

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 September 2022 (22.09.2022)



(10) International Publication Number
WO 2022/195459 A1

(51) International Patent Classification:

B64D 1/08 (2006.01) *B64D 17/00* (2006.01)
B64C 39/02 (2006.01) *B64D 17/80* (2006.01)
B64D 9/00 (2006.01)

(21) International Application Number:

PCT/IB2022/052290

(22) International Filing Date:

14 March 2022 (14.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/161,302 15 March 2021 (15.03.2021) US

(71) Applicant: AVSS - AERIAL VEHICLE SAFETY SOLUTIONS INC. [CA/CA]; 5 Russell Drive, Quispamsis, New Brunswick E2E 4L5 (CA).

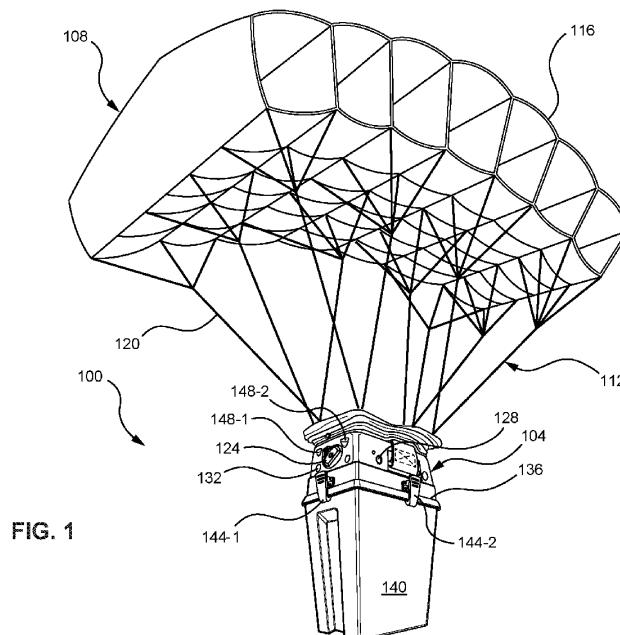
(72) Inventors: BOUDREAU, Joshua; 270 Nepean Street, Ottawa, Ontario K1R 5G3 (CA). PANTA, Ashim; 1 Al-manda Avenue, Roxburgh Park, Melbourne, Victoria 3064

(AU). OGDEN, Joshua; 5 Russell Drive, Quispamsis, New Brunswick E2E 4L5 (CA). O'DARE, Reay; 82 The Boulevard, North Warrandyte, Melbourne, Victoria 3113 (AU). DES COTES, Ryan; 1240 Adirondack Drive, Ottawa, Ontario K2C 2V3 (CA). WATTERS, Robert D.; 294 Atlantis Ave, Ottawa, Ontario K2A 1X6 (CA). BOUCHER, Luc; 1595 Digby St, Ottawa, Ontario K1G 0P5 (CA). MOORE, Thomas; 34 Aldgate Cres, Ottawa, Ontario K2J 2G4 (CA). SIROIS, Michael; 47 Fuller Street, Ottawa, Ontario K1Y 3R9 (CA).

(74) Agent: PERRY, Stephen J. et al.; Perry + Currier, 1300 Yonge Street, Suite 500, Toronto, Ontario M4T 1X3 (CA).

(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, JM, 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,

(54) Title: DRONE PARACHUTE SYSTEMS FOR DELIVERY OR RECOVERY



(57) Abstract: A system for payload delivery and drone recovery, wherein the system functions with the use of a lightweight parachute and a directional control module. The system can include a drop system for payload delivery, wherein the drop system releases the parachute and payload upon reaching a target site. The system can also include a recovery system, wherein the recovery system deploys the parachute and steers the failed drone to a target site. A lightweight ram-air parachute is used to provide a lighter steerable parachute system.

[Continued on next page]

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))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*