



(43) International Publication Date
26 September 2013 (26.09.2013)

- (51) International Patent Classification:
B64C 31/06 (2006.01) *B63B 35/85* (2006.01)
A63H 27/08 (2006.01) *B63H 9/00* (2006.01)
- (21) International Application Number: PCT/IB2013/052157
- (22) International Filing Date: 18 March 2013 (18.03.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 61/614,462 22 March 2012 (22.03.2012) US
- (71) Applicant: OCEAN RODEO SPORTS INC. [CA/CA];
41 Cadillac Avenue, Victoria, British Columbia V8Z 1T3
(CA).
- (72) Inventor: ENSERINK, Anton, Rudolf; Mathenesserlaan
483b/3023, NL-GL Rotterdam (NL).

(74) Agent: THOMSON, Douglas, B; Thompson Cooper LLP,
Suite 201, 1007 Fort Street, Victoria, British Columbia
V8V 3K5 (CA).

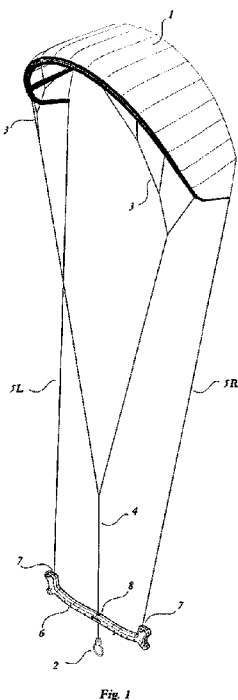
(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, 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,

[Continued on next page]

(54) Title: KITE CONTROL BAR WITH INTEGRATED LINE ADJUSTMENT MEANS

[Fig. 1]



(57) Abstract: A hollow kite control bar is provided with means for sliding access to the bar for one or multiple lines or groups of lines. Each line has one end towards the kite and the other towards the bar. The length of each line between the kite and the bar can be adjusted by pulling into and releasing from the bar, which length or lengths can be locked at multiple positions in one or more locking means fixed to the bar. The excess line length pulled in is automatically held inside the bar.



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, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims and statement (Art. 19(1))

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

(88) Date of publication of the international search report:

5 December 2013

Date of publication of the amended claims and statement:

23 January 2014

AMENDED CLAIMS

received by the International Bureau on 07 November 2013 (07.11.2013)

1. A kite control bar, comprising:
 - a hollow bar;
 - means for sliding access to the bar for one or multiple lines or groups of lines, with each line having one end towards an attached kite and the other towards the bar, with the characteristic that a length between the kite and the bar of each line can be adjusted by pulling in to and releasing from the bar, which length or lengths can be locked at multiple positions in one or more locking means fixed to the bar, whereby excess line length pulled in is automatically held inside the bar; and
 - the bar having a U shaped cross section with an open side away from the kite to facilitate drainage of water and sand, with the lines running inside the U shaped cross section.
2. The kite control bar according to claim 1, with the characteristic that the locking means is a line clamping means.
3. The kite control bar according to claim 1, with the characteristic that adjustment of the length of individual lines or groups of lines are done in discrete steps.
4. The kite control bar according to claim 1, with the characteristics that the lines in a group are joined in such a way that their length is adjusted simultaneously.
5. The kite control bar according to claim 1, with the characteristic that each means for sliding access to the bar of lines forming a group of lines can be located at a different location on the bar.
6. The kite control bar according to claim 1, with the characteristic that a line or group of lines is looped around one or multiple redirecting sliding means fixed to the bar between the means for sliding access and locking means.

7. The kite control bar according to claim 1, with the characteristics that each line or group of lines at their end towards the bar is provided with a stopper.
8. The kite control bar according to claim 7, with the characteristic that each stopper is provided with a control element for convenient operating of a stopper movement and locking and unlocking thereof.
9. The kite control bar according to claim 7, with the characteristic that the bar is provided with one or more arrays of locking means to which the stopper can be locked in discrete steps.
10. The kite control bar according to claim 1, with the characteristic that a line or group of lines at its end towards the bar is retained to the bar by a retaining cord attached to that end.
11. The kite control bar according to claim 10, with the characteristic that the retaining cord is elastic.
12. The kite control bar according to claim 10, with the characteristic that the retaining cord is looped around a retaining sliding means fixed to the bar and attached to one of the lines it retains at a point between the means for sliding access and a stopper at the end of the lines, thus forming a trim loop.
13. The kite control bar according to claim 12, with the characteristics that a pre-tensioning elastic cord is attached to the trim loop in such a way it pulls the stopper against a locking means in order to ensure a minimum tension to keep the stopper locked in a receiving pocket even if there is no or insufficient tension on the kite lines to lock the stopper in a receiving pocket.
14. The kite control bar according to claim 12, with the characteristics that a part of the trim loop containing the stopper runs external to the bar.

15. The kite control bar according to claim 7, with the characteristic that a shape of the bar is slightly curved to improve retaining of stoppers against a locking means.
16. The kite control bar according to claim 1, with the characteristic that a line or group of lines can be wound on a ratcheted reel, which reel is on one side in axial direction mounted to the bar in such a way it can both rotate and pivot, and on the other side in axial direction has a gear and a turning knob, and which pivoting motion is limited to a direction parallel to and away from the wound line or group of lines, and which turning motion is limited by a pawl which is fixed to the bar to the side the of line or group of lines access the reel, all in such a way that the reel can be turned by pivoting the knob away from the pawl to reel the lines or group of lines in or out.
17. The kite control bar according to claim 16, with the characteristic that gears teeth on the gear are slanted to a side that contacts the pawl when the knob is turned the direction that winds the line or group of lines on the reel, while the gears teeth are cut radial to the side that contacts the pawl when the reel is turned in a direction that unwinds the line or group of lines, in such a way the reel cannot turn in the direction that unwinds the lines or group of lines as long as it not pivoted away from the pawl, but can be turned in a direction that winds the line or group of lines to the reel.
18. The kite control bar according to claim 17, with the characteristic that the gear is pressed on to the pawl by a spring element.
19. The kite control bar according to claim 1, with the characteristic that receiving pockets are formed along one or more edges of the open side of the U shaped section.
20. The kite control bar according to claim 1, with the characteristic that the U shaped section is made from a single formed structural part.

21. The kite control bar according to claim 1, with the characteristic that a location of the means for sliding access can be shifted.
22. The kite control bar according to claim 6, with the characteristic that the one or multiple redirecting sliding means is a sheave.

STATEMENT UNDER ARTICLE 19

The Applicant has taken subject matter indicated as allowable in Claim 19 and inserted such subject matter into Claim 1. It is respectfully submitted that this amendment places Claim 1 and all dependent claims in suitable condition for allowance. Paragraphs 13, 14 and 16 of the present application describe how sand and water can cause failures of prior art hollow kite control bar mechanisms. Support for the subject matter of former Claim 19 (now part of Claim 1) can be found in paragraph 28 of the present application which describes how the use of a hollow kite control bar with a U-shaped cross-section allows for the draining of water and sand. This U-shaped cross-section can be viewed in FIGs 2A, 2B and 3A. The Applicant has concurrently amended all claims to address the formalities objections to the claims set forth in the Written Opinion.