

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
05 December 2024 (05.12.2024)



(10) International Publication Number
WO 2024/248929 A2

- (51) **International Patent Classification:**
Not classified
- (21) **International Application Number:**
PCT/US2024/022108
- (22) **International Filing Date:**
28 March 2024 (28.03.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/463,424 02 May 2023 (02.05.2023) US
- (71) **Applicant:** DELHIVERY ROBOTICS LLC [US/US];
1111 Elko Drive Ste H, Sunnyvale, CA 94089 (US).
- (72) **Inventors:** GIBBONEY, Jeff; 538 9th Avenue, Menlo
Park, CA 94025 (US). SINHA, Pranay; 1095 W El Camino
Real Unit 216, Sunnyvale, CA 94087 (US). FORRETTE,
Christopher; 1070 Valley View Rd, Ben Lomond, CA
95005 (US).
- (74) **Agent:** GUTH, Michael, A.; 2-2905 East Cliff Drive, Santa
Cruz, CA 95062 (US).
- (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,

(54) **Title:** RE-CONFIGURABLE VTOL AIRCRAFT

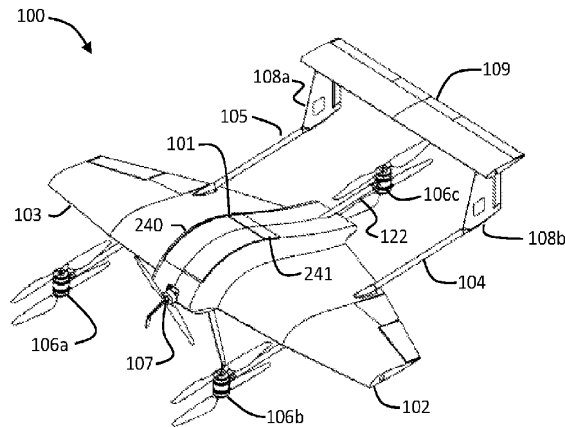


FIG. 1

(57) **Abstract:** A manned/unmanned aerial vehicle adapted for vertical takeoff and landing which is configured to be easily disassembled and reassembled. The aerial vehicle may be assembled with different wings based upon flight needs, which may be based upon cargo mass and flight duration, for example. The aerial vehicle may utilize structural booms within components, and may allow for decoupling of boom sections to facilitate disassembly. The aerial vehicle may utilize electric motors and store power in batteries. A method of customizing a configuration of an unmanned aerial vehicle based upon flight profile factors such as duration, stability, and maneuverability. A method of disassembling an aerial vehicle for storage and/or transport.

[Continued on next page]

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).

Published:

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*