

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
19 August 2021 (19.08.2021)



(10) International Publication Number
WO 2021/162634 A1

(51) International Patent Classification:
F41H 13/00 (2006.01) *B64C 39/02* (2006.01)
F42B 12/56 (2006.01)

(21) International Application Number:
PCT/SG2021/050067

(22) International Filing Date:
10 February 2021 (10.02.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10202001202W 10 February 2020 (10.02.2020) SG

(71) Applicant: **ST ENGINEERING ADVANCED MATERIAL ENGINEERING PTE. LTD.** [SG/SG]; 20 Maxwell Road, #09-17 Maxwell House, Singapore 069113 (SG).

(72) Inventors: **TAN, Yong Peng**; Block 624, Jurong West Street 61, #10-133, Singapore 640624 (SG). **CHOW, Ken Sie, Kency**; Block 463A, Bukit Batok Street 41, #09-15, Singapore 651463 (SG). **POO, Ce Yu**; Block 922, Jurong West Street 92, #06-55, Singapore 640922 (SG). **WOO, Yuen Hoong, Benedict**; Block 336, Tah Ching Road, #10-183, Singapore 610336 (SG). **ANAND, Chandrasekaran**; Block 527, Choa Chu Kang Street 51, #09-279, Singapore 680527 (SG).

(74) Agent: **IPHOUSE PTE. LTD.**; 20 Maxwell Road, #09-17 Maxwell House, Singapore 069113 (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, 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:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

(54) Title: STREAMER LAUNCHER FOR DRONE INTERCEPTION

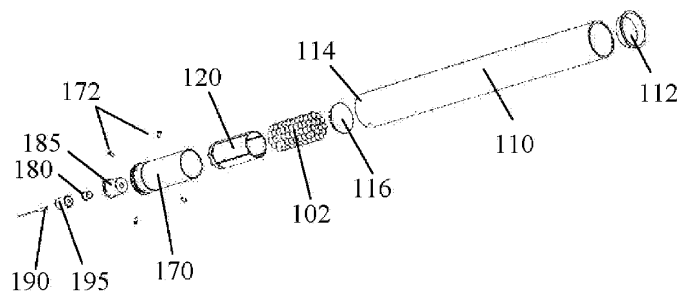


FIG. 1C

(57) Abstract: The present invention describes a drone interception system (10) and a streamer launcher (100) mountable on an interceptor drone (40). With this system, streamers (102) are packed in a streamers pusher (120, 120a-120e); the streamers pusher, in turn, is disposed inside a cartridge case (170). In use, the streamers (102) are propelled out of the streamers pusher (120, 120a-120e) and an associated launch tube (110) to generate a streamer cloud (105) in a flight path of a target propeller-driven drone (60). Contoured impeller surface (160, 160c-160e) formed at an end-face of the base (150, 150a-150e) of the streamers pusher interact with propulsion gases to create rotation. When the target drone (60) enters the streamer cloud (105), propellers of the target drone become entangled with some of the streamers (102) floating in the streamer cloud, thus causing the propellers to mal-function and resulting in the target drone (60) falling non-destructively to the ground.

[Continued on next page]

WO 2021/162634 A1

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