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(54) Control device applied to sporting activities

Steuervorrichtung für Sportaktivitäten

Dispositif de commande appliqué à des activités sportives

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(56) References cited:
WO-A1-2012/026830 DE-U1-202005 000 478
DE-U1-202005 000 708 US-A1- 2006 226 294
US-A1- 2006 237 593 US-A1- 2008 128 558
US-A1- 2008 223 989

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Description

FIELD OF THE INVENTION

[0001] This invention refers to a control device to be applied to sporting activity on water, ground or snow using a board on which the sportsman or surfer stand, a kite and a driving or towing means such as that provided by a motor boat or land vehicle, without the need of constant wind. When the sail is pulled and flown, and steered by the user of the board, the effect is the same as with a kite, that is to say a thrust upwards to make the jumps lighter and to have more time available to manoeuvre or do tricks.

PRIOR ART OF THE INVENTION AND ITS ADVANTAGES

[0002] With regard to the state of the technique or prior art of this invention, the following documents related to patents are to be mentioned: US 6.834.607B1 (Johnson et al) published December 28, 2004, US 7.575.198B2 (Hardhan et al) August 18, 2009, US 2003/0116071A1 (Starbuck) June 26, 2006, US 2011/0309199A1 (Hastilow) December 22, 2011, US 2006/0226294A1 (Logosz et al) October 12, 2006, US 2008/0223989A1 (Mutzemberg) September 18, 2008, and patent US 7.182.294B2 (Blackman) February 27, 2007. Document US-A-2008/0128558 discloses the features of the preamble of claim 1.

[0003] This invention has clear advantages compared to these patent documents such as the lack of need of wind to achieve an upward thrust, it improves the runner safety, it provides more possibilities to perform tricks since it gives more freedom, it is not necessary to have an harness or an ejection system in case of an emergency, solving the emergency situation by releasing the bar, There is also no need to use a power control system in the bar, and most important of all us to be able to have softer falls than in kitesurf or wakeboard, since it is thrust upwardly.

[0004] The invention is defined by the features of claim 1.

[0005] This invention, different from the devices mentioned in the state of the technique, proposes two elements, on one hand a linking body with the most important function, which connects the lines going from the bar to the sail or kite, connecting only one rope to the towing vehicle, and on the other hand two lines going through the linking body movably so that the sportsman can control the kite from one side to the other (buckling or side inclination) when pulling the bar or command from any of the sides. The third line, since it is fixed to this linking body or device, allows both other lines to accomplish their function appropriately, and it also permits the trimming or regulation of the angle of attack or of incidence of the sail or kite while flying, when increasing or reducing its pressure or speed. A second element comprising a

smaller bar enables to re-launch the kite once in the water, when this rests with the leading edge upwardly. When pulling this bar, a more favourable incidence can be obtained for the arrival of the kite to the zenith.

BRIEF DESCRIPTION OF THE FIGURES

[0006] In order to make this invention more comprehensible, it has been illustrated with schematic figures, in a preferred manner of embodiment and as an example for demonstration purposes, where:

Figure 1 shows a scheme of the system for sporting activity wherein the control device of this invention is applied;

Figure 2 shows a perspective view of the control device of this invention.

[0007] In both Figures, same reference numbers correspond to the same elements of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0008] We see in Figure 1 a preferred manner of embodiment of the invention, with a user 1 holding control device 2 proposed in this application, from which cords or control lines 3 spread, stretching out until making contact with the corresponding lines 4 which hold the kite 5 in its furthest end. Likewise, said cords or control lines 3 continue through towing cords or ropes 6 connected to a motor boat 7, or any other motor vehicle used in any other embodiment of this invention. Furthermore an angle formation 8 is also shown, made up between lines 3 linked to the kite and lines or cords 6 connected to the motor vehicle.

[0009] Likewise, in Figure 2 a detailed description of the control device 2 can be observed, which comprises a control shaft 10, from which ends the two lines 11 and 14 spread, one of them (11) converging jointly with the one belonging to the other end of the shaft 10, previously going through a second smaller bar 12, for re-launching, and continuing with a ballast, regulation or trimming element (incidence of the kite) 13.

[0010] Finally, second lines 14 of each end of the control bar 10 go through the substantially spherical elements 15 to re-launch the kite. These spheres 15 provide the grip of lines 14 in the event it is necessary to rotate the sail when this is resting on the water over its leading edge.

[0011] The abovementioned lines 14 stretch until they make contact with bodies, flanges or pulleys 16 able to be moved, and from which left line 4a and right line 4c extend; they continue after said bodies 16 up to binding body 17, to which additionally towing line 6 is linked.

[0012] In other preferred embodiments, spherical elements 15 may not be present although they provide re-launching, the same as the presence of a smaller re-launching bar 12.

[0013] It is essential in the invention the presence of the device or linking body 17, with its three lines, a central fixed one 4b, and two movable lines 4a and 4c that are on the leading edge of the kite 5 to get control of the same, being fundamentally movable, and directed to each end of the kite 5, near the trailing edge.

[0014] As regards angle 8, the same can be modified so that the kite 5 pushes forwardly horizontally or more upwardly vertically and consequently jumps and water release is easier for beginners. An angle 8 of less value will provide easiness for the sportsman to get out of the water making the jumps lighter; said smaller angle being obtained when shortening lines 3 or lengthening cord 6 which is joined to the motor boat or other traction vehicle used. On the contrary, if the angle is big, traction will result horizontal and consequently there will be less pressure upwards for the sportsman, being this a more difficult and demanding practice.

[0015] Hereinafter the operation being performed by the sportsman and by the driver of the motor boat or traction vehicle is described:

1. Beginning with a front wind or from the boat with forward wind if there were, the driver accelerates the motor boat while the sportsman controls the kite 5 and gets out of the water with said kite.

2. With speed enough, the kite 5 will reach the zenith and at that moment the driver shall drive perpendicular to the wind to avoid its influence.

3. The size of the kite 5 shall be chosen according to the weight or speed desired. If there is only one size, the length of cord 6 shall be adjusted so that angle 8 can be varied and thus the power of the kite 5, all of this according to the need of upward traction of each sportsman and his ability or level.

4. In order to achieve a greater climb or elevation, angle 8 is reduced, lengthening cord 6 or shortening control lines 3.

5. Re-launching bar 12 is pushed when the kite 5 is leaning on the trailing edge or the leading edge upwards, being this the correct position for re-launching.

6. When the kite 5 is leaning on the leading edge, spherical elements 15 are pushed, preferably one green and the other red, depending on which side needs to spin.

Claims

1. A control device applied to a sporting activity of the kind that uses a motor vehicle (7), a kite (5) and a control bar (10), **characterized in that** from each

end of the control bar (10) a first (14) and a second (11) line extend, the first lines (11) convergent jointly towards one element of regulation or trimming (13), where the second lines (14) of each end of the control bar (10) and line (9) which emerges from the regulation or trimming element (13) spread until they make contact with a linking body (17), to which a line or cord (6) is connected which in use is towed by the traction vehicle (7) and wherein the second lines (14) are connected to flanges or pulleys (16) being able to move, and from which left line (4a) and right line (4c) extend, and get to kite (5) jointly with a central line (4b).

2. A control device applied to sporting activity, according to claim 1, **characterized in that** previously to the regulation or trimming element (13), there is a second smaller bar (12) that joins said first lines (11).

3. A control device applied to sporting activity according to claim 1, **characterized in that** over said second lines (14) of said control (10) spherical elements (15) are located.

Patentansprüche

1. Steuervorrichtung zum Einsatz bei einer sportlichen Aktivität, welche ein Motorfahrzeug (7), einen Drachen (5) und eine Steuerstange (10) verwendet, **dadurch gekennzeichnet, dass** sich von jedem Ende der Steuerstange (10) eine erste Leine (14) und eine zweite Leine (11) erstrecken, wobei die ersten Leinen (11) zu einem Regulierungs- bzw. Trimmelement (13) hin zusammenlaufen, wobei die zweiten Leinen (14) jedes der Enden der Steuerstange (10) und eine Leine (9), welche aus dem Regulierungs- bzw. Trimmelement (13) hervorgeht, sich ausbreiten, bis sie einen Verbindungskörper (17) berühren, mit welchem eine Leine oder Schnur (6) verbunden ist, welche im Gebrauch durch das Zugfahrzeug (7) geschleppt wird, und wobei die zweiten Leinen (14) mit beweglichen Flanschen oder Seilrollen (16) verbunden sind, von welchen sich eine linken Leine (4a) und eine rechten Leine (4c) erstrecken und zusammen mit einer mittleren Leine (4b) zum Drachen (5) gelangen.

2. Steuervorrichtung zum Einsatz bei einer sportlichen Aktivität nach Anspruch 1, **dadurch gekennzeichnet, dass** sich vor dem Regulierungs- bzw. Trimmelement (13) eine zweite, kleinere Stange (12) befindet, welche die genannten ersten Leinen (11) verbindet.

3. Steuervorrichtung zum Einsatz bei einer sportlichen Aktivität nach Anspruch 1, **dadurch gekennzeichnet, dass** über die genannten zweiten Leinen (14)

der genannten Steuerung (10) kugelförmige Elemente (15) angeordnet sind.

Revendications

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1. Dispositif de commande appliqué à une activité sportive du type qui utilise un véhicule à moteur (7), un cerf-volant (5) et une barre de commande (10), **caractérisé en ce que** de chaque extrémité de la barre de commande (10) une première (14) et une deuxième (11) lignes s'étendent, les premières lignes (11) convergent ensemble vers un élément de régulation ou de parement (13), où les deuxièmes lignes (14) de chaque extrémité de la barre de commande (10) et de la ligne (9) qui émerge de l'élément de régulation ou de parage (13) s'étendent jusqu'à entrer en contact avec un corps de liaison (17), auquel une ligne ou câble (6) est connectée qui en fonctionnement est tirée par un véhicule de traction (7) et dans lequel les deuxièmes lignes (14) sont connectées aux brides ou poulies (16) étant capables de se déplacer, et duquel s'étendent la ligne gauche (4a) et la ligne droite (4c), et arrivent ensemble au cerf-volant (5) avec une ligne centrale (4b).
2. Dispositif de commande appliqué à une activité sportive, selon la revendication 1, **caractérisé en ce que** précédant l'élément de régulation ou de parage (13), se trouve une deuxième barre plus petite (12) qui joint lesdites premières lignes (11).
3. Dispositif de commande appliqué à une activité sportive selon la revendication 1, **caractérisé en ce qu'**au dessus desdites deuxièmes lignes (14) de ladite commande (10) se trouvent des éléments sphériques (15).

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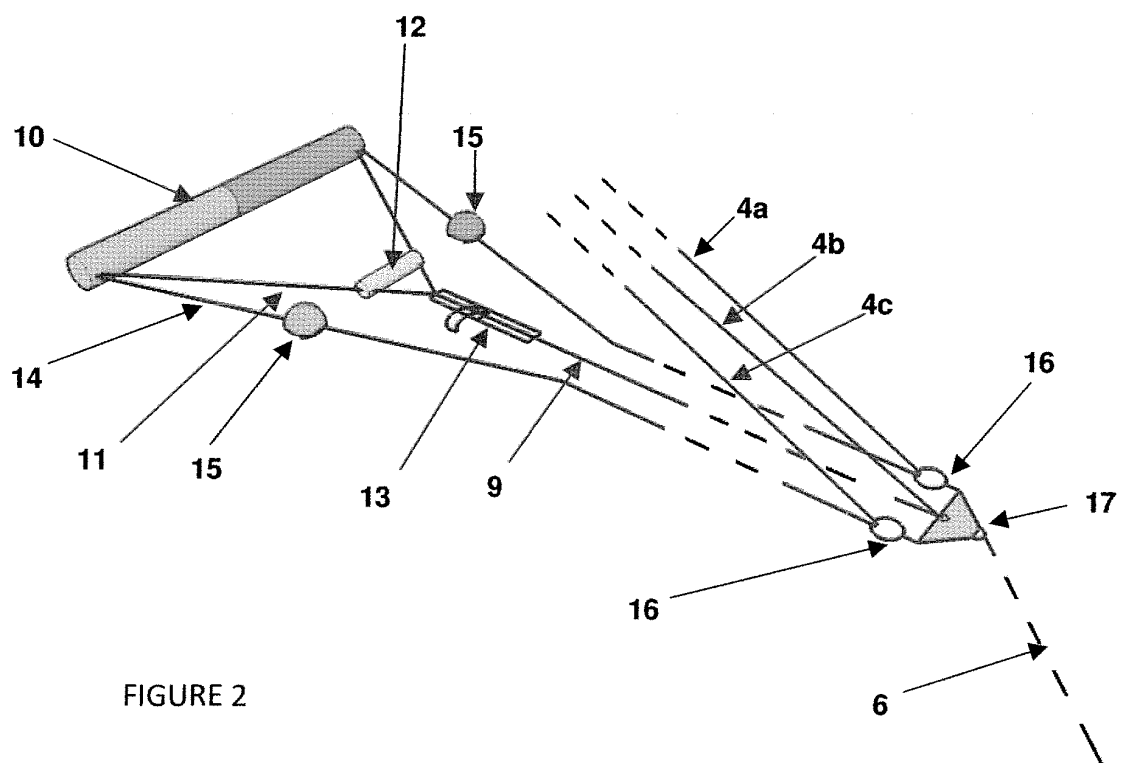
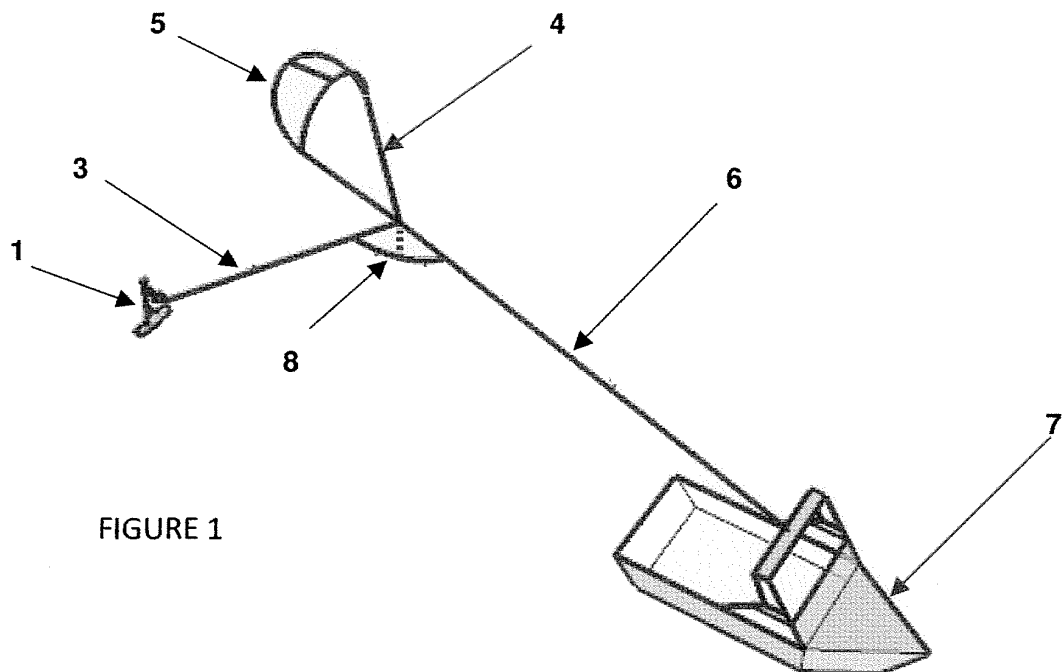
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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6834607 B1, Johnson **[0002]**
- US 7575198 B2, Hardhan **[0002]**
- US 20030116071 A1, Starbuck **[0002]**
- US 20110309199 A1, Hastilow **[0002]**
- US 20060226294 A1, Logosz **[0002]**
- US 20080223989 A1, Mutzemberg **[0002]**
- US 7182294 B2, Blackman **[0002]**
- US 20080128558 A **[0002]**