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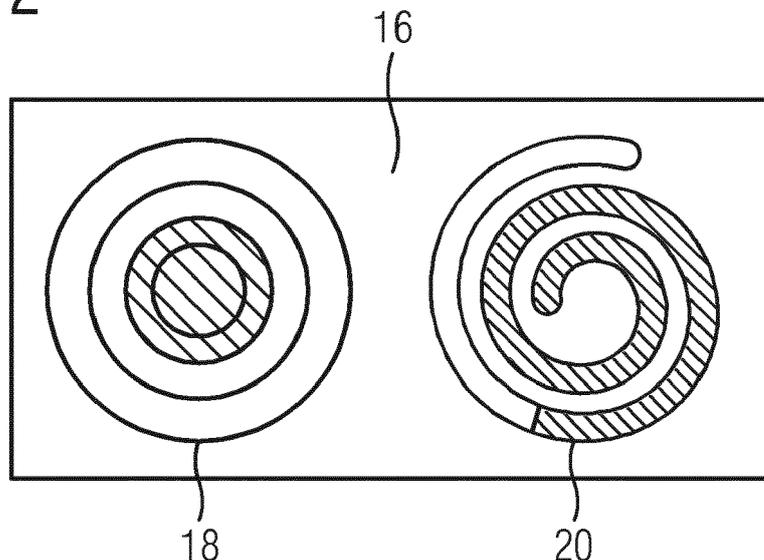
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(54) **USER INTERFACE FOR A DOMESTIC APPLIANCE, PARTICULARLY FOR A COOKING HOB**

(57) The present invention relates to a user interface (16) for a domestic appliance (12), particularly for a cooking hob (12). The user interface (16) includes at least one output element (18, 20) corresponding with a parameter of the domestic appliance (12) and/or of an operation performed by said domestic appliance (12). The output element (18, 20) is provided for indicating a parameter value of said parameter. The output element (18, 20)

provides a two-dimensional symbolic representation of the parameter value. The two-dimensional representation on the output element (18, 20) includes symmetry properties relating to a central point of said output element (18, 20), so that the views of the output element (18, 20) from different sides are identical or at least similar.

FIG 2



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Description

[0001] The present invention relates to a user interface for a domestic appliance, particularly for a cooking hob. Further, the present invention relates to a domestic appliance, particularly a cooking hob. Moreover, the present invention relates to a freestanding domestic apparatus, particularly a cooking island.

[0002] A freestanding domestic apparatus, particularly a cooking island with a cooking hob, is accessible by the user from different sides. However, information indicated on a horizontal user interface is easily readable only from one side, since said information is mostly represented by numbers, letters and/or aligned symbols. It is difficult for the user to recognise information from the opposite side.

[0003] It is an object of the present invention to provide a user interface for a domestic appliance, which is readable by the user from different sides.

[0004] The object of the present invention is achieved by the user interface for a domestic appliance to claim 1.

[0005] According to the present invention a user interface for a domestic appliance, particularly for a cooking hob, is provided, wherein:

- the user interface includes at least one output element corresponding with a parameter of the domestic appliance and/or of an operation performed by said domestic appliance,
- the output element is provided for indicating a parameter value of said parameter,
- the output element provides a two-dimensional symbolic representation of the parameter value, and
- the two-dimensional representation on the output element includes symmetry properties relating to a central point of said output element, so that
- the views of the two-dimensional symbolic representation on the output element from different sides are identical or at least similar.

[0006] The main idea of the present invention is that parameter values of the domestic appliance are indicated by two-dimensional symbolic representations having symmetry properties relating to a central point. The views of said two-dimensional symbolic representation are identical or at least similar from different sides of the domestic appliance. This allows a reliable recognition of the parameter values by the user from all sides of the domestic appliance.

[0007] Particularly, the user interface is horizontally arrangeable or arranged on the domestic appliance.

[0008] For example, a first output element includes a plurality of concentric disks activatable alternately, wherein preferably said first output element corresponds with a parameter of the domestic appliance, while the size of each disk corresponds with a parameter value.

[0009] In this case, the bigger disks of the first output element may correspond with bigger parameter values,

while the smaller disks may correspond with smaller parameter values.

[0010] Preferably, said disks are congruent and have a circular, oval, elliptic, triangular, square, rectangular or polygonal shape. For example, the first output element includes between three and fifteen preferably between five and ten, disks.

[0011] The first output element may be provided for representing the power of the domestic appliance or of a component of said domestic appliance.

[0012] Further, a second output element may include a spiral element, wherein a contiguous portion of said spiral element is activatable, and wherein the size and/or the length of said activated portion corresponds with the parameter value.

[0013] For example, the spiral element of the second output element includes between two and ten, preferably between three and five, windings.

[0014] Particularly, the second output element is provided for representing the residual or elapsed time of an operation of the domestic appliance.

[0015] According to a preferred embodiment, the user interface is provided for a cooking hob, wherein the first output element and/or the second output element correspond permanently or alternately with one cooking zone.

[0016] Moreover, the user interface comprises at least one touch sensitive surface, so that the first output element and/or the second output element act additionally as input elements.

[0017] For example, the user interface comprises at least one LED display, TFT display and/or LCD display.

[0018] Further, the present invention relates to a domestic appliance, particularly a cooking hob, comprising at least one user interface described above.

[0019] At last, the present invention relates to a freestanding domestic apparatus, particularly a cooking island, comprising at least one domestic appliance mentioned above.

[0020] Novel and inventive features of the present invention are set forth in the appended claims.

[0021] The present invention will be described in further detail with reference to the drawings, in which

45 FIG 1 illustrates a schematic top view of a cooking island with a cooking hob according to a preferred embodiment of the present invention, and

50 FIG 2 illustrates a schematic partial top view of a user interface of the cooking hob according to the preferred embodiment of the present invention.

55 **[0022]** FIG 1 illustrates a schematic top view of a cooking island 10 with a cooking hob 12 according to a preferred embodiment of the present invention.

[0023] The cooking island 10 comprises a cooking hob 12 arranged substantially in the centre of said cooking

island 10. The cooking hob 12 includes a number of cooking zones 14 and a user interface 16. In this example, the cooking hob 12 includes four cooking zones 14. The user interface 16 has such a structure that information indicated on said user interface 16 is recognisable from all sides of the cooking island 10.

[0024] In this example, the user interface 16 is provided for a cooking hob 12 on a cooking island 10. In general, the user interface 16 is suitable for an arbitrary freestanding domestic appliance, which is accessible from different sides by the user.

[0025] FIG 2 illustrates a schematic partial top view of the user interface 16 of the cooking hob 12 according to the preferred embodiment of the present invention.

[0026] The user interface 16 includes a first output element 18 and a second output element 20. In FIG 2 only the first 18 and second 20 output elements are shown, wherein generally the user interface 16 may include further output elements. For example, each pair of first 18 and second 20 output elements corresponds with one of the cooking zones 14. Alternatively, one single pair of first 18 and second 20 output elements is alternately dedicated to the cooking zones 14 by operating a switch.

[0027] The first output element 18 includes a plurality of concentric disks, wherein only one of said disks is activated at the same time. In this example, the concentric disks are circular. In general, the concentric disks may have arbitrary shapes, e.g. oval, elliptic, triangular, square, rectangular or polygonal. Preferably, the concentric disks are congruent.

[0028] The second output element 20 includes a spiral element. A contiguous portion of said spiral element is activated. The size and/or the length of said activated portion corresponds with the parameter value. In this example, the second output element 18 is provided for representing the residual or elapsed time of the operation of the domestic appliance 12.

[0029] The two-dimensional representation on the first output element 18 is rotationally symmetric relating to a central point of said first output element 18. In contrast, the two-dimensional representation on the second output element 20 is approximately rotation-symmetric relating to the central point of said second output element 20. In both cases, the views of the two-dimensional symbolic representation on the output elements 18 and 20 from different sides are identical or at least similar. Thus, the user can recognise reliably the parameter values indicated by the output elements 18 and 20.

[0030] Of course, the user interface 16 of the present invention may include only one type of the first output element 18 or the second output element 20. For example, the user interface 16 may include several first output elements 18 for indicating different parameters, e.g. the power and the residual or elapsed time.

[0031] Moreover, the first output element 18 may be provided for indicating the residual or elapsed time of the operation, while the second output element 20 is provided for indicating the power of the domestic appliance 12.

[0032] Furthermore, the user interface 16 may include one or more touch sensitive surfaces, so that the first output element 18 and the second output element 20 act additionally as input elements. By touching the first output element 18 the power of a cooking zone 14 may be adjusted. By touching the second output element 20 the residual time of the cooking process may be modified.

[0033] Although an illustrative embodiment of the present invention has been described herein with reference to the accompanying drawings, it is to be understood that the present invention is not limited to that precise embodiment, and that various other changes and modifications may be affected therein by one skilled in the art without departing from the scope or spirit of the invention. All such changes and modifications are intended to be included within the scope of the invention as defined by the appended claims.

List of reference numerals

[0034]

10	cooking island
12	cooking hob
14	cooking zones
16	user interface
18	first output element
20	second output element

Claims

1. A user interface (16) for a domestic appliance (12), particularly for a cooking hob (12), wherein:
 - the user interface (16) includes at least one output element (18, 20) corresponding with a parameter of the domestic appliance (12) and/or of an operation performed by said domestic appliance (12),
 - the output element (18, 20) is provided for indicating a parameter value of said parameter,
 - the output element (18, 20) provides a two-dimensional symbolic representation of the parameter value, and
 - the two-dimensional representation on the output element (18, 20) includes symmetry properties relating to a central point of said output element (18, 20), so that
 - the views of the two-dimensional symbolic representation on the output element (18, 20) from different sides are identical or at least similar.
2. The user interface according to claim 1, characterised in that the user interface (16) is horizontally arrangeable or arranged on the domestic appliance (12).

3. The user interface according to claim 1 or 2,
characterised in that
a first output element (18) includes a plurality of concentric disks activatable alternately, wherein preferably said first output element (18) corresponds with a parameter of the domestic appliance, while the size of each disk corresponds with a parameter value. 5
4. The user interface according to claim 3,
characterised in that
the bigger disks of the first output element (18) correspond with bigger parameter values, while the smaller disks correspond with smaller parameter values. 10
5. The user interface according to claim 3 or 4,
characterised in that
the disks are congruent and have a circular, oval, elliptic, triangular, square, rectangular or polygonal shape. 15
6. The user interface according to any one of the claims 3 to 5,
characterised in that
the first output element (18) includes between three and twelve, preferably between five and ten, disks. 20
7. The user interface according to any one of the claims 3 to 6,
characterised in that
the first output element (18) is provided for representing the power of the domestic appliance (12) or of a component of said domestic appliance (12). 25
8. The user interface according to any one of the preceding claims,
characterised in that
a second output element (20) includes a spiral element, wherein a contiguous portion of said spiral element is activatable, and wherein the size and/or the length of said activated portion corresponds with the parameter value. 30
9. The user interface according to claim 8,
characterised in that
the spiral element of the second output element (18) includes between two and ten, preferably between three and five, windings. 35
10. The user interface according to claim 8 or 9,
characterised in that
the second output element (18) is provided for representing the residual or elapsed time of an operation of the domestic appliance (12). 40
11. The user interface according to any one of the preceding claims,
characterised in that
the user interface (16) is provided for a cooking hob (12), wherein the first output element (18) and/or the second output element (20) correspond permanently or alternately with one cooking zone (14). 45
12. The user interface according to any one of the preceding claims,
characterised in that
the user interface (16) comprises at least one touch sensitive surface, so that the first output element (18) and/or the second output element (20) act additionally as input elements. 50
13. The user interface according to any one of the preceding claims,
characterised in that
the user interface (16) comprises at least one LED display, TFT display and/or LCD display. 55
14. A domestic appliance (12), particularly a cooking hob (12),
characterised in that
the domestic appliance (12) comprises at least one user interface (16) according to any one of the claims 1 to 13.
15. A freestanding domestic apparatus (10), particularly a cooking island (10),
characterised in that
the domestic apparatus (10) comprises at least one user interface (16) according to any one of the claims 1 to 13 and/or at least one domestic appliance (12) according to claim 14.

FIG 1

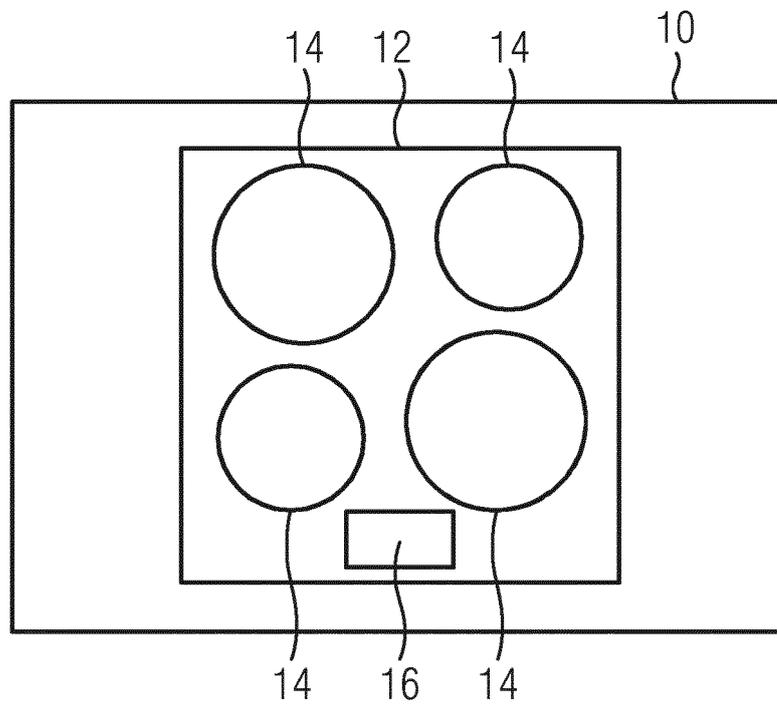
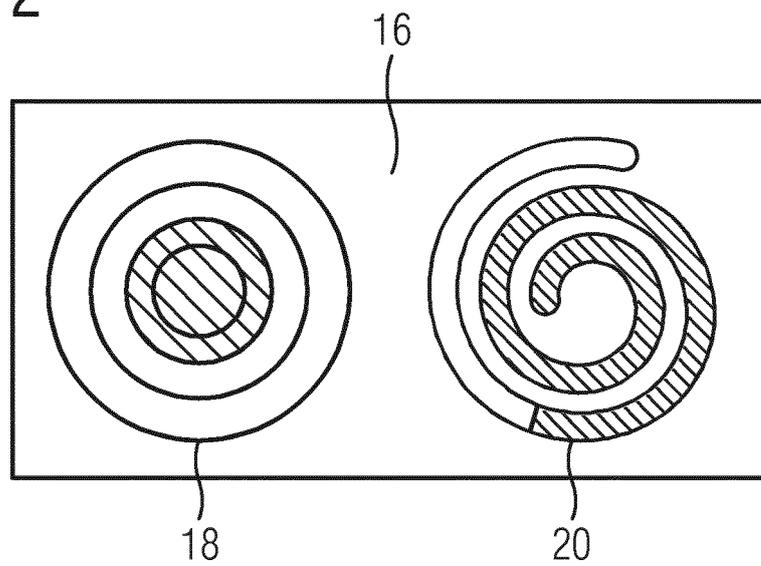


FIG 2





EUROPEAN SEARCH REPORT

Application Number
EP 18 16 8394

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2016/299595 A1 (BACH JAMES CARTER [US] ET AL) 13 October 2016 (2016-10-13) * paragraphs [0001], [0002], [0003], [0004], [0005], [0006], [0007], [0024], [0030], [0038], [0039], [0040], [0049], [0050]; figures 6, 7a-7c * paragraph [0051] *	1-7, 11-15	INV. F24C7/08
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X	DE 10 2016 117695 A1 (MIELE & CIE [DE]) 22 March 2018 (2018-03-22) * paragraphs [0001], [0012], [0013], [0015], [0024], [0027], [0028], [0042]; figure 2 *	1-7,11, 13-15	TECHNICAL FIELDS SEARCHED (IPC) F24C
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 19 October 2018	Examiner Jalal, Rashwan
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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EPO FORM 1503 03/02 (P04C01)

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

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5 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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19-10-2018

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82