



- (51) International Patent Classification:
A22C 7/00 (2006.01) B29C 33/00 (2006.01)
- (21) International Application Number:
PCT/EP2012/000610
- (22) International Filing Date:
10 February 2012 (10.02.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11001069.1 10 February 2011 (10.02.2011) EP
11002345.4 22 March 2011 (22.03.2011) EP
11003605.0 3 May 2011 (03.05.2011) EP
11010186.2 23 December 2011 (23.12.2011) EP
- (71) Applicant (for all designated States except US): **GEA CFS BAKEL B.V.** [NL/NL]; Beekakker 11, NL-5761 EN Bakel (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **VAN GERWEN, Hendrikus Petrus Gerardus** [NL/NL]; Ter Hofstadlaan 39, NL-5711 VT, Someren (NL). **BOOGERS, George Lambertus Josephus Maria** [NL/NL]; Haffel 5, NL-5406

AR, Uden (NL). **RIGHOLT, Hendrik Jan** [NL/NL]; Weeldenberg 15, NL-4904 PS, Oosterhout (NL).

(74) Agents: **WOLFF, Felix** et al.; Kutzenberger & Wolff, Theodor-Heuss-Ring 23, 50668 Köln (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, 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, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: FOOD FORMING DRUM AND PROCESS FOR ITS MANUFACTURE

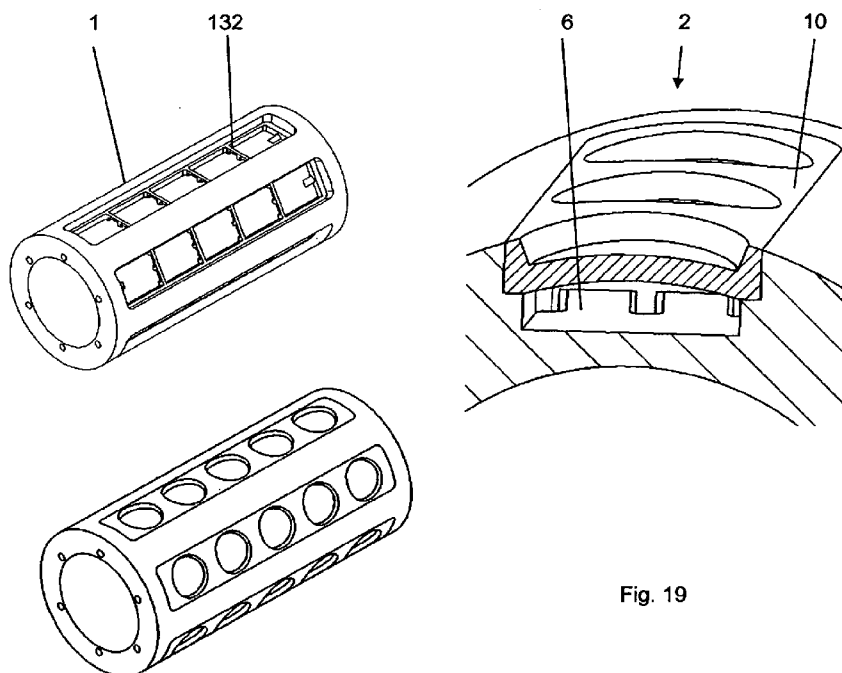


Fig. 19

(57) Abstract: The present invention relates to a food forming drum comprising a multitude of rows of cavities. The present invention further relates to the process of manufacturing the inventive drum.



Published:

(88) Date of publication of the international search report:
22 November 2012

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/000610

A. CLASSIFICATION OF SUBJECT MATTER
INV. A22C7/00 B29C33/00
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)
A22C B29C A21C B26D A23G

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	WO 2004/002229 A2 (STORK TITAN BV [NL]; VAN DER EERDEN HENDRICUS FRANC [NL]; BEIJAARD BAR) 8 January 2004 (2004-01-08)	1
Y	abstract; claims 1-62; figures 1-23 page 1, line 4 - page 32, line 8 -----	2,24,25, 33,34
Y	US 4 625 612 A (OLIVER ROBERT J L [US]) 2 December 1986 (1986-12-02) abstract; claims 1-14; figures 1-6 column 1, line 5 - column 5, line 9 -----	2,24,25, 33,34
X,P	WO 2012/012581 A1 (FORMAX INC [US]; LINDEE SCOTT A [US]; HANSEN DAVID [US]; LAMARTINO SAL) 26 January 2012 (2012-01-26) abstract; claims 1-206; figures 1-63 page 1, line 5 - page 75, line 22 ----- -/--	33,34

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 28 September 2012	Date of mailing of the international search report 08/10/2012
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Rojo Galindo, Ángel

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2012/000610

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 387 609 A1 (ZAUGG JEAN [FR]) 17 November 1978 (1978-11-17) page 1, line 1 - page 6, line 39; claims 1-10; figures 1-4	33
A	----- JP 2001 299317 A (KIBUN SHOKUHIN KK) 30 October 2001 (2001-10-30) the whole document	1,2,24, 25,28
A	----- EP 1 520 480 A1 (CRM COST REVISIONI MECC [IT]) 6 April 2005 (2005-04-06) abstract; claims 1-9; figures 1-5 paragraphs [0001] - [0035]	1,2,24, 25,28
A	----- US 3 823 633 A (ROSS W) 16 July 1974 (1974-07-16) abstract; claims 1-25; figures 1-5 column 1, line 5 - column 5, line 50	2,4,25

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2012/000610

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.: 3-23, 26, 27, 29, 30
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:
see FURTHER INFORMATION sheet PCT/ISA/210

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.:
1-30, 33, 34

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.:

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-30

Food moulding drum comprising a multitude of rows of porous product cavities provided as one or more inserts connected to the drum, as well as process for its manufacture

2. claims: 31, 32

Process for machining a cavity into a porous material

3. claims: 33, 34

process to remove a product from a porous cavity

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 3-23, 26, 27, 29, 30

The present application contains 34 claims, of which 24 are independent, since a great deal of them are drafted as dependent on the preamble of claim 1 and therefore are regarded as independent. There is no clear distinction between the independent claims because of overlapping scope. There are so many claims, and they are drafted in such a way that the claims as a whole are not in compliance with the provisions of clarity and conciseness of Article 6 PCT, as it is particularly burdensome for a skilled person to establish the subject-matter for which protection is sought. The non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search (PCT Guidelines 9.19 and 9.25). Consequently, the search has been carried out for those parts of the application which do appear to be well defined, clear and concise, namely claims 1, 2, 24, 25 and 28.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/EP2012/000610

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004002229	A2	08-01-2004	AT 549930 T 15-04-2012
			AU 2003280522 A1 19-01-2004
			BR 0312243 A 12-04-2005
			DK 1528858 T3 21-05-2012
			EP 1528858 A2 11-05-2005
			EP 2319326 A2 11-05-2011
			JP 2005530514 A 13-10-2005
			JP 2011078423 A 21-04-2011
			NL 1020942 C2 30-12-2003
			US 2005220932 A1 06-10-2005
			US 2012003374 A1 05-01-2012
			WO 2004002229 A2 08-01-2004
US 4625612	A	02-12-1986	CA 1268701 A1 08-05-1990
			MX 160277 A 25-01-1990
			US 4625612 A 02-12-1986
WO 2012012581	A1	26-01-2012	US 2012058213 A1 08-03-2012
			WO 2012012581 A1 26-01-2012
FR 2387609	A1	17-11-1978	NONE
JP 2001299317	A	30-10-2001	JP 4197826 B2 17-12-2008
			JP 2001299317 A 30-10-2001
EP 1520480	A1	06-04-2005	AT 372054 T 15-09-2007
			EP 1520480 A1 06-04-2005
US 3823633	A	16-07-1974	NONE