



(51) International Patent Classification:

A01G 9/08 (2006.01) B25J 15/00 (2006.01)  
A01H 4/00 (2006.01)

(21) International Application Number:

PCT/EP2024/066453

(22) International Filing Date:

13 June 2024 (13.06.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2035082 13 June 2023 (13.06.2023) NL

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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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available):

ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

(54) Title: SYSTEM AND METHODS FOR PROCESSING PLANT MATERIAL

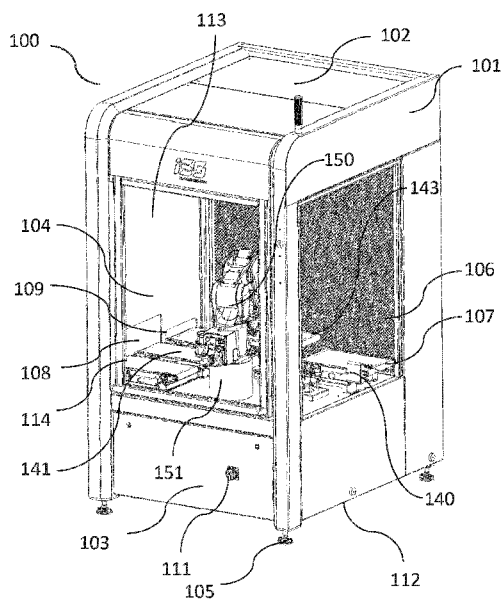


Figure 1

(57) Abstract: The present invention discloses a system (100) for processing plant material, such as sprouts and explants, and comprises a plant supply unit (140) which comprises a platform (204) that supports supplied plant material. The system further comprises a container supply unit (141) for supply containers preferably having a bottom with walls and an open top. The system further comprises a pick-and-place robot (150) for picking individual plant material, the pick and place robot comprising a grasping element for grasping the plant material, wherein the grasping element has elongated rods for grasping individual plant material between ends of the rods. In this system, the pick-and-place robot is arranged to pick supplied individual plant material from the platform and to place the individual plant material in the container. In this system, the pick-and-place robot is also arranged to place the individual plant material having a predetermined orientation, preferably root downwards, in the container.



**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:**

16 January 2025 (16.01.2025)

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2024/066453

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV.    A01G9/08                    A01H4/00                    B25J15/00 ADD.				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) <b>A01G C12N B25J A01H</b>				
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)  <b>EPO-Internal</b>				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	US 2018/007842 A1 (VAN DER EL WIM [NL]) 11 January 2018 (2018-01-11) paragraphs [0068] - [0082], [0086] - [0094], [0114], [0140]; figures 1-4,8a-8j -----	1-22		
A	US 2017/318753 A1 (TEASDALE ROBERT DIXON [AU]) 9 November 2017 (2017-11-09) paragraph [0065]; figure 1 -----	1-3,12, 14		
A	US 2016/376604 A1 (MCCARTY II DONALD L [US] ET AL) 29 December 2016 (2016-12-29)  paragraph [0087]; figures 1-3,21 ----- -/-	1,9,10, 12,13, 20,21		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.</td> <td style="width: 50%; border: none;"><input checked="" type="checkbox"/> See patent family annex.</td> </tr> </table>			<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> 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	Date of mailing of the international search report			
<b>18 November 2024</b>	<b>09/12/2024</b>			
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  <b>Dagnelies, Joëlle</b>			

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2024/066453

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2019/183078 A1 (VON RUNDSTEDT FRIEDERIKE [DE] ET AL) 20 June 2019 (2019-06-20) paragraphs [0007], [0012], [0014], [0023] - [0030]; claim 8; figures 1-3 -----	1, 23
X	US 2019/193284 A1 (ADAMS GREGORY W [CA] ET AL) 27 June 2019 (2019-06-27) paragraphs [0136] - [0140], [0149]; claim 40; figures 1-5 -----	1, 23

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2024/066453

## 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 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.:
  
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: 1-22

System for processing plant material in a clean environment  
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2. claim: 23

System for processing plant material with a platform  
rotatable around a vertical axis  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/EP2024/066453
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