



(11) EP 2 093 499 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
26.08.2009 Bulletin 2009/35

(51) Int Cl.:
F24C 15/16 (2006.01)

(21) Application number: 08003218.8

(22) Date of filing: 22.02.2008

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR

Designated Extension States:

AL BA MK RS

(71) Applicant: Electrolux Home Products Corporation
N.V.
1930 Zaventem (BE)

(72) Inventors:

- Heisswolf, Bernd
9151 Rothenburg (DE)
- Hildner, Dietmar
90765 Fürth (DE)

- Wäntig, Grit
90451 Nürnberg (DE)
- Pörner, Harald
91220 Schnaittach (DE)
- Weber, Tobias
91596 Burk (DE)
- Koitzsch, Erhard
91541 Rothenburg (DE)
- Huxhold, Heinz-Peter
90766 Fürth (DE)
- Schmid, Rita
91154 Roth (DE)

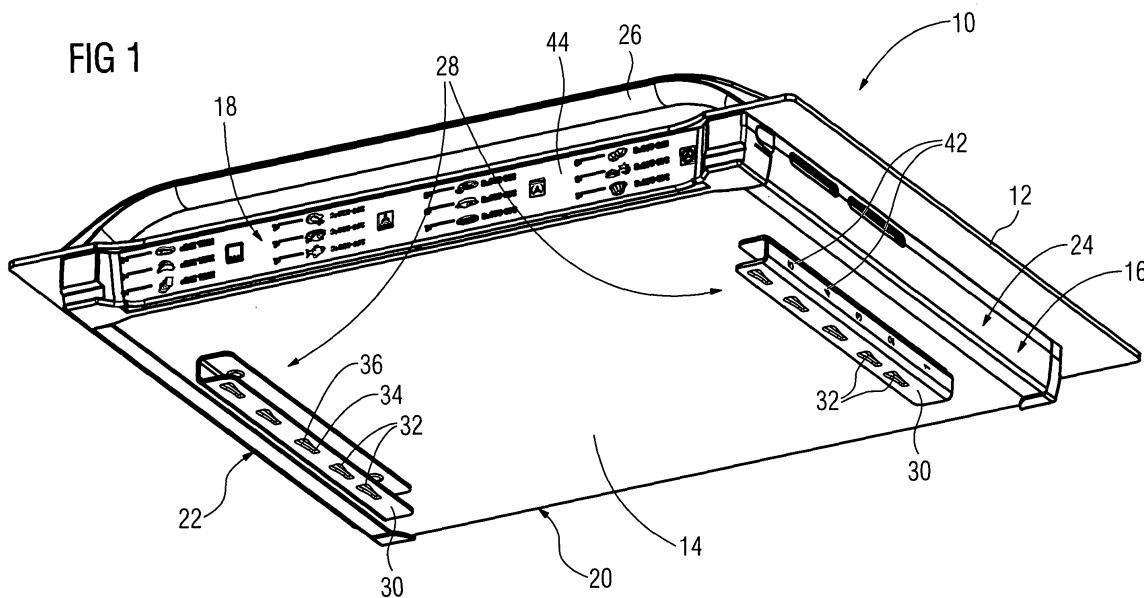
(74) Representative: Schröer, Gernot H. et al
Patentanwälte Meissner, Bolte & Partner
Bankgasse 3
90402 Nürnberg (DE)

(54) Cooking oven with quick guide

(57) A cooking oven comprising a cabinet defining an oven cavity with a charging opening for charging the oven cavity with foodstuff to be cooked; a drawer-like door (10) for optionally opening and closing said charging opening in a substantially horizontal direction, said door including at least one wall (12,14) and a door frame (16)

surrounding said at least one wall and having an upper frame portion (18), a lower frame portion (20) and two side frame portions (22,24); and a quick guide (44) suggesting to the user adequate handling of the cooking oven with respect to different cooking situations; characterized in that said quick guide (44) is arranged at the upper frame portion (18) of the door frame (16).

FIG 1



Description

TECHNICAL FIELD

[0001] The present invention relates to a cooking oven comprising a cabinet defining an oven cavity with a charging opening for charging the oven cavity with foodstuff to be cooked; and a drawer-like door for optionally opening and closing said charging opening in a substantially horizontal direction, said door including at least one wall and a door frame surrounding said wall and having an upper frame portion, a lower frame portion and two side frame portions.

BACKGROUND TECHNOLOGY

[0002] Cooking ovens of the above-mentioned type are known in several configurations.

[0003] In order to teach the user about the handling of the cooking oven in different cooking situations, cooking ovens are normally delivered with an operating manual. Such an operating manual normally contains information about the temperature; the mode; e.g. top heat, bottom heat, air circulation; the baking tray level within the oven; etc.; which should be used in a special cooking situation, e.g. when cooking fish, a roast, when making an au gratin, a pizza, etc, in order to achieve an optimal cooking result. Accordingly, the user can get a general idea about the way to operate the cooking oven when studying the operating manual.

[0004] However, due to the detailedness of such operating manuals it is very uncommon, that a user studies the manual each time before cooking. This leads to an incorrect handling of the cooking oven and hence to sub-optimal cooking results.

[0005] In order to overcome this drawback, DE-A-101 25 247 discloses a cooking oven comprising a cabinet defining an oven cavity with a charging opening for charging the oven cavity with foodstuff to be cooked; and a door for optionally opening and closing said charging opening; a plurality of baking ray holders arranged on different levels within the oven cavity for receiving baking trays, baking grids, etc.; an optical identification mark for each baking tray holder, said optical identification marks being positioned next to the corresponding baking tray holders in the form of a signal light or the like; and a control panel for choosing a baking program, said control panel being arranged above the door and connected to a control device. According to such an arrangement, the user can choose a cooking program according to the intended cooking situation by means of the control panel. As soon as the cooking program is chosen, the control device will automatically actuate one or more of the optical identification marks assigned to the chosen cooking program to signalize the user where the baking tray should be placed in order to receive an optimal cooking result. In this regard, this arrangement is very comfortable and effective. However, it is also very expensive to

manufacture. Moreover, the control device or the optical identifications marks may get damaged. Accordingly, a maintenance of these components may be necessary.

[0006] Another solution is to provide a cooking oven with a quick guide, which contains information about the handling of the cooking oven with respect to the most frequent cooking situations. Such quick guides are normally positioned - in form of an impression, a label, etc. - at the inner side of the door, so they cannot be seen from the outside in order to not disturb the outer appearance of the cooking oven. This arrangement of the quick guide is effective, when the door is pivoted at the cabinet, because the quick guide can be easily studied by the user in the opened state of the door.

[0007] However, when the door is a drawer-like door, the inner side of the door wall is - even in the opened state of the door - hardly visible for the user.

[0008] Starting from the above mentioned prior art technology it is an object of the present invention to provide a cooking oven of the mentioned type, which has an alternative configuration in order to eliminate the foregoing drawbacks.

SUMMARY OF THE INVENTION

[0009] This object is solved by providing a cooking oven according to claim 1. The dependent claims refer to individual embodiments of the present invention.

[0010] The present invention provides a cooking oven comprising a cabinet defining an oven cavity with a charging opening (or feeding opening) for charging (or feeding) the oven cavity with foodstuff to be cooked; a drawer-like door for optionally opening and closing said charging opening in a substantially horizontal direction, said door including at least one wall and a door frame surrounding said at least one wall and having an upper frame portion, a lower frame portion and two side frame portions; and a quick guide suggesting to the user adequate handling of the cooking oven with respect to different cooking situations.

[0011] The cooking oven of the present invention is characterized in that said quick guide is arranged at the upper frame portion of the door frame. Accordingly, the user can easily study the quick guide in the opened state of the door, i.e. in the state, when he or she intends to use the cooking oven. On the other hand the quick guide is usually not visible in the closed state of the door, such that it does not derogate the outer appearance of the oven.

[0012] According to one aspect of the present invention, the quick guide is arranged directly on the upper frame portion.

[0013] According to another aspect of the present invention, the quick guide is arranged at a substrate, e.g. a plate or tag, which is in turn fixed to the upper frame portion.

[0014] The quick guide may be provided in printed and/or in graved form. When printed, the used colour

should be temperature and cleaning resistant.

[0015] According to a preferred embodiment of the present invention, the cooking oven comprises a plurality of baking tray holders provided on different levels within the oven cavity or at the inner side of the at least one wall of the door, whereas each level is identified by a specific identification mark arranged at a position, which is well visible for the user, e.g., a position directly adjacent the baking tray holder. Moreover, the quick guide comprises information, which assigns specific cooking situations to specific identification marks. Accordingly, the user can take from the quick guide, which specific baking tray holder level should be used for a specific cooking situation in order to receive an optimal baking result.

[0016] Preferably, the specific identification marks are numbers, e.g. from 1 to 5, or letters, e.g. from A to E, if five baking tray holders are provided. However, it should be noticed, that the quantity of baking tray holders is not limited to five.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

[0017] The detailed configuration, features and advantages of the present invention will become apparent in the course of the following description with reference to the accompanying drawings.

Figure 1 is a perspective rear view showing a door of a cooking oven according to an embodiment of the present invention;

Figure 2 is a top view of the door shown in figure 1; and

Figure 3 is a perspective rear view of the door shown in figures 1 and 2, whereas a baking tray is fixed to the door.

DETAILED DESCRIPTION

[0018] Below, one embodiment of the present will be described with reference to the figures 1 to 3. In these figures, like parts or portions are denoted by like reference numerals.

[0019] Figure 1 is a perspective rear view of an embodiment of a door 10 of a cooking oven according to the present invention, figure 2 is a top view of the door 10, and figure 3 is a perspective rear view of the door 10 with a baking tray attached thereto.

[0020] The door 10 comprises a front wall 12, a back wall 14 and a frame 16 surrounding the walls 12 and 14. The frame 16 includes an upper frame portion 18, a lower frame portion 20 and two side frame portions 22 and 24, which are fixed to each other. Furthermore, a handle 26 for opening and closing the door 10 is fixed to the upper portion of the front wall 12.

[0021] The door 10 is one of the drawer-like type, i.e. the door 10 is arranged at a cooking oven in such a man-

ner, that it opens and closes the charging opening of the cooking oven by means of movements in a substantially linear and horizontal direction. In this regard, the door 10 may be, e.g., attached at the free ends of two sliding bars,

5 which are received in two corresponding guiding rails arranged beneath the oven cavity (not shown in the figures). Accordingly, the door 10 may perform a horizontal back and forth movement together with the sliding bars, which slide along the guiding rails. Such drawer-like doors are basically known in the prior art (see, e.g., EP-A-0 443 329) and are not described in more detail herein.

[0022] A baking tray holder 28 is provided, which comprises two rails 30 secured to the back wall 14 of the door 10. The rails 30 each have an essentially U-shaped 15 cross-section and extend in a vertical direction in parallel to each other. Each rail 30 contains a plurality of longish holes 32, which are aligned vertically. Each hole 32 of one rail 30 is positioned on the same level as one hole 32 of the other rail 30, such that pairs of holes 32 on

20 different levels are formed. Moreover, each hole 32 is formed of a longish, slit-like lower hole-section 34 and an upper hole-section 36, which broadens in the upward direction starting from the lower hole-section 34. The pairs of holes 32 arranged on a common level are each 25 adapted to receive a hook-like fixing means 38 of a supporting frame 39, which performs the task of supporting a baking tray 40, as it is shown in figure 3, or another component, on which food items to be cooked may be 30 placed. However, it should be noticed, that the fixing means 38 can be provided directly on baking trays, baking grids, etc., such that the supporting frame may be omitted.

[0023] Each level, on which a baking tray may be arranged, is marked by means of special identification 35 marks 42 being arranged at the outer surfaces of the rails 30 facing to the sides of the door 10. The identification marks 42 serve to identify the different levels to the user and are provided in the form of numbers from 1 to 5, whereas 1 identifies the lowermost level and 5 identifies 40 the uppermost level. However, it should be noticed, that other identification marks may be used instead of the numbers 1 to 5, e.g. the letters A to E or the like. According to the present embodiment, the identification marks are graved. However, they also can be provided in a different 45 way, e.g. as printed numbers or the like.

[0024] Moreover, the door 10 comprises a quick guide 44 arranged at the upper frame portion 18 of the frame 16. The quick guide 44 contains information suggesting to the user an adequate handling of the cooking oven 50 with respect to different cooking situations in order to achieve an optimal cooking result. According to the present embodiment, this information is given by means of icons 46 representing the kind of food to be cooked, by means of temperature information 48, i.e. information 55 about the temperature range within which the food represented by a specific icon should be cooked, and by means of level information 50 representing the identification mark 42 and hence the level on which the food

represented by a specific icon should be arranged at the baking tray holder 28.

[0025] According to the present embodiment, the quick guide 44 is printed on the upper frame portion 18 of the frame 16. However, it should be noticed, that the quick guide 44 may be provided in another form, e.g. in graved form or arranged at a substrate (not shown), e.g. a plate or tag, which in turn is fixed to the upper frame portion 18, etc.

[0026] By positioning the quick guide 44 on the upper frame portion 18 of the frame 16 of the door 10, the user can easily read the instructions of the quick guide 44 when opening the drawer-like door 10 of the cooking oven. Moreover, the quick guide 44 is hidden, when the door 10 is in its closed state. Accordingly, the quick guide 44 does not disturb the outer appearance of the oven.

[0027] Although only one exemplary embodiment of this invention has been described in detail above, those skilled in the art will readily appreciate that many modifications are possible with respect to the exemplary embodiments without materially departing from the novel teachings and advantages of this invention. Accordingly, all such modifications are intended to be included within the scope of this invention.

LIST OF REFERENCE SIGNS

[0028]

10	door
12	front wall
14	back wall
16	frame
18	upper frame portion
20	lower frame portion
22	side frame portion
24	side frame portion
26	handle
28	baking tray holder
30	rail
32	hole
34	lower hole-section
36	upper hole-section
38	fixing means
39	supporting frame
40	baking tray
42	identification mark
44	quick guide
46	icon
48	temperature information
50	level information

like door (10) being movable in a substantially horizontal direction for opening or closing said charging opening, said door (10) including at least one wall (12, 14) and a door frame (16) surrounding said at least one wall (12, 14) and having an upper frame portion (18), a lower frame portion (20) and two side frame portions (22, 24); and a list of cooking information or quick guide (44) suggesting to the user adequate handling of the cooking oven with respect to different cooking situations; **characterized in that** said quick guide (44) is arranged at the upper frame portion (18) of the door frame (16).

2. A cooking oven according to claim 1, **characterized in that** the quick guide (44) is arranged directly on the upper frame portion (18).
3. A cooking oven according to claim 2, **characterized in that** the quick guide (44) is printed and or graved on the upper frame portion (18).
4. A cooking oven according to claim 1, **characterized in that** the quick guide (44) is arranged at a substrate which in turn is fixed to the upper frame portion (18).
5. A cooking oven according to one of the foregoing claims, **characterized in that** a plurality of baking tray holders (28) is provided on different levels within the oven cavity or at the inner side of the at least one wall (14) of the door (10), whereas each level is identified by a specific identification mark (42) arranged at a position, which is well visible for the user; and **in that** the quick guide (44) comprises information (46, 48, 50), which assigns specific cooking situations to specific identification marks (42).
6. A cooking oven according to claim 5, **characterized in that** the specific identification marks (42) are numbers (50) or letters.

Claims

1. A cooking oven comprising a cabinet defining an oven cavity with a charging opening for charging the oven cavity with foodstuff to be cooked; a drawer-

55

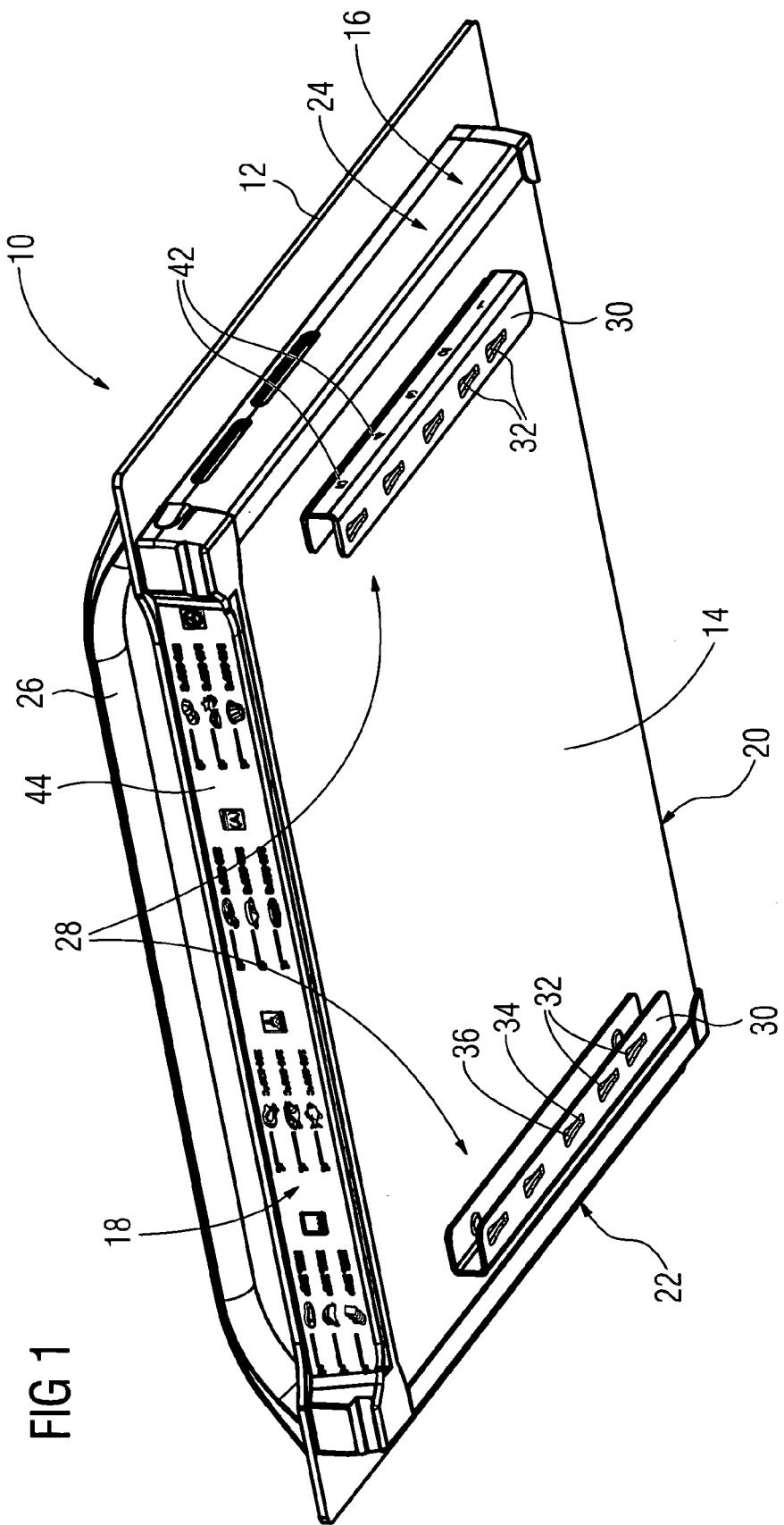


FIG 2

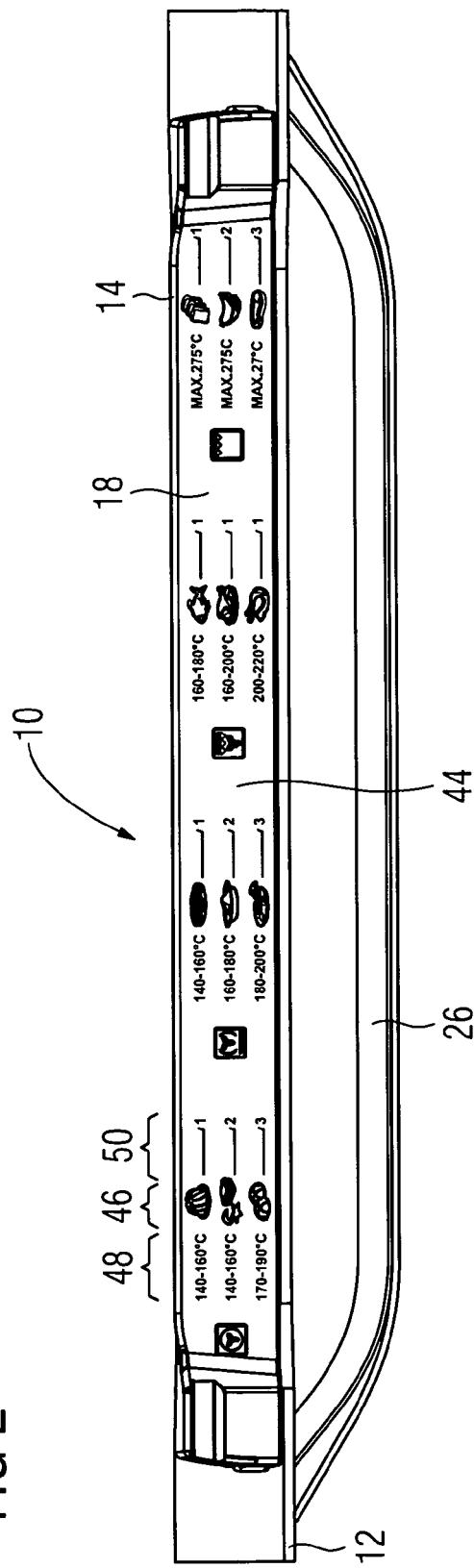
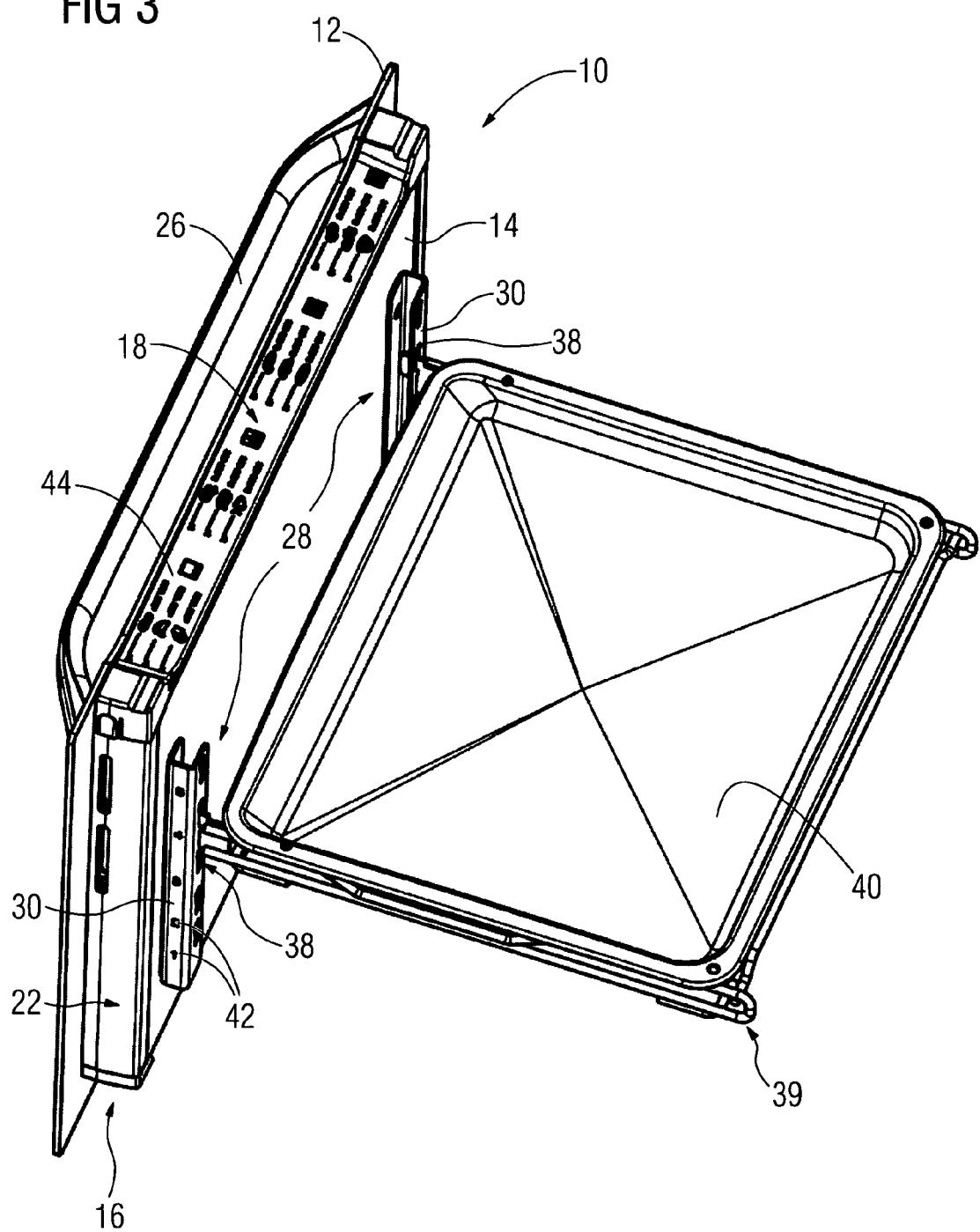


FIG 3





EUROPEAN SEARCH REPORT

Application Number
EP 08 00 3218

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DE 44 44 316 A1 (BOSCH SIEMENS HAUSGERAETE [DE]) 20 June 1996 (1996-06-20) * column 2, line 27 - line 30; figure 1 *	1-4	INV. F24C15/16
Y	-----	5,6	
Y	EP 1 835 232 A (ELECTROLUX HOME PROD CORP [BE]) 19 September 2007 (2007-09-19) * paragraphs [0015], [0022]; figures *	5,6	
Y	-----	5,6	
A	DE 103 49 315 A1 (BSH BOSCH SIEMENS HAUSGERAETE [DE]) 25 May 2005 (2005-05-25) * paragraph [0025]; figures 3-6 *	1	
A	JP 60 240921 A (MATSUSHITA ELECTRIC IND CO LTD) 29 November 1985 (1985-11-29) * abstract; figures *	1	
A	-----	3	
	DE 100 07 923 C1 (AEG HAUSGERAETE GMBH [DE]) 31 October 2001 (2001-10-31) * paragraph [0015]; figures *	3	

			TECHNICAL FIELDS SEARCHED (IPC)
			F24C
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
	The Hague	6 January 2009	Verdoordt, Luk
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 08 00 3218

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-01-2009

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 4444316	A1	20-06-1996	NONE	
EP 1835232	A	19-09-2007	DE 102006012502 A1	20-09-2007
DE 10349315	A1	25-05-2005	NONE	
JP 60240921	A	29-11-1985	NONE	
DE 10007923	C1	31-10-2001	NONE	

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- DE 10125247 A [0005]
- EP 0443329 A [0021]