



- (51) **International Patent Classification:**
B65B 25/00 (2006.01) *B65G 47/86* (2006.01)
B65B 35/16 (2006.01) *A23G 3/12* (2006.01)
B65B 35/26 (2006.01) *A23G 3/56* (2006.01)
B65B 35/58 (2006.01)
- (21) **International Application Number:**
PCT/EP2015/060941
- (22) **International Filing Date:**
19 May 2015 (19.05.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
14169067.7 20 May 2014 (20.05.2014) EP
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- (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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).
- 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))

(54) **Title:** TRANSFER WHEEL BETWEEN A LOLLIPOP FORMING AND A LOLLIPOP WRAPPING UNIT

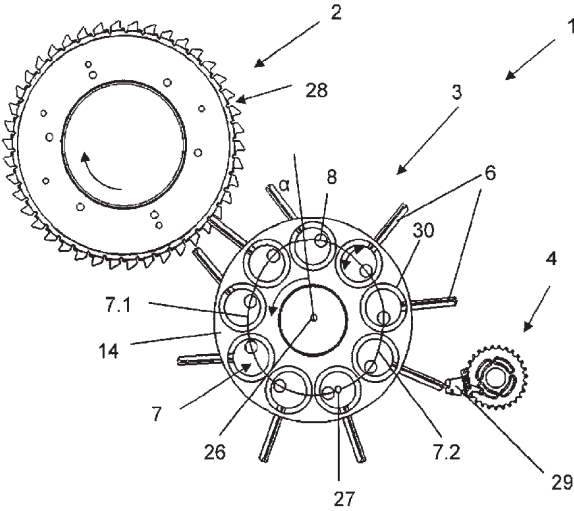


Fig. 1

(57) **Abstract:** The present invention relates to a lollipop production and down-stream processing apparatus (1) with a forming unit (2) and a down-stream processing unit (4) and a transfer wheel (3) in between the units (2,4) which rotates around a first axis (26) and which comprises a multitude of grippers (6) which releasably hold the stick of the lollipop and which rotate relative to the transfer wheel (3) around a second axis of rotation (27) parallel to the first axis of rotation (26). The present invention further relates to a method to transfer a lollipop from a forming unit (2) to a down-stream processing unit (4) by means of a transfer wheel (3) which rotates around an axis of rotation (26) and which comprises a multitude of grippers (6), each gripping the stick of a lollipop and taking it out of the holding means of the forming unit (2) and handing it over to the holding means of a down-stream processing unit (4).

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

To:

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ERLANGEN

31. Aug. 2016

KUTZENBERGER WOLFF & PARTNER
FRIST:

Date of mailing
(day/month/year)

29.08.2016

Applicant's or agent's file reference
CI0523-WO

IMPORTANT NOTIFICATION

International application No.
PCT/EP2015/060941

International filing date (day/month/year)
19.05.2015

Priority date (day/month/year)
20.05.2014

Applicant
GEA Food Solutions Weert B.V.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CI0523-WO	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2015/060941	International filing date (<i>day/month/year</i>) 19.05.2015	Priority date (<i>day/month/year</i>) 20.05.2014	
International Patent Classification (IPC) or national classification and IPC INV. B65B25/00			
Applicant GEA Food Solutions Weert B.V.			
1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>11</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ (<i>sent to the applicant and to the International Bureau</i>) a total of <u>4</u> sheets, as follows: ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions). ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4bis, 70.2(e), 70.16 and 91.2). ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No. I and the Supplemental Box (see Rule 70.16(b)). b. ☐ (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing, in the form of an Annex C/ST.25 text file, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3ter of Annex C of the Administrative Instructions).			
4. This report contains indications relating to the following items: ☒ Box No. I Basis of the report ☐ Box No. II Priority ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability ☒ Box No. IV Lack of unity of invention ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement ☐ Box No. VI Certain documents cited ☒ Box No. VII Certain defects in the international application ☒ Box No. VIII Certain observations on the international application			
Date of submission of the demand 08.03.2016		Date of completion of this report 29.08.2016	
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Fax: +49 89 2399 - 4465		Authorized officer Vassoille, Philippe Telephone No. +49 89 2399-5678	



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2015/060941

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a) and (b))
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-10 as originally filed

Claims, Numbers

1-10 filed with telefax on 08-06-2016

Drawings, Sheets

1/8-8/8 as originally filed

- ☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and (c-bis)):
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
5. ☐ This report has been established:
- ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-bis) and 70.2(e)).
 - ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91(Rules 66.4bis and 70.2(e)).

**INTERNATIONAL PRELIMINARY REPORT
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6. ☒ With regard to top-up searches (Rules 66.1 *ter* and 70.2(f)):
- ☒ A top-up search was carried out by this Authority on 17.08.2016 (all discovered documents are listed in the Supplemental Box Relating to Top-up Search).
 - ☐ Additional relevant documents have been discovered during the top-up search.
 - ☐ No top-up search was carried out by this Authority because it would serve no useful purpose.
7. ☐ Supplementary international search report(s) from Authority(ies) has/have been received and taken into account in establishing this report (Rule 45bis.8(b) and (c)).

* If item 4 applies, some or all of those sheets may be marked "superseded".

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 7-10
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*).
 - ☒ no international search report has been established for the said claims Nos. 7
 - ☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:
 - ☐ furnish a sequence listing in the form of an Annex C/ST.25 text file, and such listing was not available to the International Preliminary Examining Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.
 - ☐ furnish a sequence listing on paper or in the form of an image file complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Preliminary Examining Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.
 - ☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rules 13*ter*.1(a) or (b) and 13*ter*.2.
 - ☒ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2015/060941

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has, within the applicable time limit:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest and, where applicable, the protest fee.
 - ☐ paid additional fees under protest but the applicable protest fee was not paid.
 - ☐ neither restricted the claims nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☐ complied with.
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-6.

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-6</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>2</u>
	No: Claims	<u>1, 3-6</u>
Industrial applicability (IA)	Yes: Claims	<u>1-6</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY REPORT
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International application No.
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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1 **Re Item III**

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

- 1.1 Claims 7-10 belong to a group of inventions (see **Re Item IV** below) for which search fees were not paid (claim 7) and which therefore were not searched. As such no opinion for these claims will be given with regard to novelty, inventive step and industrial applicability.

2 **Re Item IV**

Lack of unity of invention

- 2.1 Reference is made to the following documents:

- D1 WO 2006/108782 A1 (CFS WEERT BV [NL]; ASMA SEFERINUS JELLE [NL]) 19 October 2006 (2006-10-19)
- D2 US 3 272 152 A (WILLIAMS SHAFTER L) 13 September 1966 (1966-09-13)

- 2.2 This Authority considers that the application does not meet the requirements of unity of invention and that there are 2 inventions covered by the 2 independent claims indicated as follows:

group of claims 1-6:

relates to changing a radial extension of the grippers

group of claims 7-10

relates to rotating the gripper around an axis perpendicular to the axis of rotation of the transfer wheel

- 2.3 The reasons for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:

The technical features common to independent claim 1 and independent claim 9 are: a "lollipop production and wrapping apparatus with a forming unit rotating around an axis in one direction and a down-stream processing unit and a transfer wheel in between the units which rotates in a direction opposite to the direction of rotation of the forming unit around a first axis, which is parallel to the axis of the forming unit which comprises a multitude of grippers which releasably hold the stick of a lollipop"

The closest prior art has been identified as D2 and discloses:

A "lollipop production and wrapping apparatus (figure 1, 2, 120) with a forming unit (52) rotating around an axis in one direction and a down-stream processing unit (105) and a transfer wheel (102) in between the units which rotates in a direction opposite to the direction of rotation of the forming unit around a first axis, which is parallel to the axis of the forming unit (see arrows on figure 2 indicating opposite rotation directions for the forming unit (52) and the transfer wheel (102))"

The technical features common to claim 1 and to claim 7 therefore differ from this known apparatus (and associated method) in that the transfer wheel comprises a multitude of grippers which releasably hold the stick of a lollipop.

The problem to be solved may therefore be regarded as how to modify D2 in order to improve the transfer of the lollipops.

The solution proposed cannot be considered to involve an inventive step (Article 33(3) PCT). D1 discloses a lollipop production and wrapping apparatus ((1) in figure 1) with "a lollipop feeder, "a down-stream processing unit (wrapping means 9, 10, 11) and a transfer wheel (8) in between the units which rotates around a first axis ((S2) in figures 1-4) and which comprises a multitude of grippers (30) which hold the stick of the lollipop. Faced with the problem of improving the transfer of lollipops, the skilled person would replace the transfer wheel of D2 with the transfer wheel of D1 with a multitude of grippers and arrive at the lollipop production and wrapping apparatus of the preamble of claim 1. The features common to claim 1 and claim 7 are not considered as being inventive.

It follows that:

- the following technical feature of claim 1 makes a contribution over the prior art and can be considered as a potential special technical feature within the meaning of Rule 13.2 PCT: the grippers move eccentrically relative to the transfer wheel around a second axis of rotation parallel to the first axis of rotation, wherein the eccentric motion of the gripper changes the radial extension of each gripper out of the transfer wheel and/or its angle relative to the transfer wheel. The problem to be solved by this technical feature is how to adapt the position of the gripper to the upstream and/or downstream processing units.

- the following technical feature of claim 7 makes a contribution over the prior art and can be considered as a potential special technical feature within the meaning of Rule 13.2 PCT: the lollipops are turned by 180° around an axis perpendicular to the axis of rotation of the transfer wheel while the lollipop is transferred from the forming to the downstream processing unit. The problem to be solved by this technical feature is how to change the orientation of the lollipop.

Consequently, neither the objective problem underlying the subjects of the claimed inventions, nor their solutions defined by the potential special technical features allow for a relationship to be established between the said inventions, which involves a single general inventive concept.

- 2.4 In conclusion, the groups of claims are not linked by common or corresponding special technical features and define 2 different inventions not linked by a single general inventive concept.

The application, hence does not meet the requirements of unity of invention as defined in Rules 13.1 and 13.2 PCT.

3 **Re Item VIII**

Certain observations on the international application

- 3.1 The application does not meet the requirements of Article 6 PCT, because claim 6 is not clear. In claim 6, the feature of the 'drive unit of the gripper' is first defined. It is not clear which motion of the gripper this drive unit intends to control (around the second axis of rotation or the third axis of rotation). Furthermore it is not clear if the 'drive unit' of the gripper is different to the drive unit defined in claim 5.

4 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

4.1 **Independent claim 1**

- 4.1.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step in the sense of Article 33(3) PCT.
- 4.1.2 D2 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses:

- 4.1.3 A "lollipop production and wrapping apparatus (figure 1, 2, 120) with a forming unit (52) rotating around an axis in one direction and a down-stream processing unit (105) and a transfer wheel (102) in between the units which rotates in a direction opposite to the direction of rotation of the forming unit around a first axis, which is parallel to the axis of the forming unit (see arrows on figure 2 indicating opposite rotation directions for the forming unit (52) and the transfer wheel (102))"
- 4.1.4 The subject-matter of claim 1 therefore differs from this known apparatus in that the transfer wheel comprises a multitude of grippers which releasably hold the stick of the lollipop and which move relative to the transfer wheel, preferably around a second axis of rotation parallel to the first axis of rotation, wherein the motion of the gripper changes the radial extension of each gripper out of the transfer wheel and/or its *angle* relative to the transfer wheel.
- 4.1.5 The effect is that the the position of the gripper with relative to the transfer wheel can be radially or angularly adjusted therefore adapting the trajectory of the gripper to the upstream or downstream equipment.
- 4.1.6 The problem to be solved by the present invention may therefore be regarded as how to modify or adapt D2 in order to improve the transfer of the lollipops.
- 4.1.7 The solution proposed in claim 1 of the present application cannot be considered to involve an inventive step (Article 33(3) PCT). D1 discloses a lollipop production and wrapping apparatus ((1) in figure 1) with "a lollipop feeder, "a down-stream processing unit (wrapping means 9, 10, 11) and a transfer wheel (8) in between the units which rotates around a first axis ((S2) in figures 1-4) and which comprises a multitude of grippers (30) which releasably hold the stick of the lollipop and which move eccentrically relative to the transfer wheel (8), around a second axis (S5) of rotation parallel to the first axis (S2) of rotation (page 12, line 31 - page 14, line 2; the second axis (S5) is off-centered relative to the axis of rotation of the transfer wheel) therefore the grippers move eccentrically relative to the transfer wheel) wherein the eccentric motion of the gripper (30) changes the radial extension of each gripper out of the transfer wheel and/or its *angle* relative to the transfer wheel (8) (page 19, line 3 - page 19, line 34; due to the action of the cams 15a, 17a on the wheels 72a,b (figure 5) the gripper can change its radial position or angle relative to the transfer wheel). This mechanism is described on page 19, lines 30-34 as providing the same advantage as in the present application. Furthermore, the skilled person would find in D1 a hint (page 13, lines 22-24) towards a parallel distribution wheel and transfer wheel

configuration and therefore parallel wheel axes (such as in D2). The skilled person would therefore find it straightforward to include the transfer wheel of D1 with the grippers capable of changing its radial extension and/or angle relative to the transfer wheel in the apparatus of D2 in order to solve the problem posed and arrive at the subject-matter of claim 1 without the use of inventive skills.

4.2 **Dependent claims 3-6**

4.2.1 Dependent claims 3-6 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons being as follows. The additional features of each of claims 3-6, are either already known from D2 or known in combination with other documents (D1) or are common knowledge such that by combining it with D2, it renders the subject matter of each claim taken independently **not inventive**.

4.2.2 The additional features of claims 3 and 4 are known from D1 (the gripper ((30) figures 3-5) is supported at the transfer wheel (8) by a support with a cam (15a,17a) which interacts with a stationary control curve (the curve of the cam path) with a first (on the side of the distribution wheel (7)) and a second section (on the side of the downstream unit (9); page 18, line 11 - page 19, line 34).

4.2.3 The additional features of claims 5 and 6 are considered one of several straightforward options for driving the different units that the skilled person would choose, in accordance with circumstances, without the use of inventive skills.

4.3 **Dependent claim 2**

The combination of the features of dependent claim 2 is neither known from, nor rendered obvious by, the available prior art. None of the prior art documents found during the search discloses or renders obvious a transfer wheel with a gripper rotating around a third axis of rotation perpendicular to the first one therefore allowing a reorientation of the lollipop on the transfer wheel.

5 **Re Item VII**

Certain defects in the international application

- 5.1 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in D1, D2 is not mentioned in the description, nor are these documents identified therein.

EPO - Munich
31
10. Juni 2016



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DATE:

CI0523-WO/FWdj

June 7, 2016/se

International application no. PCT/EP2015/060941 (WO2015/177111)

GEA Food Solutions Weert B. V.

»Transfer wheel between a lollipop forming and a lollipop wrapping unit«

Regarding the written opinion of the international preliminary examination authority, a new set of claims is herewith submitted and requested to base the further examination on this set of claims.

In the claims the clarity objections raised by the Examiner have been overcome all claims are now directly or indirectly dependent on claim 1 or claim 7.

In the Examiners opinion claim 1 is not inventive over a combination of D1 and D2.

Applicant respectfully disagrees.

Due to the inclusion of the subject matter eccentrically it is now a clear distinction over the D1, because in D1, the grippers do not move eccentrically relative to the transfer wheel but rotate around an axis S5.

Hence, even the combination of D1 and D2 cannot render claim 1 as non-inventive.

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Since the examiner has already accepted the patentability of claim 2, claim 7 which comprises the same subject matters as claim 2 is patentable as well.

If you have any questions or need additional information, please do not hesitate to contact us.



Dr. Oliver Brosch
European Patent Attorney

Encl.

New set of patent claims

Patent claims:

1. Lollipop production and wrapping apparatus (1) with a forming unit (2) rotating around an axis in one direction and a down-stream processing unit (4) and a transfer wheel (3) in between the units (2, 4) which rotates in a direction opposite to the direction of rotation of the forming unit around a first axis (26), which is parallel to the axis of the forming unit and which comprises a multitude of grippers (6) which releasably hold the stick of the lollipop and which move eccentrically relative to the transfer wheel, preferably around a second axis of rotation (27) parallel to the first axis of rotation (26), wherein the eccentric motion of the gripper changes the radial extension of each gripper out of the transfer wheel and/or its angle relative to the transfer wheel (3).
2. Lollipop production and wrapping apparatus (1) according to claim 1, characterized in that the grippers rotate around a third axis of rotation (9) which is perpendicular to the first axis of rotation.
3. Lollipop production and wrapping apparatus (1) according to claims 1 or 2, characterized in that the gripper (6) is supported at the transfer wheel by a support (30) with a cam (8) which interacts with a stationary control curve (7) with a first and a second section (7.1, 7.2).
4. Lollipop production and wrapping apparatus (1) according to claim 3, characterized in that the first section (7.1) controls the movement of the gripper (6) adapted to the gauge and/or gapping of the forming unit and that the second section (7.2) controls the movement of the gripper (6) adapted to the gauge and/or gapping of the down-stream processing unit (4).
5. Lollipop production and wrapping apparatus (1) according to one of the preceding claims ~~or the preamble of claim 1~~, characterized in that the transfer wheel has a drive which is independent from the drives of the forming unit and/or down-stream processing unit (2, 4).

6. Lollipop production and wrapping apparatus (1) according to one of the preceding claims ~~or the preamble of claim 4~~, characterized in that the drive unit (11) of the gripper (6) comprises at least one, preferably two linear drives (12, 13).
7. Method to transfer a lollipop from a forming unit (2) which rotates around a first axis in one direction to a down-stream processing (4) by means of a transfer wheel (3) which rotates in a direction opposite to the direction of rotation of the forming unit around an axis of rotation (26) which is parallel to the axis of the forming unit and which comprises a multitude of grippers (6), each gripping the stick of a lollipop and taking it out of the holding means (28) of the forming unit (2) and handing it over to the holding means (29) of a down-stream processing unit (4), wherein the lollipops are turned by 180° around an axis perpendicular to the axis of rotation (26) of the transfer wheel while the lollipop is transferred from the forming to the down-stream processing unit (2, 4).
8. Method according to claim 7, characterized in that each gripper is slewed relative to the transfer wheel (3) before, while and/or after it has taken the lollipop.
9. Method according to claims 7 or 8 ~~or the preamble of claim 7~~, characterized in that the radial extension of the gripper (6) from the axis of rotation changes during the take over procedure during transfer from the transfer wheel to the downstream processing unit.
10. Method according to one of claims 7 – 9 ~~or the preamble of claim 7~~, characterized in that the transfer wheel rotates independently from the forming unit (2) and/or the packaging unit (4).