

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
24 June 2021 (24.06.2021)



(10) International Publication Number
WO 2021/126071 A1

(51) International Patent Classification:

B66D 1/50 (2006.01) *B64F 3/02* (2006.01)
B65H 75/48 (2006.01) *B64C 39/02* (2006.01)

(21) International Application Number:

PCT/SG2019/050623

(22) International Filing Date:

18 December 2019 (18.12.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant: **AVETICS GLOBAL PTE. LTD.** [SG/SG]; 47
Ayer Rajah Crescent #07-08, Singapore 139947 (SG).

(72) Inventors: **CHAO, Jang En, Joshua**; 47 Ayer Rajah Cres-
cent #07-08, Singapore 139947 (SG). **HARBIR SINGH,**
Gurbind Singh s/o; 47 Ayer Rajah Crescent #07-08, Sin-

gapore 139947 (SG). **SEE, Peng Wee, Marcus**; 47 Ayer
Rajah Crescent #07-08, Singapore 139947 (SG).

(74) Agent: **YUSARN AUDREY**; 24 Raffles Place, #27-01
Clifford Centre, Singapore 048621 (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, 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, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

(54) Title: A TETHER MANAGEMENT SYSTEM AND METHOD

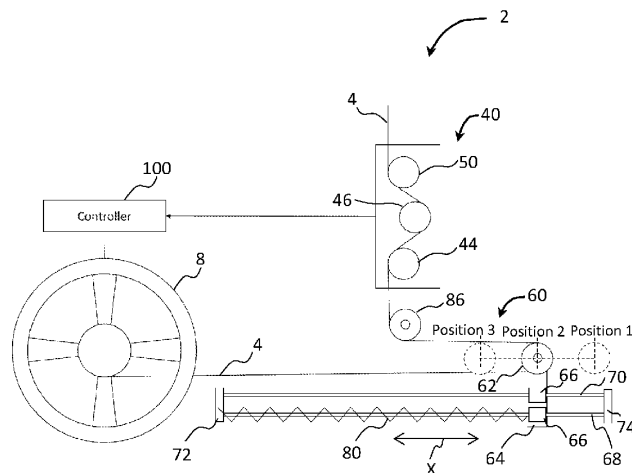


Fig. 1

(57) Abstract: A tether management system is disclosed. The tether management system includes a spool, a tension sensor, a controller and a moveable pulley. The spool is rotatable to reel in and reel out a tether. The tension sensor measures a tension of the tether. The controller receives a desired tension of the tether and controls the rotation of the spool to reel in and reel out the tether based on a difference between a measured tension from the tension sensor and the desired tension of the tether. The moveable pulley is disposed to engage tether between the spool and the tension sensor. The moveable pulley being able to be biased and moveable along a linear path to adjust a tension of the tether when the tension of the tether deviates from the desired tension. A method for managing tether is also disclosed.

[Continued on next page]

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))*
- *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*