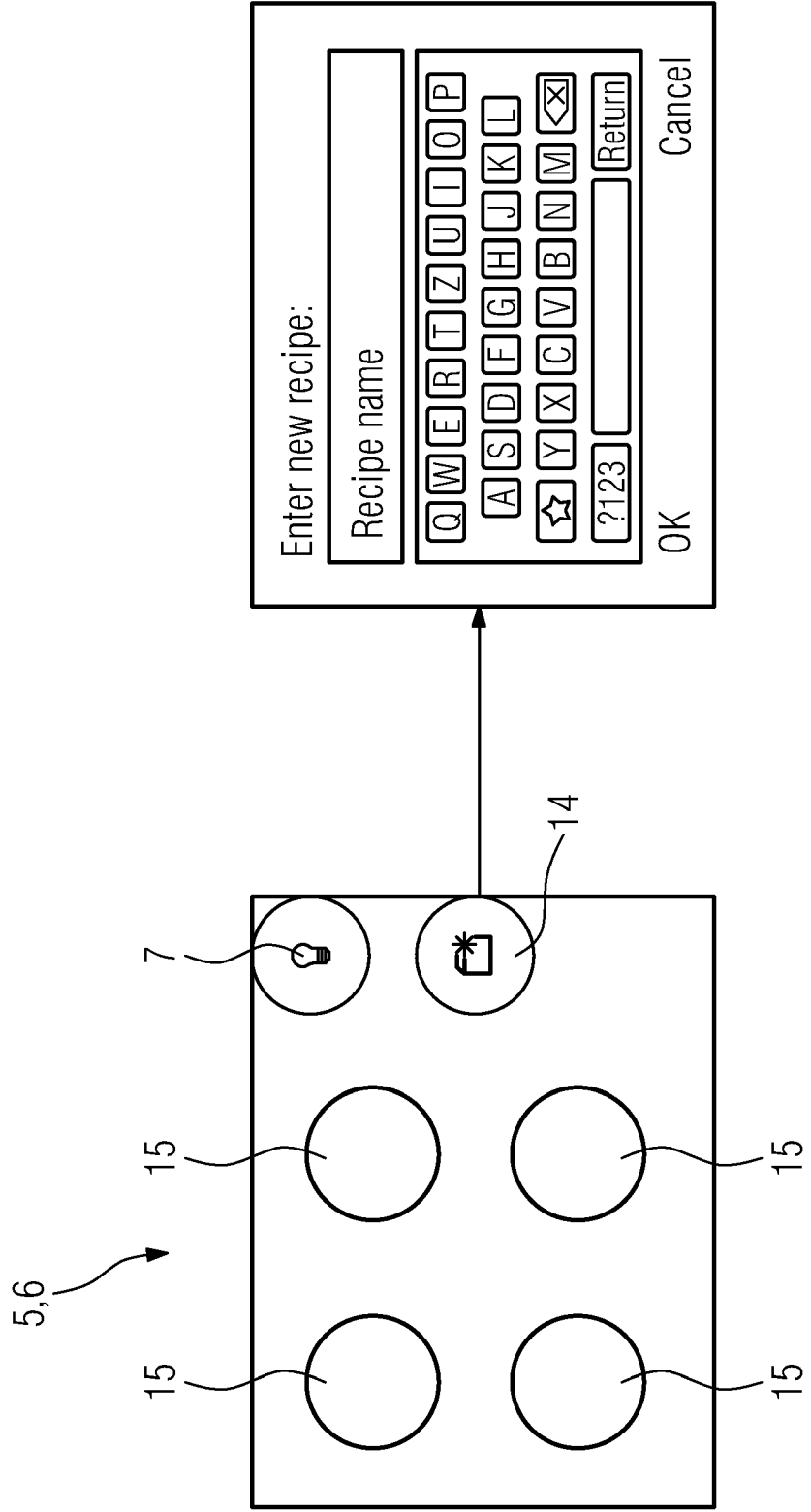


FIG 4

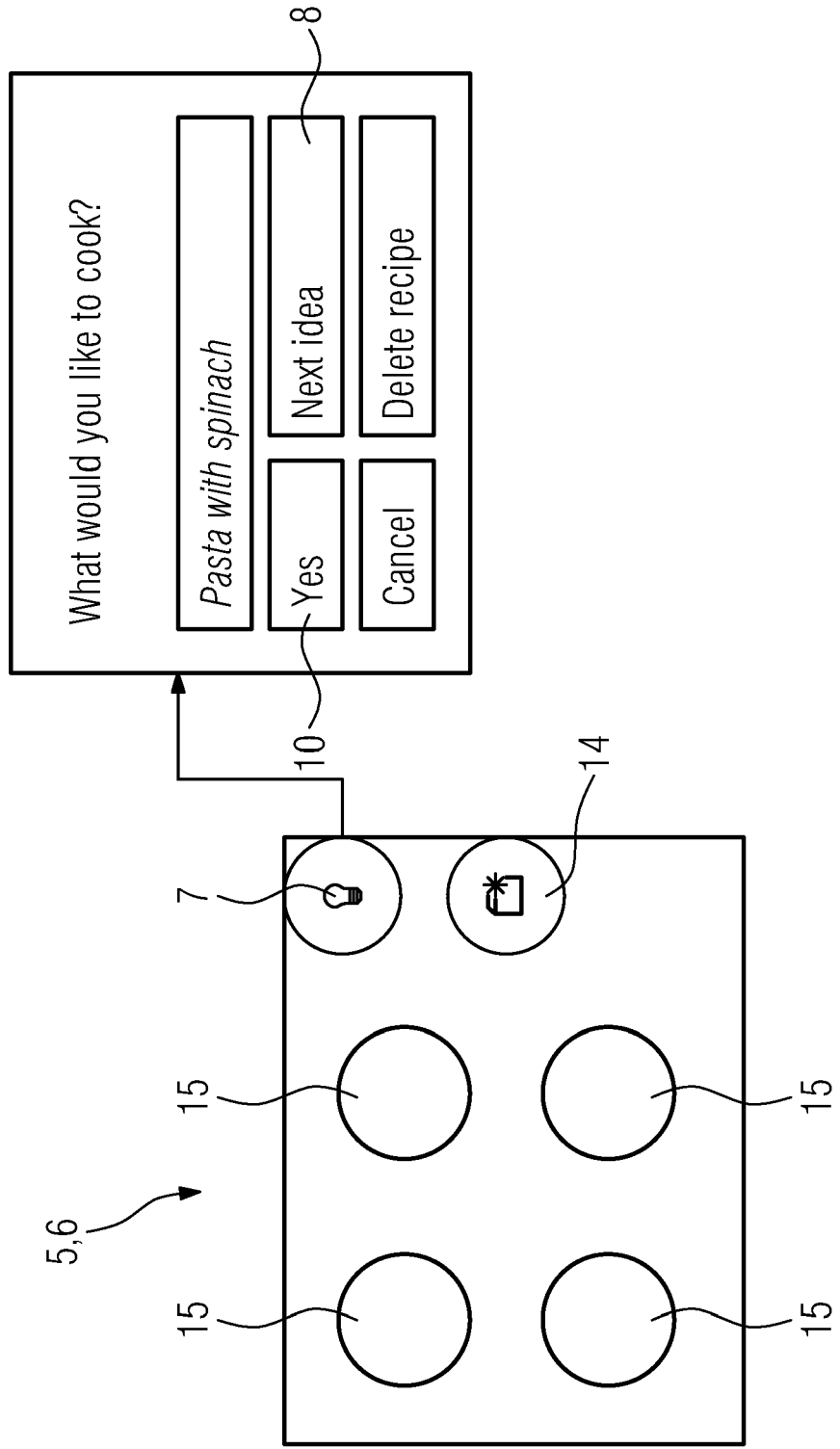
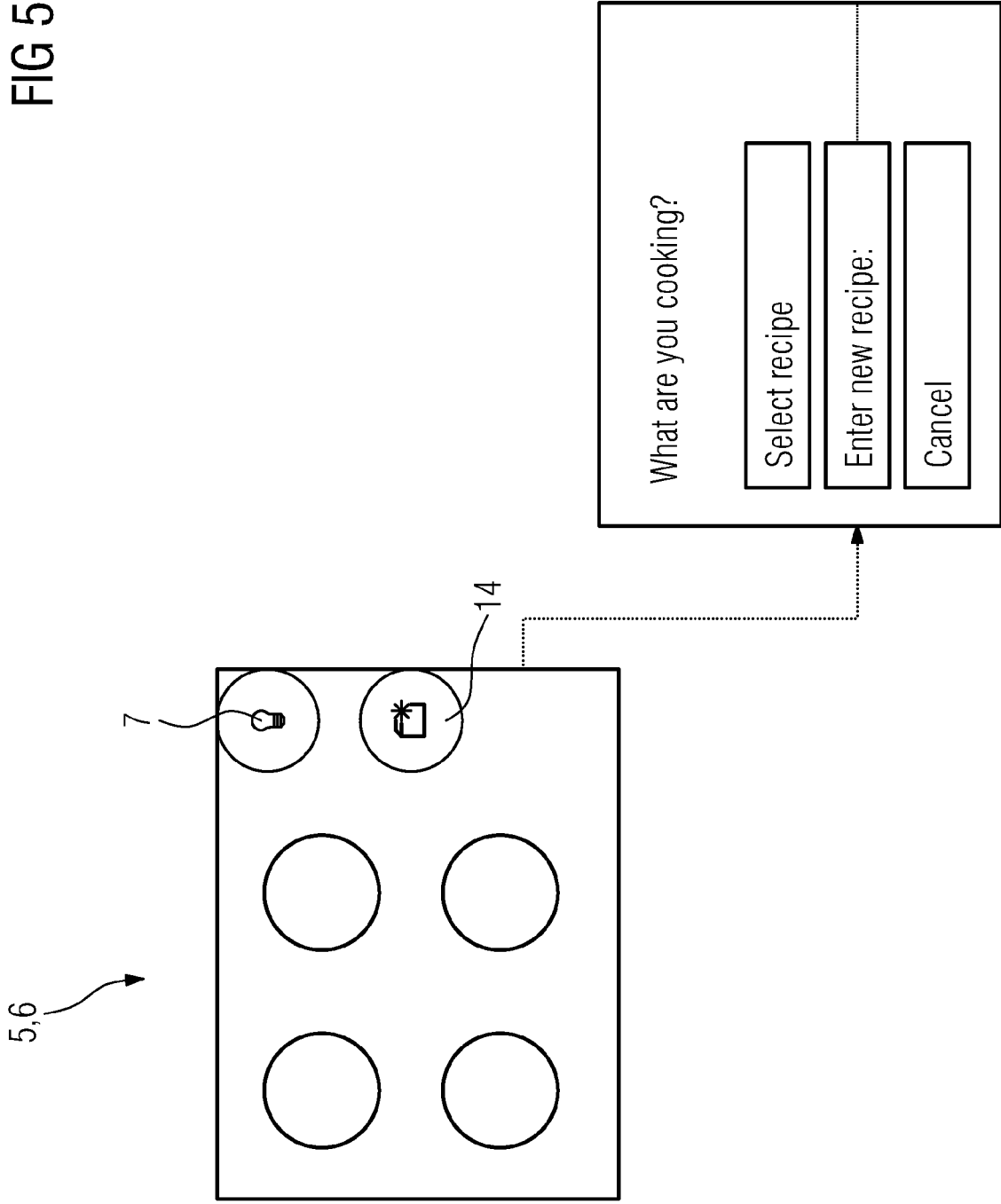


FIG 5





EUROPEAN SEARCH REPORT

Application Number
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Place of search Munich		Date of completion of the search 10 February 2012	Examiner Pierron, Christophe
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
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