



(51) International Patent Classification:

A01G 9/16 (2006.01) A01G 31/06 (2006.01)  
A01G 31/02 (2006.01) A01G 9/20 (2006.01)

(21) International Application Number:

PCT/IB2018/052752

(22) International Filing Date:

20 April 2018 (20.04.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

92101 13 April 2018 (13.04.2018) PA

(71) Applicant: **TINKERALL** [PA/PA]; Centro Comercial Los Pueblos, Local 32E3, Av. José Agustín Arango. Juan Díaz, Ciudad De Panamá (PA).

(72) Inventors: **CHONG LOO, Elena**; Centro Comercial Los Pueblos, Local 32E3, Electronica Hong Kong II, al lado de Nikos y C.S.S., Ciudad De Panamá (PA). **TONG ZHANG,**

**Manuel Alejandro**; Centro Comercial Los Pueblos, Local 32E3, Electronica Hong Kong II, al lado de Nikos y C.S.S., Ciudad De Panamá (PA). **CHEUNG YAU, Lucía**; Centro Comercial Los Pueblos, Local 32E3, Electronica Hong Kong II, al lado de Nikos y C.S.S., Ciudad De Panamá (PA). **QIU LIU, Jaime Eric**; Centro Comercial Los Pueblos, Local 32E3, Electronica Hong Kong II, al lado de Nikos y C.S.S., Ciudad De Panamá (PA).

(74) Agent: **BENEDETTI V., Ramón**; Edificio Comosa, piso19, situado en las Avenidas Samuel Lewis y María Ycaza, Panamá (PA).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, 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,

(54) Title: DOMESTIC AUTONOMOUS VERTICAL FARM THAT IS MOVEABLE IN STACKABLE UNITS

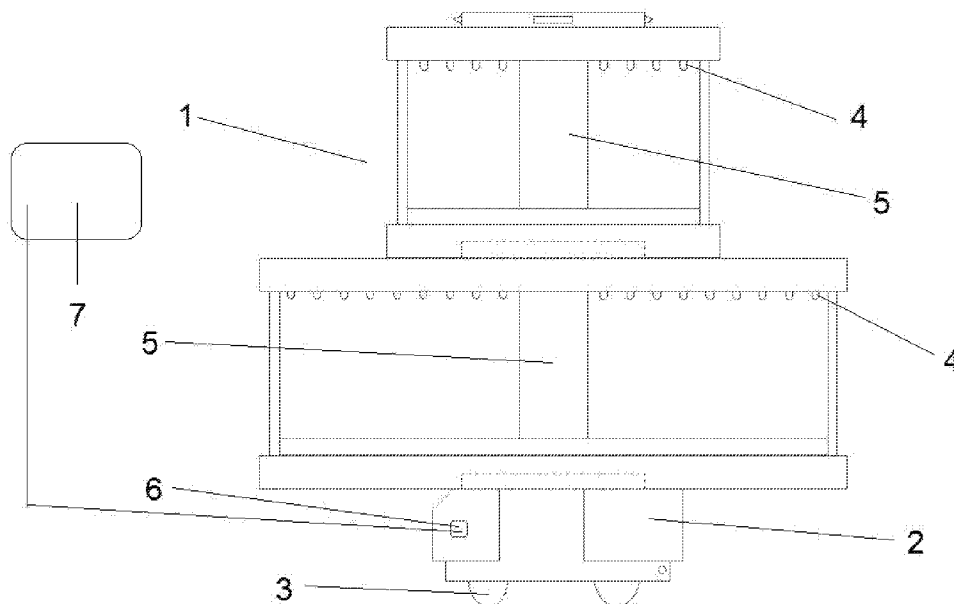


FIG. 1

(57) Abstract: The invention relates to a domestic autonomous vertical farm that is moveable in stackable units comprising: - a central structure that in turn comprises: - a base provided with movement means, - lighting means, - conduits for supplying water, and - a plurality of sensors, - a control unit to control the movement means, lighting means and the water supply based on the information received by the sensors, to which it is connected, and - a plurality of modular units, connected to each other and to the central structure, for housing the plants being grown.



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))*
- *upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*

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

25 October 2018 (25.10.2018)

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 18/52752

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A01G 9/16, A01G 31/02, A01G 31/06, A01G 9/20 (2018.01)

CPC - A01G 22/00, A01G 9/16, A01G 31/00, A01G 31/02, A01G 31/06, A01G 7/00, A01G 9/00, A01G 9/02, A01G 9/20, A01G 9/24

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)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History Document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History Document

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017/0099791 A1 (Joseph et al.) 13 April 2017 (13.04.2017), entire document, especially Fig. 1, 2, 3, 4, 5, 6, 7, 9.1-9.5, 10; para[0061]; para[0062]; para[0064]; para[0069]; para[0074]; para[0068]; para[0065];	1-4
A	US 2014/0196363 A1 (Fung Gih Da Energy Science and Technology Co., Ltd.) 17 July 2014 (17.07.2014), entire document	1-4
A	US 2016/0100530 A1 (Hwang) 14 April 2016 (14.04.2016), entire document	1-4
A	WO 2015/105426 A1 (AARTS) 16 July 2015 (16.07.2015), entire document	1-4
A	US 7,549,250 B2 (Feuz) 23 June 2009 (23.06.2009), entire document	1-4
A	US 2002/0040548 A1 (Ware) 11 April 2002 (11.04.2002), entire document	1-4

 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 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

26 July 2018

Date of mailing of the international search report

08 AUG 2018

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. 571-273-8300

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774