

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(PCT Rule 71.1)

Date of mailing
(day/month/year)

06.10.2016

Applicant's or agent's file reference
CASETE-PCT

IMPORTANT NOTIFICATION

International application No.
PCT/EP2015/073948

International filing date (day/month/year)
15.10.2015

Priority date (day/month/year)
17.10.2014

Applicant
Zumex Group S.A.

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.

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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 CASETE-PCT	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2015/073948	International filing date (day/month/year) 15.10.2015	Priority date (day/month/year) 17.10.2014	
International Patent Classification (IPC) or national classification and IPC INV. A23N1/00			
Applicant Zumex Group S.A.			
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>5</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: a. ☒ (sent to the applicant and to the International Bureau) a total of <u>7</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. ☐ (sent to the International Bureau only) 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 09.08.2016		Date of completion of this report 06.10.2016	
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 Acerbis, Giorgio Telephone No. +49 89 2399-6895 	

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2015/073948

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, 4, 5 as originally filed
2, 3 filed with the letter of

09-08-2016

Claims, Numbers

1-6 filed with the letter of

09-08-2016

Drawings, Sheets

1/4-4/4 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
ON PATENTABILITY**

International application No.
PCT/EP2015/073948

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 15.09.2016 (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. 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>1-6</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-6</u>
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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

1 **Re Item V**

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

1.1 Reference is made to the following documents:

- D1 US 2012/024172 A1 (PICHLER JOSEF [AT]) 2 February 2012 (2012-02-02)
- D2 US 5 170 699 A (SENALADA JOSE M M [ES]) 15 December 1992 (1992-12-15)
- D3 BE 713 716 A 16 September 1968 (1968-09-16)

1.2 D1 is regarded as being the prior art closest to the subject-matter of claim 1, and discloses:

1.3 An automatic squeezing machine of the type comprising, as the main squeezing elements, at least one male drum (*ref 3*) and at least one female drum (*ref 2*) with synchronised rotational movement, as drive elements at least one motor and the movement transmission elements (§ 1), wherein it comprises two clearly differentiated modules (*ref 1*) and (*ref 21*), where:
Module 1 (*ref 1*), the drive module, comprises the drive element.
Module 2 (*ref 21*), acting as a block (when disengaging the two nuts, the plate 16 will keep the module 2 as a block), comprises a squeezing unit that in turn comprises:
At least one male drum (*ref 3*).
At least one female drum (*ref 2*).
Engagement elements (*ref 4*) between the module 1 and the module 2, such that when engaged the movement of module 1 is transmitted to module 2 (*fig 2*).

1.4 The subject-matter of claim 1 therefore differs from this known device in that it further comprises:

- 1.5 A support (7) with housings (13) and (14), where this support is a casing to which are connected, preferably in a removable manner, at least the various individual elements of the squeezing unit, such that the support allows at least one rotational degree of freedom in said elements, and is therefore new (Article 33(2) PCT).
- 1.6 The problem to be solved by the present invention may be regarded as how to modify D1 in order to simplify the task of removing the various elements for cleaning.
- 1.7 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: The provision of a casing acting as a support so that the entire module can be removed in an easy way is not disclosed nor suggested in the prior art; the skilled person would have to modify too much, namely to provide on the casing itself some engagement means, in order to arrive at the subject matter claimed.
- 1.8 Claims 2-6 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step. D1 discloses:

2 Re Item VII

Certain defects in the international application

Although claim 1 is drafted in the two-part form, some features are incorrectly placed in the characterising portion (see paragraph 1.3 and 1.5 above), (Rule 6.3(b) PCT).

EXPLANATION LETTER OF AMENDMENTS AND OBSERVATIONS IN RESPONSE TO THE ISR

In order to overcome the objections said in the Written Opinion of the ISA in PCT/EP2015/073948, the applicant answer as follows.

First of all, it is to say that the patent named as D1 in the written opinion is already mentioned in the application. It is mentioned by using its publication number in Spain ES2475147 (T3).

The applicant wants to reproduce here what is said about this document D1:

Patent ES2475147 relates to a squeezing machine of those comprising male and female drums, where in order to simplify the cleaning tasks a removable wall is provided to separate the squeezing area from the machine frame. This removable wall coinciding with the squeezing area prevents the frame from getting dirty.

However, the problem of the complex assembly and removal operations is not solved, since as indicated in the specification the cleaning operations require first removing the case and collector tray from the frame before removing the press rollers and the heads of the punch, as well as the sliding guide for the fruits cut in half and the scraper elements can be removed after being separated from the support. Next the rear wall can be separated from the axles with the guide and spool for the blade, such that the spool can be moved outwards from the guide. The operation is performed in the inverse order to assemble the cleaned parts.

*The invention of the present invention intends to prevent the assembly and removal of each part separately, proposing a squeezing unit in which at least the main elements thereof are interconnected such that they can all be assembled **and removed as a block**.*

It is clear, from claim 1 of the application, as originally filled in Spain, that the main characteristic of the invention is that all main elements of the squeezing unit are interconnected, so those elements configure a block that can be assembled and removed as one only piece separated from module 1 (1) and in that block can be easily manipulated for washing purposes.

That characteristic is said not only in claim 1 as originally filled, but also in description: pag.2 line 20, *"proposing a squeezing unit in which at least the main elements thereof are interconnected such that they can all be assembled and removed as a block"*, pag 3 line 8 *"In a preferred embodiment, module 2 comprises a support in the form of a lateral or enveloping casing, this casing being the supporting element that interconnects the various individual elements of the squeezing unit and facilitates handling them as a block"* pag 3 line 15 *"The invention as described allows a simple, quick and complete separation of the entire squeezing module from the drive module, which greatly simplifies cleaning tasks and therefore greatly improves health and hygiene conditions."* Pag 5 line 5 *"The squeezing module 2 (2) is connected to module 1 such that it can be disengaged from module 1 (1) as a block, thereby facilitating and streamlining the removal and assembly operations for washing, particularly since the squeezing module 2 (2) can be also washed as a block."*

Also in the description it is said that all those squeezing elements are interconnected by the casing pag 5 line 12 *"The casing has two functions: interconnecting the squeezing module 2 (2) acting as a support for the various elements thereof and containing them as a cover."*

The squeezing elements are not interconnected as a block in D1 neither in D2. In D1 or D2 different squeezing elements have to be removed individually for cleaning the machine. In the examined application, the squeezing elements are interconnected so they can be manipulated as a block making much more easy cleaning works. The application is obviously novel.

In order to explain the inventive step of the application, the applicant wants to mention that the casing of the machine has two functions (pag.5 line 12 of the description) *"interconnecting the squeezing module 2 (2) acting as a support for the various elements thereof and containing them as a cover."*

It is to say that the problem to be solved was not only to obtain a way of interconnecting the main squeezing elements, such male and female drums, but also the auxiliary squeezing elements and, at the same time, a cover for the group of elements.

Interconnecting main squeezing elements, could be easy since they all are supported by axles and they all move at once in a synchronized movement.

In the description page 3 line 1 is said about the support that *"...to which are connected, preferably in a removable manner, at least the various individual elements of the squeezing unit, such that the support allows at least one rotational degree of freedom in said elements."*

The problem comes when the applicant wants to interconnect, as a block, the moving main elements and the static auxiliary elements such as a blade, guide means for the fruit or vegetable, elements for ejecting the skin, a cover, filters, vats, skin extraction ducts, fruit or vegetable feeder, a spigot or others.

For interconnecting moving elements and static elements is needed a third element that support both kind of elements. In this case a casing has been used as that kind of third kind of elements.

As it is said in the description (page 5 line 12) the casing has two functions, all elements are fixed to the casing and, on the other hand that casing also acts as a cover avoiding splashes in the squeezing process.

In order to make it more clear, the applicant modifies the claim 1 as follows (changes in bold):

*1. AUTOMATIC SQUEEZING MACHINE of the type comprising, as the main squeezing elements, at least one male drum and at least one female drum with synchronised rotational movement, as drive elements at least one motor and the movement transmission elements, **characterized in that it comprises two clearly differentiated modules (1) and (2), where:***

- 1. Module 1 (1), the drive module, comprises the drive element.*
- 2. Module 2 (2) **acting as a block** that comprises a squeezing unit that in turn comprises:*
 - a. At least one male drum (5).*
 - b. At least one female drum (4).*
- 3. **A support (7) with housings (13) and (14), where this support is a casing to which are connected, preferably in a removable manner, at least the various individual elements of the squeezing unit, such that the support allows at least one rotational degree of freedom in said elements.***
- 4. Engagement elements (3) between the module 1 (1) and the module 2 (2), such that when engaged the movement of module 1 (1) is transmitted to module 2 (2).*

Claim 4 is deleted because the supporting element which is a casing is now featured in claim 1.

All of changes are supported in the description or in the document as originally filled so that the applicant do not add any subject matter that extends beyond the content of the application as originally filed.

Attached to this document, the applicant also files:

1. New set of claims with the new claim one and the deleted claim 4 and the rest of renumbered claims.
2. New page 2 of the description, mentioning D2 and naming D1 as it is identified in the written opinion.
3. New page 3 of the description, where have been deleted some different embodiments of the invention that are not coherent with the new claim 1.

Based on the above explained, we kindly request the EPO as IPEA to reconsider the observations and conclusions raised in the ISR and to issue an IPRP in which the novelty and inventive step of the Patent is recognized.

The applicant is intended to comply with all PCT requirements, we request a further opportunity to file observations and amendments if required according to the examiner opinion before issuing the final IPRP.

CLAIMS

1. AUTOMATIC SQUEEZING MACHINE of the type comprising, as the main squeezing elements, at least one male drum and at least one female drum with synchronised rotational movement, as drive elements at least one motor and the movement transmission elements, characterized in that it comprises two clearly differentiated modules (1) and (2), where:
- 5
1. Module 1 (1), the drive module, comprises the drive element.
 2. Module 2 (2) acting as a block that comprises a squeezing unit that in turn comprises:
 - a. At least one male drum (5).
 - b. At least one female drum (4).

10

 3. A support (7) with housings (13) and (14), where this support is a casing to which are connected, preferably in a removable manner, at least the various individual elements of the squeezing unit, such that the support allows at least one rotational degree of freedom in said elements.
 4. Engagement elements (3) between the module 1 (1) and the module 2 (2), such that
15 when engaged the movement of module 1 (1) is transmitted to module 2 (2).
2. AUTOMATIC SQUEEZING MACHINE according to claim 1 characterized in that the squeezing unit comprises some of the following auxiliary elements: blade (6), guide (9), skin extractors (10), filter (12), vat (11), turner, skin extraction ducts, fruit or vegetable feeder, or spigot.
3. AUTOMATIC SQUEEZING MACHINE according to claim 2 characterized in that the auxiliary
20 elements are interconnected to the support.
4. AUTOMATIC SQUEEZING MACHINE according to claims 1 and 3 characterized in that the interconnection between the squeezing unit elements and the casing is not permanent.
5. AUTOMATIC SQUEEZING MACHINE according to claim 1 characterized in that the engagement elements between module 1 (1) and module 2 (2) comprise the shafts (3) that are inserted in the
25 male (5) and female (6) drums.
6. AUTOMATIC SQUEEZING MACHINE according to claim 1 characterized in that it comprises means for securing (8) and attaching said module to each other.

It is the case of the patent BE713716.

To solve the aforementioned problem, patent ES2389890T3 describes an extraction lock comprising an element that acts as a stop for the squeezing drums, where said stop is removably attached directly to the frame.

- 5 Said patent simplifies the attachment and releasing tasks, as the same element provides a stop for all drums such that when said element is attached, all the drums are secured, and when removed all drums are released and can be removed.

However, it is still necessary to assemble and remove each drum individually, which hinders and slows down the cleaning operations and can lead to losing drums.

- 10 Patent ES2475147 (also known as US2012/024172) relates to a squeezing machine of those comprising male and female drums, where in order to simplify the cleaning tasks a removable wall is provided to separate the squeezing area from the machine frame. This removable wall coinciding with the squeezing area prevents the frame from getting dirty.

- However, the problem of the complex assembly and removal operations is not solved, since as indicated in the specification the cleaning operations require first removing the case and collector tray from the frame before removing the press rollers and the heads of the punch, as well as the sliding guide for the fruits cut in half and the scraper elements can be removed after being separated from the support. Next the rear wall can be separated from the axles with the guide and spool for the blade, such that the spool can be moved outwards from the guide. The operation is performed in the inverse order to assemble the cleaned parts.
- 15
- 20

The invention of the present invention intends to prevent the assembly and removal of each part separately, proposing a squeezing unit in which at least the main elements thereof are interconnected such that they can all be assembled and removed as a block.

DESCRIPTION OF THE INVENTION

- 25 To overcome the aforementioned drawbacks and allow a simple assembly and removal of the individual elements of the squeezing unit for cleaning thereof, the invention proposed relates to an improved squeezing machine comprising two independent modules related by at least a transmission or gearing.

Module 1 comprises the drive elements, and can also comprise other auxiliary elements such as electric, electronic, transmission or gearing elements, among others.

Module 2 comprises a support to which are connected, preferably in a removable manner, at least the various individual elements of the squeezing group, namely the male and female drums,
5 such that the support allows at least one rotational degree of freedom in said elements.

Modules 1 and 2 are engaged such that the movement of module 1 is transmitted to module 2.

In addition, module 2 can comprise auxiliary squeezing elements such as a blade, guide means for the fruit or vegetable, elements for ejecting the skin, a turning element, a cover, filters, vats, skin extraction ducts, fruit or vegetable feeder, a spigot or others.

10 In a preferred embodiment, module 2 comprises a support in the form of a lateral or enveloping casing, this casing being the supporting element that interconnects the various individual elements of the squeezing unit and facilitates handling them as a block.

The invention as described allows a simple, quick and complete separation of the entire squeezing module from the drive module, which greatly simplifies cleaning tasks and therefore greatly
15 improves health and hygiene conditions.

In addition to the connection transmitting the movement from the drive module to the squeezing module, the two modules can be joined by auxiliary connections such as locks and closures to prevent the accidental separation of the modules, electrical connections for disconnecting the drive module when separated from the squeezing unit, or of any other type meant to increase the
20 safety of use of the machine.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 shows the drive module 1 (1) and the squeezing module 2 (2) engaged to each other, also showing the rotary female drums (4) and male drums (5). Also visible is the casing (7) that contains the various individual elements of the squeezing unit, as well as the safety elements (8).
25 Also visible are other auxiliary elements such as the blade (6), the guide (9), the skin extractor (10), vat (11), filter (12) and fruit feeder (19).

FIGURE 2 is an exploded view of the squeezing module (2) showing the casing (7) that comprises the bearings (13) which support an on which revolve the female drums (4), the housings (14) for