



(51) International Patent Classification:

A01M 1/02 (2006.01) *G06K 9/62* (2006.01)
A01M 1/04 (2006.01) *G06N 20/00* (2019.01)
A01M 1/08 (2006.01) *G06Q 30/06* (2012.01)
G01N 21/84 (2006.01)

(21) International Application Number:

PCT/IB2020/055427

(22) International Filing Date:

09 June 2020 (09.06.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant: **RYNAN TECHNOLOGIES PTE. LTD.**
[SG/SG]; 60 Paya Lebar Road, 05-57, Paya Lebar Square
409051 (SG).

(72) Inventors; and

(71) Applicants (for US only): **NGUYEN, My T.** [CA/VN];
Long Tri Hamlet, Long Duc Ward, Tra Vinh City, Tra Vin
Province (VN). **HONG, Cuong Q.** [VN/VN]; No. 416A,
Nguyen Thi Minh Khai Street, Ward 7, Tra Vinh City, Tra
Vinh Province (VN). **TRAN, Toan Q.** [VN/VN]; Ham-
let 6A, An Truong Ward, Cang Long District, Tra Vinh
Province (VN). **SON, Phuong H.** [VN/VN]; Thanh Nguyen
A Hamlet, My Chanh Ward, Chau Thanh District, Tra
Vinh Province (VN). **PHAM, Luom H.** [VN/VN]; Phu
Hung Hamlet, Hoa Phu Ward, Long Ho District, Vinh Long
Province (VN). **PHAN, Quy M.** [VN/VN]; No. 66, Long
Binh Hamlet, Ward 4, Tra Vinh City, Tra Vinh Province
(VN).

(74) Agent: **FASKEN MARTINEAU DUMOULIN LLP**; 800
Victoria Square - Suite 3500, P.O. Box 242, Montreal,
Québec H4Z 1E9 (CA).

(54) Title: INSECT MONITORING SYSTEM AND METHOD

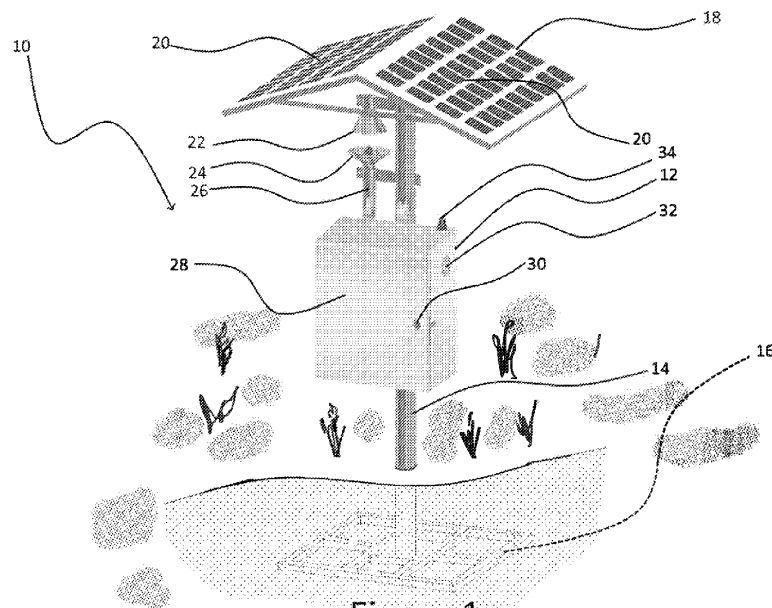


Figure 1

(57) **Abstract:** An insect monitoring system (ISM), method of operating and related e-commerce system are provided. The ISM includes an insect attracting light, an intake, a channel between intake and exhaust, an insect collecting net (ICN) in the channel, a fan for airflow in the channel, and one or more cameras pointed on the ICN. The insect attracting light and the fan are activated such that insects are drawn into the intake and trapped against the ICN. The cameras acquire images of the ICN. The images are processed and analyzed using a machine learning algorithm to recognize a type and number of insects. Recommendations are provided based on the analysis. In some aspects, the insect monitoring system is connected to electronic devices over a communication network. The electronic devices are provided with an e-commerce application for sale of products and services responsive to the recommendations or otherwise marketable to the user.

[Continued on next page]

(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, 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, 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))