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CA 2297643 E 2011/04/12

(11)(21)(64) 2 297 643

(12) BREVET CANADIEN REDÉLIVRÉ
CANADIAN REISSUED PATENT

(13) E

(22) Date de dépôt/Filing Date: 2000/01/31

(41) Mise à la disp. pub./Open to Public Insp.: 2001/07/31

(45) Date de délivrance/Issue Date: 2004/12/21

(48) Date de correction/Correction Date: 2011/04/12

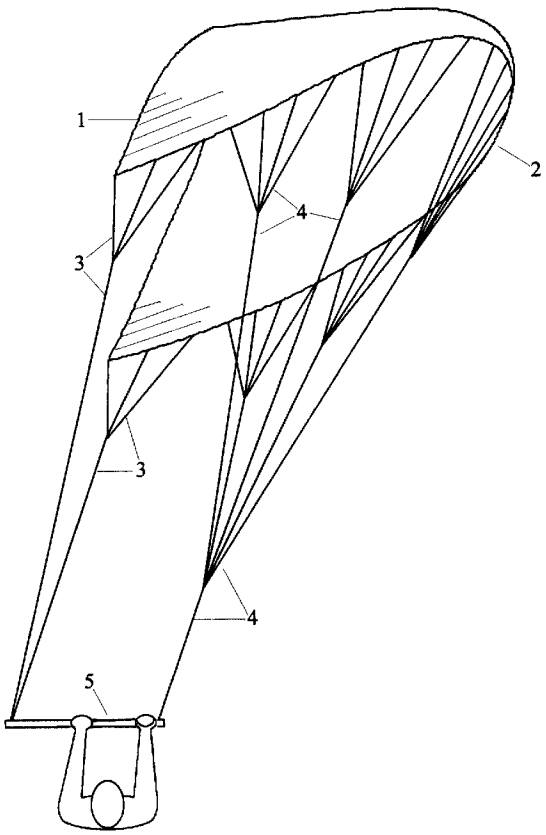
(51) Cl.Int./Int.Cl. *B64C 31/06* (2006.01),
A63H 27/08 (2006.01)

(72) Inventeur/Inventor:
POTVIN, RAYMOND, CA

(73) Propriétaire/Owner:
GODBOUT, LUC, CA

(74) Agent: BROUILLETTE & ASSOCIES/PARTNERS

(54) Titre : CERF-VOLANT FLEXIBLE
(54) Title: FLEXIBLE KITE



(57) Abrégé/Abstract:
A spoon like simple skin kite for kite sailing having a long flexible fiberglass rod on the leading edge as the only structure, many bridles that are all connected directly to that rod, no lines, a 30 inches long straight handle to steer it that turns around the same axis as the kite turns.

File number: 11126-001
Date: 2009/12/04

FLEXIBLE KITE

Abstract

A spoon like simple skin kite for kite sailing having a long flexible rod or tube on the leading edge as the only structure, many bridles that are all connected directly to that rod, no lines, an elongated straight handle to steer it that turns around the same axis as the kite turns.

File number: 11126-001
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Title of the Invention

[0001] Flexible Kite.

Cross-Reference to Related Applications

[0002] There are no cross-related applications.

Background of the Invention

[0003] The present invention relates to "traction kites" or "power kites" designed for sailing with different vehicles like skis, skates, surfboards, buggies.

[0004] These kites derive from "acrobatic kites" with two lines that can be steered by pulling on one or the other line, they are simply bigger and more powerful but steer the same way. Because of their long lines 100 feet long they are complex to use, cumbersome and dangerous because the kite is far away from the user and can have considerable radial accelerations. On the field the long lines, which can count up to four, can become very cumbersome when there are many users around and can tangle very badly.

[0005] Present kite has no lines, therefore has a lot less radial acceleration than others, what renders it clearly safer to use. Its bridles are connected directly to an elongated straight handle (e.g. 30 inches long). Said handle steers the kite revolving on the same axis as the kite itself, a simpler and more natural steering movement but inefficient with long lines.

[0006] Power kites can have different structures:
(www.worldwindsurf.com/cgi-shl/list.pl?kite)

1. With cells, like parachutes, double skin connected by walls and many row of bridles: they are the most common. (www.conceptair.com/enalishlski/ski_pro.htm)

2. With pressure inflated tubes, without bridles: they are specifically designed to be used on water. (www.wipikakiteboarding.com/w_flash/wipika_master2.htm1, USPTO 4,708,078 Legaignoux)

3. With fiberglass rods, single skin and many rows of bridles: their transverse rods renders them fragile to shocks. (www.peterlynnkites.co.nz/web/powerkites/cquad.htm)

4. With cells, without bridles: they are also designed to be used on water. (www.peterlynnkites.co.nz/web/powerkites/arc.htm)

5. Present kite (www.sportdirect.gc.ca/paraski/engl_version/index.htm) has a single skin and a long flexible rod or tube (e.g. fiberglass rod) on the leading edge as the only structure. It has bridles that are all connected to the leading edge. That kind of structure takes a half spoon like shape when it is inflated. Such a shape is easier to inflate and collapses less easily than others, which facilitates the handling. When it hits the ground it bends without breaking because of its flexibility.

[0007] Because of those particularities the present kite allows beginners to sail in minutes instead of having to fly a small kite for hours before switching to a bigger one and trying to move around without being catapulted because of the radial acceleration of the kite. It is easy to make and to repair and its power compares to others.

Summary of the Invention

[0008] To sail with a kite one has to be able to steer it, to launch it and to land it easily from far away. That type of "power kites" derive from the "acrobatic kites" and has two three or four lines about 100 feet long to steer it When such a kite is flying it can move at considerable radial speed developing an enormous instant power which can hurt it's user. Moreover the lines can become very cumbersome when there are a lot of kites at the same spot and they can sometimes get tangled very badly.

[0009] Present kite avoids these problems by being closer to the user, but the steering mode used with long lines does not work as good when we take them off. I found a very efficient way to steer a kite whose lines were taken off that works with all "power kites",

but I also found a new kite structure more efficient than others for that kind of use : it inflates and deflates to will more easily, collapses less easily in whirlwind, is easier to handle an to make than others. It does not turn as well as others with long lines but it works better than others with no lines.

Brief Description of the Drawings

[0010] Fig. 1 is a perspective view of an inflated kite showing the spoon like shape of the skin 1, the leading edge rod or tube 2, the two rear group of bridles 3, the front group of bridles 4, the handle 5 and the user 6.

Detailed Description of the Preferred Embodiment

[0011] Present invention is a kite designed for sailing. Inflated it has a spoon like shape 1, spread opened it forms a half circle. Its only structure is a long (e.g. 24 feet long) rod or tube 2 (e.g. fiberglass rod) so flexible it is stored rolled in circles 3 feet in diameter. When it hits the ground it bends without breaking.

[0012] About 25 bridles, regularly spaced, are tied to the rod or tube on one of their ends and divided in three groups, two rear groups 3 and one front group 4. At least the last bridle on each side must be part of the rear groups. Shown kite has three. Bridles are then joined together on their other end and connected to an elongated (e.g. 30 inches long) straight handle 5 by means of longer bridles, rear groups at one end of the handle and front group at the other end. User 6 can then change pitch and direction of the kite by changing the respective pitch and direction of the handle.

Claims

1) A kite for sailing comprising: a single layer skin with the supporting structure being a flexible rod or tube located at the kite's leading edge, the flexible rod or tube being connected to a first trailing edge continuing to said leading edge and returning continuously to a second trailing edge opposite to the first trailing edge, two rear groups and one front group of bridles being directly connected to the flexible rod or tube, the groups of bridles also being directly connected to a straight handle at two points, the front group of bridles connected at one end of the handle and the two rear groups of bridles connected at the opposite end of the handle.

2) The kite of claim 1, wherein the flexible rod or tube is made of fiberglass.

3) The kite of claim 1 or 2, wherein the handle steers the kite by revolving on a plane at right angle with an axis going from the kite to the handle, instead of revolving on a plane passing by said axis.

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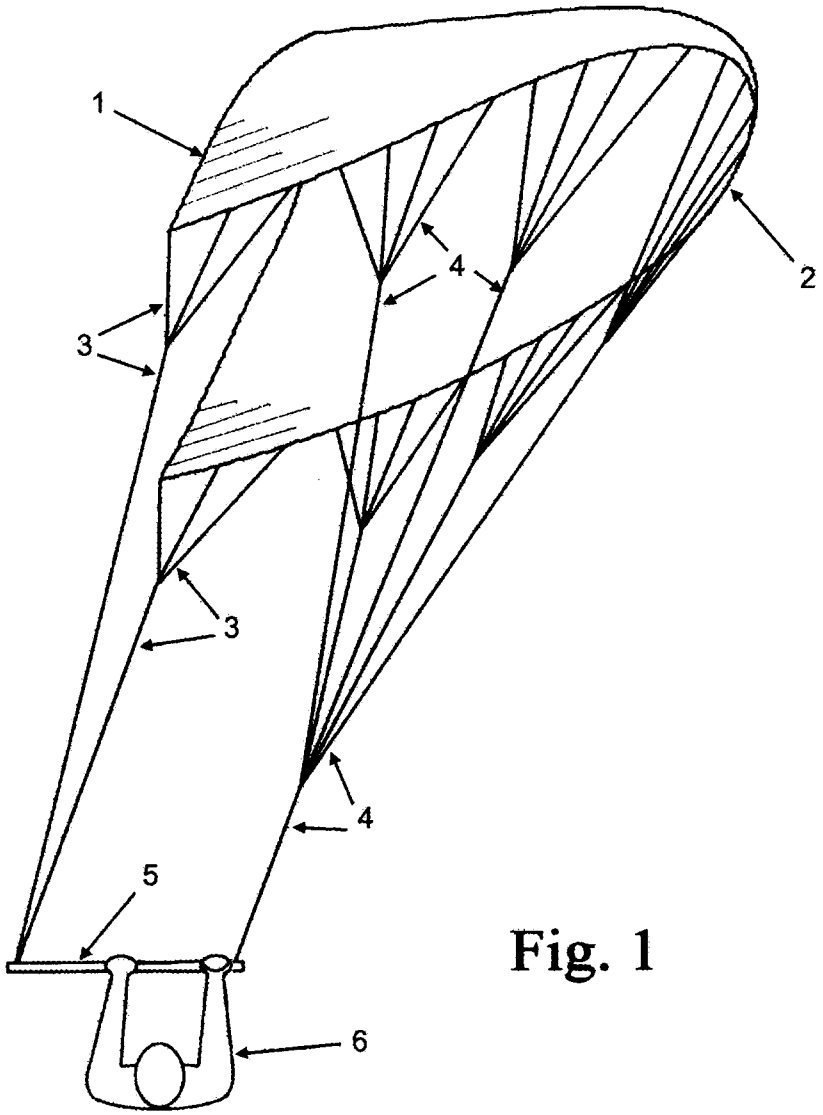
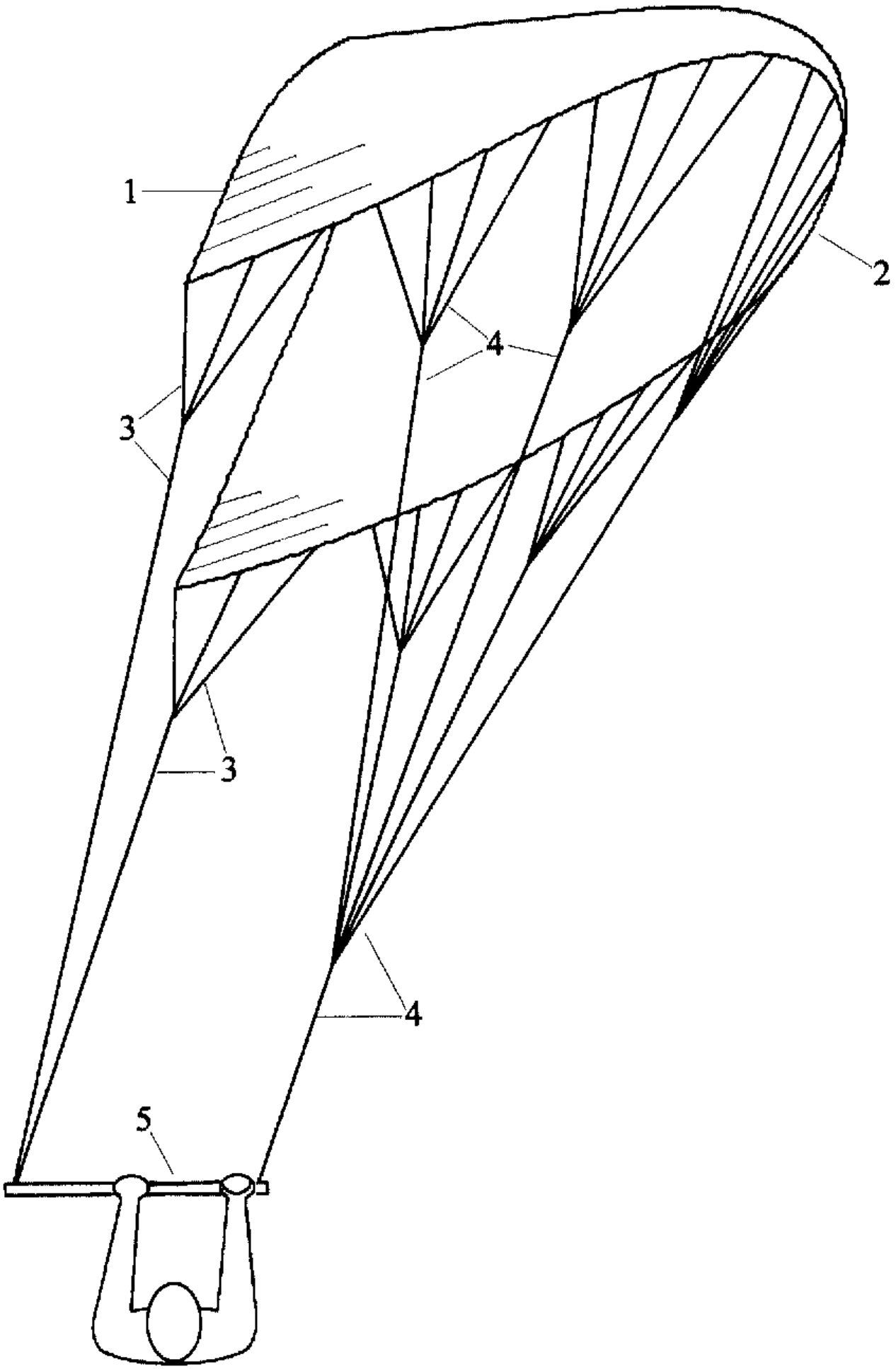


Fig. 1


1
2
3
4
3
3
4
5