



(51) International Patent Classification:

A21C 11/22 (2006.01) *B29C 47/32* (2006.01)
A23N 17/00 (2006.01) *A23P 1/12* (2006.01)
B29C 47/30 (2006.01)

(21) International Application Number:

PCT/IB2009/050243

(22) International Filing Date:

22 January 2009 (22.01.2009)

(25) Filing Language:

Italian

(26) Publication Language:

English

(30) Priority Data:

VR2008A000006 23 January 2008 (23.01.2008) IT

(71) Applicants and

(72) Inventors: **CERETTA, Renato** [IT/IT]; Via Rosario, 11,
I-37040 Arcole (VR) (IT). **CERETTA, David** [IT/IT];
Via Fornasa, 18/A, I-37040 Arcole (VR) (IT).

(74) Agent: **BORTOLUZZI, Daniele**; Con Lor Spa, Via A.
Sciesa, 9, I-37122 Verona (IT).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

[Continued on next page]

(54) Title: APPARATUS FOR MAKING PASTE ELEMENTS

(57) Abstract: A device (10) for making paste elements, preferably of a basically spherical shape, includes supporting structure (16), extrusion means (12), cutting means (62) of the paste elements exiting from extrusion means and molding means (14, 114), fastening to the supporting structure and designed to receive the paste from extrusion means (12) and to give it a basically spherical shape. Molding means (14; 114) include die (52) and at least one rotating roller (50; 150) between which a path (53; 153) is created. The paste elements are rotated on themselves in this path so as to take on a basically spherical shape.

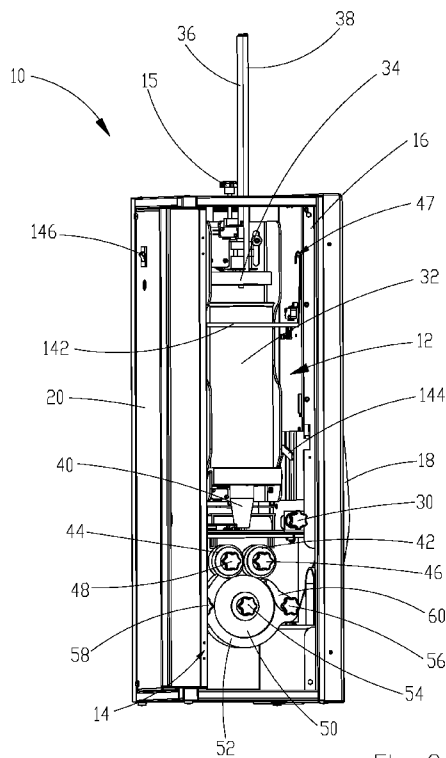


Fig. 3



— *of inventorship (Rule 4.17(iv))*

Published:

— *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))*

(88) Date of publication of the international search report:

17 September 2009

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2009/050243

A. CLASSIFICATION OF SUBJECT MATTER

INV. A21C11/22 A23N17/00 B29C47/30 B29C47/32 A23P1/12

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)

A23N A21C A23P B29C A22C 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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 559 631 A (CRUYSSSEN GEORGES V D [BE]) 8 September 1993 (1993-09-08)	1,3,8
Y	column 6, line 6 - line 46; claim 9; figures 5,6	10-16
Y	EP 0 622 022 A (REFIN SRL [IT]) 2 November 1994 (1994-11-02)	10-16
	column 2, line 45 - column 3, line 16; claim 1; figures 1,2,5,7	
X	EP 0 133 856 A (MERTENS GUSTAAF) 13 March 1985 (1985-03-13)	1,3,8
	page 1, line 1 - page 2, line 3; claim 1; figure 1	
A	GB 190 748 A (ALBERT WILLIAM SIZER) 2 January 1923 (1923-01-02)	1-18
	page 1, line 14 - line 55; figures	
	----- -/-	

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search

9 July 2009

Date of mailing of the international search report

20/07/2009

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

Gaiser, Markus

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2009/050243

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 025 273 A (MAUER JAMES E ET AL) 24 May 1977 (1977-05-24) abstract; claim 1; figures 1,2 -----	1
A	EP 1 676 490 A (HOLDEKER S L [ES]) 5 July 2006 (2006-07-05) paragraph [0014] - paragraph [0018] -----	1
A	DE 89 04 806 U1 (BEIG, WILLY; ARNEGGER, ROLF, 7990 FRIEDRICHSHAFEN, DE) 8 June 1989 (1989-06-08) claims 1,3; figure 1 -----	1

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2009/050243

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0559631	A	08-09-1993	BE 1005668 A6 US 5402711 A	07-12-1993 04-04-1995
EP 0622022	A	02-11-1994	IT 1272369 B	23-06-1997
EP 0133856	A	13-03-1985	NONE	
GB 190748	A	02-01-1923	BE 354770 A DE 397725 C FR 555203 A	30-11-1928 28-06-1924 26-06-1923
US 4025273	A	24-05-1977	NONE	
EP 1676490	A	05-07-2006	NONE	
DE 8904806	U1	08-06-1989	NONE	