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- (81) **Designated States** (*unless otherwise indicated, for every
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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,

ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
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RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ,
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MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
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— *of inventorship (Rule 4.17(iv))*

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— *with international search report (Art. 21(3))*

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(54) **Title:** OPTICAL QUALITY CONTROL SYSTEM

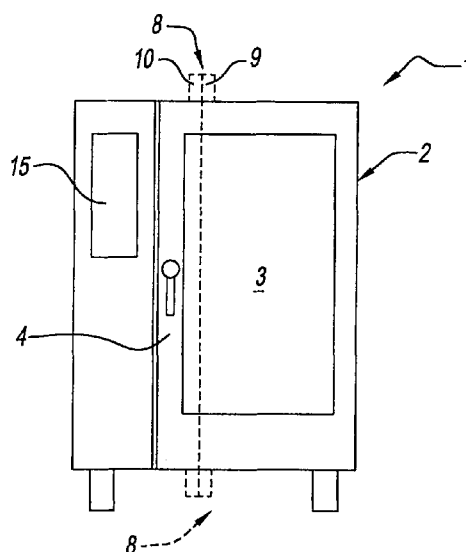


FIG. 1

(57) **Abstract:** Disclosed are cooking devices having inspection systems including: a distance sensor and a digital optical recognition device. The distance sensor detects the position of the food product placed in the cooking device and the digital optical recognition device captures a series of images for the purpose of food product recognition. Once the food product is recognized, the operator is provided with the correct cooking cycle/program for the position and type of food product placed in the cooking device. The inspection systems ensure: (1) the food product is correctly recognized; (2) the cooking cycle/program is correctly selected; (3) the correct cooking cycle/program is followed to completion and (4) the quality of the cooked food product meets expected standards.



INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2013/000860

A. CLASSIFICATION OF SUBJECT MATTER
INV. F24C7/08 H05B6/64 H05B6/68
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
F24C H05B G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2 149 755 A1 (ELECTROLUX HOME PROD CORP [BE]) 3 February 2010 (2010-02-03) cited in the application	1-10, 14, 16
Y	paragraphs [0047], [0058] - [0059], [0062], [0065], [0066]; figure 7 column 14, line 56 - line 57 column 9, line 12 - line 14 -----	15
A	DE 20 2011 002570 U1 (WIESHEU GMBH [DE]) 7 May 2012 (2012-05-07) paragraphs [0055], [0054], [0059] -----	1, 14
Y	US 2007/001012 A1 (KIM KWANG K [KR] ET AL) 4 January 2007 (2007-01-04) claim 1 -----	15



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

23 September 2013

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2149755	A1	03-02-2010	AU 2009275539 A1 04-02-2010
			CA 2731470 A1 04-02-2010
			CN 102066843 A 18-05-2011
			EP 2149755 A1 03-02-2010
			US 2011123689 A1 26-05-2011
			WO 2010012340 A1 04-02-2010

DE 202011002570	U1	07-05-2012	NONE

US 2007001012	A1	04-01-2007	EP 1740017 A1 03-01-2007
			KR 20070002567 A 05-01-2007
			RU 2327217 C2 20-06-2008
			US 2007001012 A1 04-01-2007

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10, 14-16

"An inspection system for providing a cooking cycle/program for food to be cooked in a cooking device, the cooking device including a cooking chamber for cooking food, the inspection system comprising: a distance sensor; wherein the distance sensor detects the location of placement of the food to be cooked in the cooking chamber, wherein the inspection system recognizes the food to be cooked based upon the comparison, and wherein, based upon the detected location and the recognition of the food to be cooked, a cooking cycle/program for the food to be cooked is selected".

2. claims: 11-13, 17-20

"An inspection system for determining whether food cooked in a cooking device has been properly cooked, wherein a digital optical recognition device captures images of the cooked food as the cooked food is removed from a cooking chamber, wherein the inspection system compares the captured images to stored images, and wherein the inspection system determines, based upon the comparison, whether the cooked food has been properly cooked".

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2013/000860

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see annex

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.