

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 November 2021 (25.11.2021)



(10) International Publication Number
WO 2021/236012 A1

- (51) **International Patent Classification:**
A01G 9/24 (2006.01) *A01G 31/00* (2018.01)
- (21) **International Application Number:**
PCT/SG2021/050273
- (22) **International Filing Date:**
19 May 2021 (19.05.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
10202004666U 19 May 2020 (19.05.2020) SG
- (71) **Applicant: RIPE FRESH PTE. LTD.** [SG/SG]; 531A Upper Cross Street, #04-95, Hong Lim Complex, Singapore 051531 (SG).
- (72) **Inventor: YUNG, Ken Hoe, Paul;** Unit 1-10-9, Amaya Saujana Condominiums, Persiaran Golf, Seksyen U2, Shah Alam, 40150 (MY).
- (74) **Agent: DAVIES COLLISON CAVE ASIA PTE. LTD.;** 10 Collyer Quay #07-01, Ocean Financial Centre, Singapore 049315 (SG).
- (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, IT, 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, 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, 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,

(54) **Title:** SYSTEM FOR CULTIVATION OF PLANTS

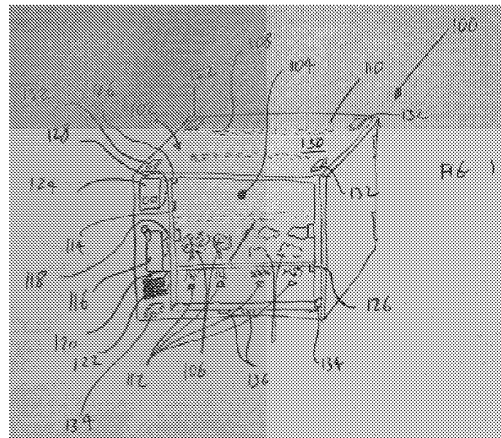


Figure 1

(57) **Abstract:** This disclosure relates generally to urban agriculture, and more particularly, to systems and methods for the cultivation of plants. The invention can be adjusted to meet plant specific conditions for optimal growth and is enclosed for more efficient control of the plants environment. Different variables such as temperature, air quality, light intensity, humidity and frequency of dispensing nutrients can be detected by various sensors within the invention and controlled from a display screen on the invention or a mobile application. The system includes an enclosure for enclosing an environment, environment conditioner(s) for controlling condition(s) of the environment, and sensor(s) for sensing the condition(s). A controller is provided for receiving sensor measurements and producing an output based on a comparison between the measurements and corresponding value(s) of a desired growing environment, and the conditioner(s) are controlled based on the output.

[Continued on next page]



WO 2021/236012 A1

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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*
— *in black and white; the international application as filed
contained color or greyscale and is available for download
from PATENTSCOPE*