

A Note on Windless Flying—George Webster

Kitefliers have always been frustrated by a lack of wind. My guess is that the day after the mythical Indonesian fisherman invented the kite he said to his family “Come and see this thing fly” — with the result that he faced the first flat calm for a fortnight.

Early European kite designs up to the end of the 19th century required a reasonable wind. Designers in the ‘Golden Age’ were not much interested in low-wind flying since kites were being developed for lifting.

So, although modern designs and newer materials meant that kites could fly in lower winds (e.g. the lightly loaded Brogden used in Edwardian kite competitions), it was not until the Delta of the 1970’s that low wind flying became possible for enthusiasts.

However, No Wind flying (and indoor flying) developed differently. If the centre of gravity of a kite moves forward of the centre of forces (e.g. by weight of the line or reduction of airspeed) then the kite will behave as a glider. This was well known to model aircraft makers — one of whom, William Bigge, by the early 1970’s was using model aircraft technology to design kites which would fly in the 3 knot wind achievable by walking in a large hall (in his case an aircraft shed). When the speed dropped the kite would glide backwards ‘downwind’. For details, see the books by Newman [1] and Moulton [2]. Bill Bigge is still involved in indoor kites and gliders (see *AKA Kiting*, Spring 2011).

A kite must always have an airflow to produce lift but ‘no wind’ flying minimises the windspeed either by the flier moving as described or by the flier’s ability to pull the kite through the air. This second approach is obviously easier for two-line or multi-line kites. The 1980’s saw fliers of two-line kites being asked by festival organisers to ‘fly 360s’ i.e. use a low downwind speed as the basis for steering the kite in a circle — limited only by dizziness. By the mid-1990’s there were a few skilled fliers of Revolutions who could fly on short lines on a stage — gliding one to be caught in the flier’s mouth was a top trick.

At various times there have been indoor circuits and events for such fliers, but what nudged me into writing this has been the development of outdoor single-line ‘No Wind’ flying — by which term I do include very low winds.

For several years I have seen Chinese fliers with large eagles sparred with heavy bamboo. They are bridled to lie very flat on the wind, they will glide upwind but can be turned to fly in a long downwind circle before being pulled round. This requires rapid line in/out movements for which they will use special large circumferenced reels. The effect of a soaring eagle can be very realistic. For the last 3 years they have produced a modern fighter aircraft design (still using curved bamboo) which originally flew like an eagle. Most recently I’ve seen them perform a backward loop when pulled hard into the wind; a loop not a flip. Pedro Gonzales has one.

Apart from a ‘No Wind’ ultra-light delta (Le Malard, by Louis Sko from Germany (Illustration 1)) which I haven’t seen flying, there have been two established English kites which can be pulled round in ‘No Wind’ conditions.

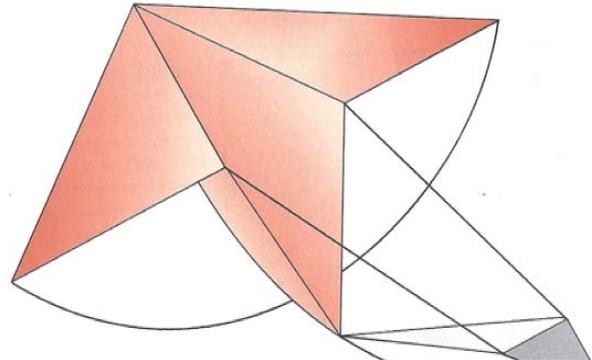


Illustration 1: Le Malard by Louis Sko

First there is the Bai Se Hui Die (Illustration 2) — a radical new design by Stephen Hoath and the Gonzales brothers. Not only is this kite great for ‘tricking’ but nothing approaches the Bai for toughness and ability to be unmoved by heavy crashes on hard indoor floors and immediately relaunch itself.



Illustration 2: Bai Se Hue Die

The Pteranodon (Illustration 3) by Karl Longbottom is a wonderful varied flier. I’m amused by the way in which Malaysians see it as a bird even though it can’t challenge the Eagle’s swoops. Anyway, who knows how pteranodons flew all those years ago?

Admittedly these kites are often flown outdoors in low winds, but there is in my view a definite trend to fly single line kites which can ‘trick’ in a very low wind as well as indoor ‘no wind’.

Two further examples. The first is Christophe Tournay’s Ginga (see Illustration 4).

The second takes us back into history. Reinhold Platz was a German aircraft designer who worked for Fok-

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Illustration 3: Pteranodon

The Marconi rigged jib kite was a new design in the UK in the 1940's, associated with WM. Angas (see Pelham [3]). I have no idea whether Platz influenced Angas. I do know that the kite is difficult to make, involving a vertical post and notoriously difficult to bridle. The 'Modern Marconi' of about 2004 (Illustration 6) with no post seems to stem from Platz.

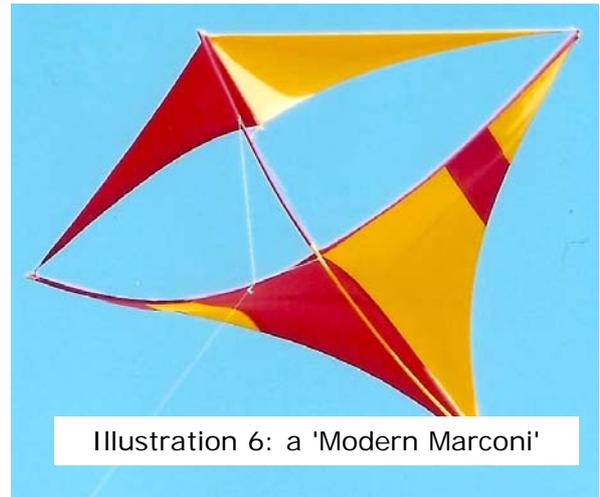


Illustration 6: a 'Modern Marconi'



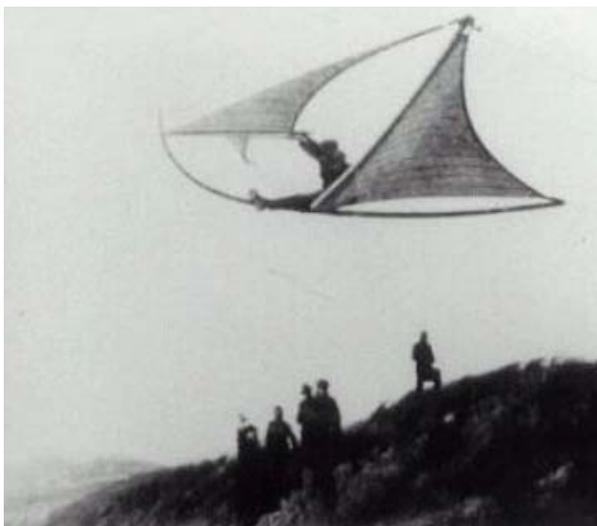
Illustration 4: Ginga

Recently (2011) Ceewan –the Malaysian designer of the Langkawi Pointer, a very good low wind flier– has produced a kite more closely based on Platz called the Plutz to acknowledge its inspiration. It has a single bridle point and performs well indoors and 'no wind' outdoors (see Illustration 7).



Illustration 7: Plutz, a low wind kite by Ceewan

ker on the first world war Triplane made famous by the Red Baron. He designed a glider using jib sails — adapted from sailing ship technology and very reminiscent of the later Marconi jib kite. There is a drawing of the hang glider and also of one being flown in 1923 (below). How this sits with American claims to have invented the hang glider in the 1970's I do not know.



Bibliography

- [1] Newman, L.S. and Newman, J.H. (1974) *Kite Craft*.
- [2] Moulton, R. (1978) *Kites*.
- [3] Pelham, D. (1976) *Kites*.