

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 April 2009 (02.04.2009)

PCT

(10) International Publication Number
WO 2009/040759 A3

(51) International Patent Classification:

G01G 15/00 (2006.01) **B65B 1/46** (2006.01)
G01G 17/00 (2006.01) **B67C 3/20** (2006.01)

(21) International Application Number:

PCT/IB2008/053910

(22) International Filing Date:

25 September 2008 (25.09.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

BO2007A000660

27 September 2007 (27.09.2007) IT

(71) Applicant (for all designated States except US): **RO-MACO S.R.L.** [IT/IT]; Via Marzabotto 5, I-40067 Pianoro Fraz. Rastignano (bo) (IT).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **COCCHI, Lorenzo** [IT/IT]; Via della Repubblica 44, I-40068 San Lazzaro Di Savena (bo) (IT).

(74) Agent: **MANZELLA, Giovanni**; c/o Manzella & Associati, Via Nosadella 9, I-40123 Bologna (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, 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).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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

2 July 2009

(54) Title: METHOD FOR WEIGHING IN A MACHINE FOR FILLING CONTAINERS

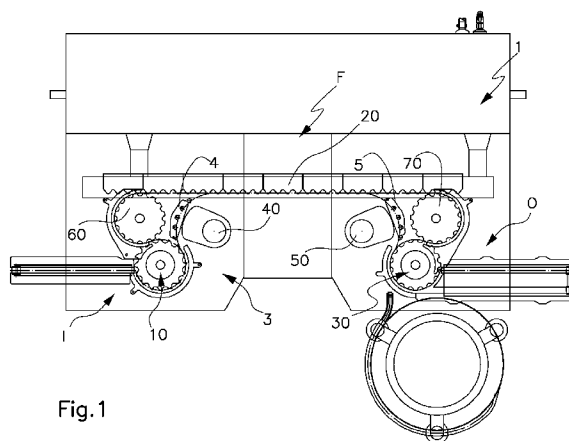


Fig.1

(57) Abstract: The method for weighing in a machine for filling containers provides for feeding an ordered sequence of containers (2) along a transport line (3) having curvilinear development defined by at least a first rotating distribution member (10) of the containers (2) to be filled, a linear conveying member (20) arranged downstream of the first rotating distribution member (10) and passing through said filling station (F), at least a second rotating distribution member (30) of the filled containers (2) arranged downstream of the linear conveying member (20). An empty container (2) weighed is inserted into the linear conveying member (20), in correspondence with an opening determined by collecting the same container (2) to be weighed from the transport line (3). The same container (2) weighed when empty, subsequently filled with a measured amount of product, is then collected from the linear conveying member (20) and transferred to second weighing means (85). The filled container (2) weighed is inserted into the second rotating distribution member (30), in correspondence with an opening determined by collecting the same container (2) from the transport line (3).



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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2008/053910

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01G15/00 G01G17/00 B65B1/46 B67C3/20

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)

G01G B65B B67C

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, 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 2007/003407 A (IMA SPA [IT]; TREBBI CLAUDIO [IT]; GABUSI GABRIELE [IT]; BECHINI CLAUD) 11 January 2007 (2007-01-11) cited in the application page 2, line 17 - page 4, line 27 page 5, line 31 - page 7, line 20 page 8, line 6 - page 9, line 26 page 10, line 35 - page 11, line 3 figures 1-8 ----- -/--	1-6



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 document 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)

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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 March 2009

Date of mailing of the international search report

27/05/2009

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

Koch, Florian

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2008/053910

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/05485 A (TAKEDA CHEMICAL INDUSTRIES LTD [JP]; YANO HIROYUKI [JP]; KISHIMOTO JOT) 22 February 1996 (1996-02-22) page 8, line 3 - page 9, line 22 page 20, line 2 - page 22, line 4 page 24, line 13 - page 28, line 8 page 32, line 7 - page 33, line 22 figures 1,2A,5A,5B -----	1-6
X	EP 1 647 484 A (MARCHESINI GROUP SPA [IT]) 19 April 2006 (2006-04-19) the whole document -----	1-6
A	EP 1 582 193 A (MG2 S R L [IT]) 5 October 2005 (2005-10-05) paragraph [0003] paragraph [0008] - paragraph [0012] paragraph [0013] - paragraph [0016] figures 1-3 -----	1,3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2008/053910

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 allsearchable 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 reportcovers 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.:

1-6

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: 1-6

Method and apparatus for weighing in a machine for filling containers with a transport line having curvilinear development

2. claims: 7-13, 15

Apparatus for weighing in a machine for filling containers with precision weight measurements.

3. claim: 14

Apparatus for weighing in a machine for filling containers with save transport on a linear conveying member.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2008/053910

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 2007003407	A	11-01-2007	EP	1941249 A1	09-07-2008
WO 9605485	A	22-02-1996	AU	3193295 A	07-03-1996
EP 1647484	A	19-04-2006	ES	2317124 T3	16-04-2009
			US	2006076078 A1	13-04-2006
EP 1582193	A	05-10-2005	CN	1677067 A	05-10-2005
			DE	602005001643 T2	10-04-2008
			JP	2005292148 A	20-10-2005
			US	2005230000 A1	20-10-2005