

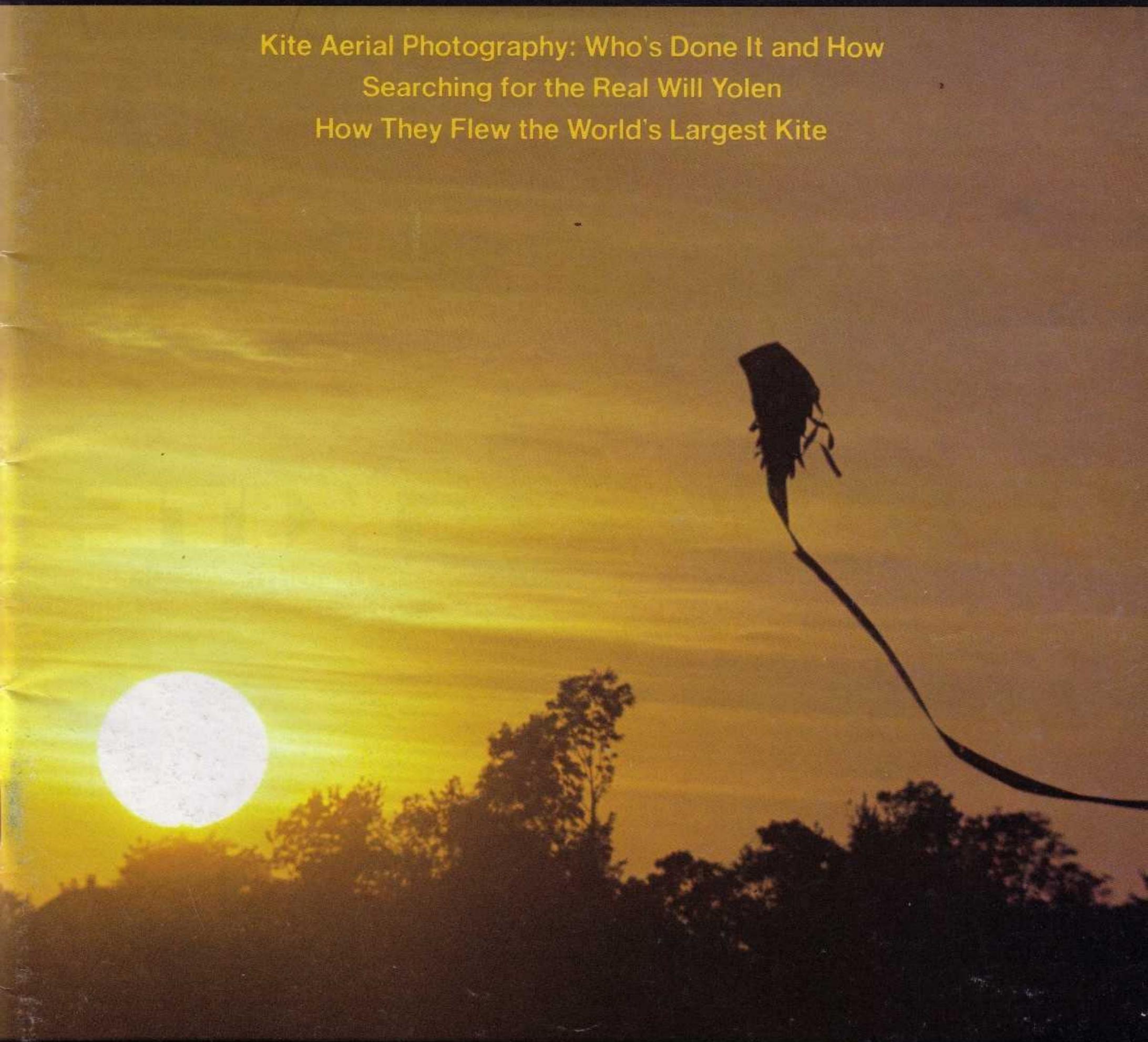
# KiteLines™

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SPRING-SUMMER 1980

quarterly journal of the American Kitefliers Association

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Kite Aerial Photography: Who's Done It and How  
Searching for the Real Will Yolen  
How They Flew the World's Largest Kite



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# Contents

Volume 3, Number 2, Spring-Summer 1980

## Profiles: Searching for the Real Will Yolen / 16

By Valerie Govig. An attempt to set the record straight  
on an American figure of mythical proportions.

## David Slays Goliath with his Patchwork Special / 21

By Malcolm G. Russo. A boy's perseverance gives pause to Dad.

## Variations on a Theme: The Tetrahedrals Reconsidered / 22

By Bevan H. Brown. The potential permutations of the tetra  
explored in an instructively systematic way.

## Kite Aerial Photography: Who's Done It and How / 24

A brief history of kite-lifted picture-taking accomplishments  
with a list of current-day practitioners, by Valerie Govig.

## Everything I Know (so far) about Kite-Lofted Photography / 25

By Garry Woodcock. A well-thought-out system that  
costs little for an inventive scavenger.

## Notes to the Would-Be Kite Aerial Photographer / 28

By Robert S. Price. Solid advice on the basic options as  
learned from the school of hard knocks.

## Rules and Regulations of the First Kite Aerial Photography

Contest of the Cerf-Volant Club de France / 28

## My Method of Photography by Kite: 100% Reliable / 29

By Stanley E. Crinklaw. Perhaps the cheapest solution and  
therefore one of the best ways to start.

## Preset Intervals for Photography by Kite (a very fancy frill) / 30

By Dale Fleener. A circuit for pulsing your far-away camera,  
with added comments by Curtis Marshall.

## Behold! Antique Kites / 32

By Robert M. Ingraham. Some kites of yesterday  
found by George Hurtado, and speculation on their value.

## For the Record: The World's Largest Kite Is Flown in Japan / 38

By the Shirone Kite Association with background on how the  
incredible effort was made by David M. Checkley.

## How to Bridle a Giant Japanese Kite (without getting tied up in its 48 lines) / 40

A photo sequence of the Shirone method  
by John F. Van Gilder.

# Departments

## Letter from the Editor and Postscripts / 6

## Letters / 8

## What's New / 11

Reviews of the Skynasaur Stunter, four Kites of the Four Winds,  
the Soaring Scimitar, the Heart's Delight sled and Spectra Star's  
Spinnaker Diamond. In the book section, Margaret Greger reviews  
*Kites for Kids* by Burton and Rita Marks.

## News from Here and There: Stateside / 41

## News from Here and There: International / 42

## Directory of Outlets / 36

## Classifieds / 46

## Swap Shop / 46

# Cover

Jacques Fissier is a photojournalist with a string of credits and  
a portfolio of experience that makes the jaw drop.  
But in addition to all that he is a lover of kites with the gift  
of inspiring others to the same love. You will know it when you  
read his writing in "Letters" (page 8). And you will know it  
from merely gazing at this issue's cover photo,  
also the work of Jacques.

# Letter from the Editor

Kiting has always had the special advantage of multiple appeal—as an art, science, sport, craft, study, escapade—whatever. It is many things to many people. But if there's any one attribute of kiting that's more important right now in mid-1980, it must be its environmental acceptability. It doesn't take any fossil fuels to fly a kite. Even to make one is not much of a kilowatt drain, depending on whether you use a sewing machine, band saw or other powered assist. In addition, kites are non-polluting in flight.

But this is not the time to be smug, my fellow kites. Because we all know very well, in our quietly guilty hearts, that kiting *can* lead to the use of oil. That's because open spaces for kiteflying are limited in most urban areas and the result is the necessity, for many of us, of *driving* to a flying site.

Now, as an incurable patriot, I want to do my best to waste no fuel, and I've tried to figure out how to cut back on nonessential driving. Is kiteflying a "non-essential" activity? The question hits me

right in the middle of my suspended judgment, my conflicting tendencies toward the spartan and the hedonistic. I believe we are misguided to forever sacrifice all of today's frivolities and pleasures in order to pursue some distant good in all its doubtful glory. Life is to be enjoyed. That is an imperative, clearly a part of the grand design, or there would be in this world no roses, no puppies, no birdsong, no sunsets, no kisses—and no kites. (Ah, yes, the *carpe diem* theme always did hold ineluctable appeal for me.)

On the other hand (the struggle for balance is visible), shouldn't we be responsible about the future, for ourselves and our children? Isn't the welfare of our great country important? Well, then, what *can* we do? The only answer I've found (and it's imperfect) is to fly closer to home.

Try out the thermals over that parking lot at your nearest shopping center on a Sunday afternoon. Give a schoolyard a go. Consider befriending the person with the best roof for kiting in your neighborhood. Decorate the sky that's over you. V.G.

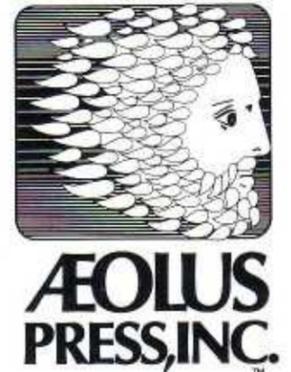
# Post Scripts

## WHY THE SPRING-SUMMER ISSUE?

We decided it was better to reflect reality and name this issue logically by its time of publication. However, it does *not* count as two issues in your subscription term. Subscribers will automatically receive an "additional" issue. We are still fighting the good fight to improve our schedule, and we really do think we'll win!

## OUR NEW NAME: AEOLUS PRESS, INC.

As of April 18, 1980, Verve Enterprises, Inc. (publisher of *Kite Lines*), legally changed its name to Aeolus Press, Inc. There is nothing peculiar going on here. The sole reason we have made this change is to better reflect our nature as a publisher specializing in kite texts. Aeolus, the Greek God of the Winds, gives us the appropriate metaphor. Although we have published only *Kite Lines* so far, in the future we anticipate putting out books, monographs and other delights for the kiteophile. It will be our pleasure to serve you this way under the fitting new moniker of Aeolus.



## SEATTLE TO HOST THIRD ANNUAL

The Washington Kitefliers Association will host the third annual meeting and festival of the American Kitefliers Association on October 3, 4 and 5 in Seattle, WA. The format of the meeting promises to be similar to the first two, but Seattle's location as the gateway to the Orient is expected to bring many visitors from the Far East. The committee has already planned an exciting agenda. *Kite Lines* is keeping fingers crossed that we'll be there! For further information, write to Chairman Joe Voellmeck, AKA Annual Meeting, c/o Washington Kitefliers Association, Pacific Science Center, 200 2nd Ave. N., Seattle, WA 98109, USA.

## CORRECTION

Ed Grauel writes that the target parachute kite drawing in the Winter '79-80 *Kite Lines* was incorrect. The artist placed the trapezoidal vents in the red section rather than the white area. Somehow this was missed by the two or more pairs of eyes that review everything before printing in *Kite Lines*. However, the text correctly stated that the vents are to be cut from the white section. ▽

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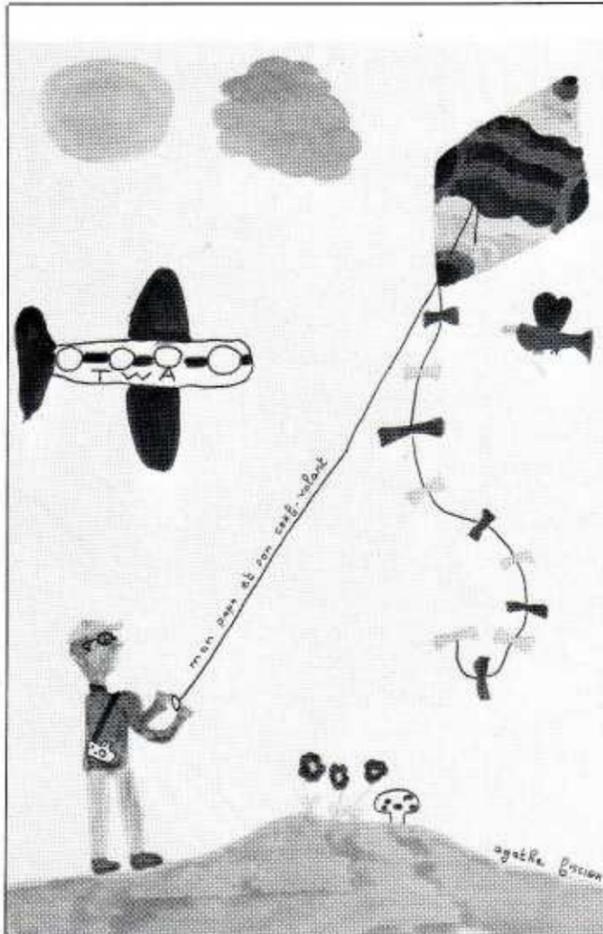
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# Letters



Above, painting by Agathe Fissier. Below, top: Jacques, Laurence and Agathe Fissier at Angeot, their home; bottom: kiting at Angeot—where the airport is 2 kilometers (1.24 miles) away.

## THE FRENCH EYE ON KITES

Thank you very much for your wonderful *Kite Lines*! It is very very very interesting and I like its spirit and form. I'm for "kitepower," of course!

I have been ever passionate for kites, but journalism doesn't allow me (alas!) to practice kiteflying as I wish around the farm where we live. You know, in France the kite lovers are judged dreamers, naive old children. Poetry, contemplation and reflection are often judged pejorative! But sky, wind and kites are—together—a symbol of great freedom, a sort of soul purification!

I've one great project: to go to Japan in June for the famous kite festival of Shirone (Niigata prefecture). Also I can send you reports with photos on the Cerf-Volant Club de France because I go often to Paris. (I teach also photojournalism at the Centre de Perfectionnement des Journalistes.)

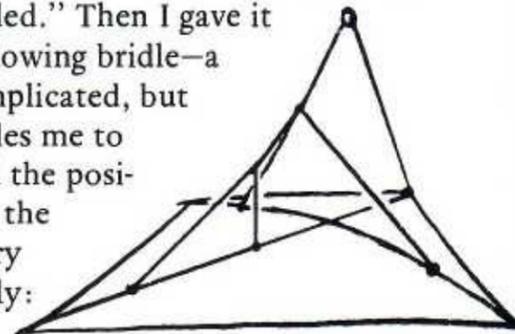
Jacques Fissier  
*L'Est Republicain*  
Belfort, France

## SOME DIFFERING OPINIONS

It was indeed a great pleasure to receive *Kite Lines*. Just one point of criticism: if it is a journal for the *worldwide* kite com-

munity, you'll have to give all the measures and weights not only in feet and pounds but also in meters and kilograms.

On the letters page (Fall 1979 *Kite Lines*), F. W. Coles from England wrote (and I have heard this remark before) that Eddy-type kites are not tailless. I can't agree with this at all. I have made such a kite. It is 1.8m or 5.8 ft high and wide; 250 gm or 0.55 lb; rating 0.17 kg / m<sup>2</sup> or 0.03 lb / ft<sup>2</sup>; plastic covered; just slightly bowed. It is an excellent flier in any wind. I have even flown it by night in a near storm. All without a tail or drogue. At first the kite had a two-leg bridle, and "wobbled." Then I gave it the following bridle—a bit complicated, but it enables me to control the position of the kite very precisely:



A remark about a totally different kite: I made the Flow-Form from the Summer 1979 issue, in plastic, half the dimensions, and it flew horribly. I then removed the center keel and opened up all the chambers at the bottom and now it is a good-flying kind of parasled.

Jan Pieter Kuil  
Maarssen, Holland

*The suggestion that Kite Lines give all measures in metric is meritorious, but since most of our readers work in the old U.S. units we are adhering to the mode. Yes, we know metric is coming; we will have to change eventually.*

## AN ADDED ENDORSEMENT

For many years I have encouraged the members of the International Kitefliers Association to subscribe to *Kite Lines* and to *Kite Tales* before it. When I read that the members of the American Kitefliers Association had voted at their last meeting to endorse and support *Kite Lines* magazine, I wanted it known that IKA had always done so. With this letter I am making this known officially. Furthermore, I urge all kitefliers to subscribe to *Kite Lines*, read *Kite Lines* and promote *Kite Lines* as the authoritative journal of kiting throughout the world.

It has been an IKA tenet that you need buy nothing from or through it. I continue to give membership cards upon request for a self-addressed stamped envelope. IKA has no dues, no meetings and no responsibilities. That will never change. But I can and do recommend my book *The Complete Book of Kites and Kite Flying*, published by Simon and Schuster,



at your library or \$4.95 in paperback at kite and book stores. And of course I recommend the one and only *Kite Lines*.

Will Yolen  
President and Founder  
International Kitefliers Association  
321 E. 48th Street  
New York, NY 10017

### WEIGHTY MATTERS

I refer to a letter by Louis Denov in the first issue of *Kite Lines* (Spring 1977), in which he states the results of experiments with placing pieces of putty on the spines of kites. (This is a bit late, I admit; but it shows that people don't just read the magazine—they reread it.)

Mr. Denov found that weighting the tail-end of the spine decreased stability,

and weighting the tip improved it, contrary to his expectations.

I have just spent two hours or so flying a kite I made, a soaring kite of perhaps five-foot wingspan, similar in some respects to a high-aspect-ratio Eddy. Lateral stability was good, but it tended, upon reaching a fairly high angle of flight, to tip forward and begin to drift down like a glider. Supposing the center of gravity (CG) to be too far forward of the center of pressure (CP), I weighted the tail-end of the spine by taping on two pieces of split bamboo, each perhaps eight inches long, and added a 15-foot streamer of crepe paper. The kite now flies very well. (Previously, addition of a tail hadn't helped much.)

My experience appears to be the reverse of Mr. Denov's. Could it be that results dif-

fer depending on the relationship of CG to CP? Or perhaps the cut of the sail has something to do with it. Mine has the trailing edges tauter than the center of the sail, which results in what might be described as an umbrella effect. When I have tried using weights on kites having sails of more or less uniform tautness, the method described has not been so successful.

John Spendlove  
Preston, Lancashire, England

*Readers are encouraged to write letters and reply to them and we will route them to appropriate parties whenever possible. Address your letters to Kite Lines, 7106 Campfield Road, Baltimore, MD 21207, USA. All letters become the property of Kite Lines. The editor reserves the right to edit letters for publication.*



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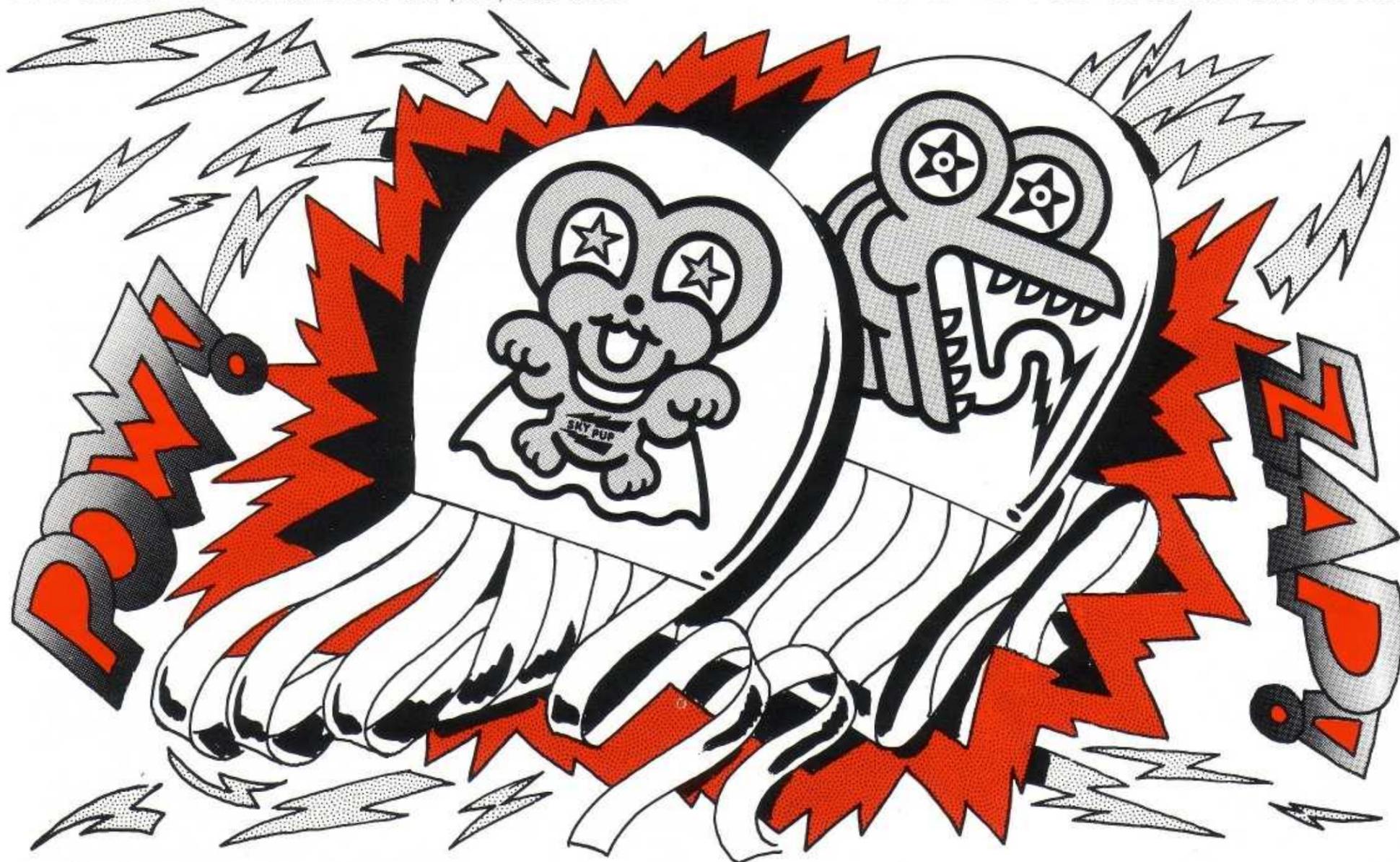
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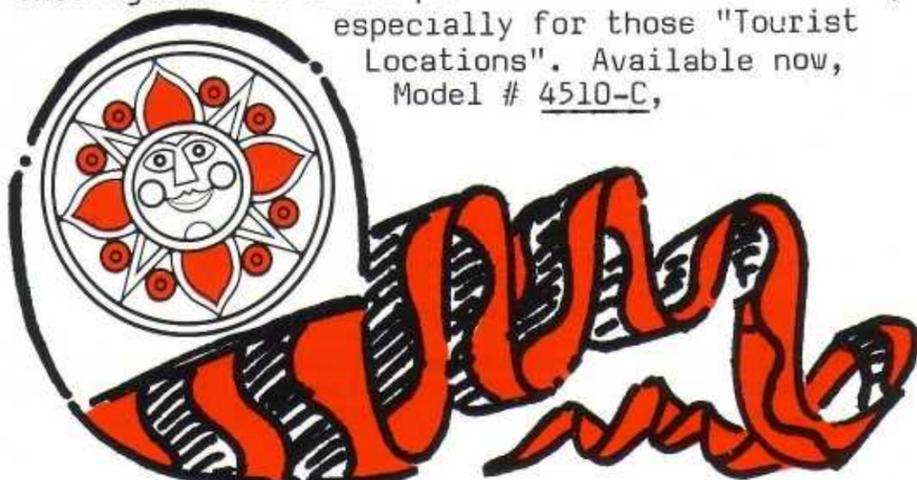


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# What's New: Kites, Books, Sundries

## Kites

By Mel Govig, assisted by A. Pete Ianuzzi

### THE SKYNASAUR STUNTER

After waiting for weeks to find a day to fly this stunter kite in the 15 mile-per-hour winds the instructions call for, the day finally came: 20°F. That translated into -5° wind-chill index. Needless to say, our test was fast.

Eureka! It flew! Probably the toughest kite you will ever fly, with fiberglass spars, machined nylon fittings and rubberized nylon cover, the Skynasaur weighs in at a hefty 15½ ounces for only 7.5 square feet of lifting surface. In design, the Skynasaur is something like a heavy version of the Gayla Acro "bat."

For performance, in 20 m.p.h. winds, it roared into the sky and moved to left and right, but failed to recover from loops. (Sorry, but in these weather conditions we just couldn't stick it out to make the necessary bridle adjustments.) However, we had seen the kite flown in Manassas, VA, the previous October, and we cross-checked with other observers that day. In the good winds on that occasion, the Skynasaur flew well, with a satisfying roar and authoritative line tug. The Skynasaur was very fast, going through snap loops and fast figure eights. Also it proved as tough as it looks, surviving a 20-minute bout with a tree without a scratch. It is definitely the kind of kite for those who want the maximum physical challenge from their equipment.

A warning: the Skynasaur is dangerous in its recommended winds, tearing through the skies at speeds to 50 m.p.h.—not for kids, not for crowds, not for the ungloried.

### FOUR KITES FROM FOUR WINDS

Nick Van Sant of Indiana comes from a kiteflying Maryland family and arrives on the commercial kite scene with a family of fine kites. Taking their cue from the venerable designs of Ansel Toney, 92, the company, Kites of the Four Winds (run by Nick and Sallie Van Sant), has tried to make big, rugged kites available at modest cost. They have succeeded admirably.

The line includes three deltas in the "Feather" series, from about \$38 to \$70 and a four-foot classic Conyne, about \$18.

All four kites share good workmanship in .75-ounce rip-stop nylon. They don't

have the refinements of some of their more elegant (and expensive) competitors. There are no embroidery stitches or complex fasteners. All spars and longerons are made of clear basswood and do not break down for easy transport. (You could replace these sticks easily with joining sections if, for example, your auto's dimensions were a problem.) But quality is important at Four Winds: each kite is numbered, logged and test-flown in the open spaces of the "heartland" before it is shipped.

For performance, the deltas flew as well as any we have tested, showing a good high angle of flight and no more than the usual tendency of deltas to overfly on a light wind. The largest and smallest of the deltas compare very well to Bob Ingraham's deltas, which many consider a standard for performance.

For appearance, the Feathers are colorful in limited but distinctive patterns, including patchwork quilt. In design and refinement of construction elements, they could be compared to the Cloud Pleasers kites as a granny-square afghan could be compared to a tapestry. This is to take nothing away from the Feathers; on the contrary, they meet a market for the extra-large kite at a relatively economical cost.

Nick and Sallie have also shown themselves to be as capable as the best of them in crafting customized kites with insets and appliques for advertising. It's obvious they could make fancier and more refined kites if they wanted to. But they do what they do. And they do it well.

### THE SOARING SCIMITAR

Here's another excellent design from Wind Mill Kites. Like the Soaring Wing before it, the Soaring Scimitar is a high aspect ratio delta-type kite. Narrower (52 in. vs. 72 in.) and with a slightly broader wing chord (14 in. vs. 12 in.) than the Wing, the Scimitar is the more predictable flier of the two. Its scalloped trailing edge gives it a touch of Middle Eastern romance. Our sample was bright red rip-stop with a double ribbon of red as tail—very pretty in the air. The workmanship is up to the high standards set by the Soaring Wing and is well worth its \$20-or-so asking price.

In flight, the Scimitar performed well in winds from 5 to 25 miles per hour, after some adjustments were made to the spreader connectors. The instructions (which were among the best we've read on how-to-fly) include a caution that the spreader might have to be adjusted from time to time for balance, and it was true

DATA CHART

	Dimensions	Weight	Materials	P	AT	ED	EWV	AF	SL
Skynasaur	36x60"	15 oz	nylon, fiberglass	G	20 min.	E	15-30	70°	S
Feather 9	52x104"	10.5 oz	rip-stop nylon, basswood	G	30 sec	G	3-20	65-85°	N
Feather 11	65x130"	24 oz	rip-stop nylon, basswood	G	30 sec	G	8-25	55-75°	N
Feather 13	77x154"	29.5 oz	rip-stop nylon, basswood	G	30 sec	G	3-20	65-85°	N
4 Winds Conyne	40x40"	7.5 oz	rip-stop nylon, basswood	G	15 sec	G	5-25	45-70°	N
Soaring Scimitar	14x52"	2.75 oz	rip-stop nylon, birch dowels	E	30 sec	E	5-20	45-65°	S
Heart's Delight	25x30"	2 oz	nylon taffeta, 1/8" dia. dowels	G	0	G	5-15	35-45°	N
Spinnaker Diamond	50x58"	6.5 oz	rip-stop nylon, fiberglass	E	1 min	E	5-15	45-55°	N

Code: P=Portability; AT=Assembly Time (on field); ED=Est. Durability; EWV=Est. Wind Velocity (min.-max. m.p.h.); AF=Angle of Flight; Skill Level: N=Novice, I=Intermediate, S=Skilled  
Ratings: P=Poor, F=Fair, G=Good, VG=Very Good, E=Excellent

## What's New

...Continued

of our test-model in winds over 15 m.p.h. However, the adjustment was easy; the connectors of split vinyl tubing can be pushed up or down to achieve balance.

The Soaring Scimitar flies at a higher angle than the Soaring Wing and without the amusing (annoying?) flap-flap of the Wing. Like other deltas, it flew at the highest angle on the lightest winds, achieving an angle of 65° at 5 m.p.h. At higher wind speeds, without adjustment, it settled to an angle of about 45°. Also, like other deltas, it has a tendency to overfly and loop back in light to moderate winds.

Recovery from a loop took some getting used to. If you are a fighter flier, you have to fight your habits. In order to recover the Scimitar, you have to keep a steady line pressure, sometimes even pull in line, and power loop it back to the zenith. If you slack the line, it tips over and dives to the ground. This can probably be corrected by moving the spreader bar back about an inch for light winds, giving it a mechanically back-heavy incentive to glide backwards instead of forward.

All in all, we were very pleased with the original qualities and attractiveness of the Scimitar. I found that adding extra ribbons of inch-wide nylon to the batten points accented the kite's showiness and had almost no effect on performance.

### HEART'S DELIGHT KITE

If your heart's delight is to fly unusual shapes or if an unusually attractive shape has become your heart's delight and has not yet been initiated into kiteflying—then the Heart's Delight might just be the kite for you. It's \$12 plus \$1.50 shipping from Wings of the Wind in Wichita, KS—not cheap, but not extremely expensive. It's not the greatest flier, but it flies well and steady. It's not the best construction we have ever seen, but it is very neatly done. It's durable, it flies, it's fun. I like it!

### SPECTRA'S SPINNAKER DIAMOND

Spectra Star Kites has expanded its line to include more of the bright-colored plastic fliers that move off shelves and into the sky so effectively. In addition, they've added several cloth kites. We lack space to cover all of them, but we did test the Spinnaker Diamond as perhaps representative.

Sewn from 1.5-ounce rip-stop nylon in rainbow colors, the kite measures 48" x 57". The longeron and spar are of .3 fiberglass divided and joined by a piece of aluminum tubing to permit the kite to roll up to a 27-inch-long bundle and fit into its own neat matching bag for transport and storage.

There were no instructions with our model, but the construction was easy to understand—not easy to do, just easy to

understand. In the process of bowing the spar to assemble the kite, we ran into a little design problem that took some re-bridling to overcome. The two-point bridle is permanently attached to the cover and the longeron and spar must pass through the loose loop of the bridle on the back of the kite when assembled. Unfortunately, in our test sample, the slack in the bridle line was not adequate to allow us to flex the bowed spar into place without breaking the upper bridle leg and retying it. Also, the aluminum tube connectors used to join the split sections of the two sticks are not permanently attached to either half of their respective sticks and could easily be lost. A little glue on one stick-half will cure this.

In flight, the Spinnaker Diamond performs well in winds up to about 15 m.p.h. At that point, the sticks are just too flexible and the kite takes a low angle, bowing back on itself. The kite could still be flown in higher winds if you replaced the sticks with more rigid ones (say 3/16" dia. dowels).

The tail furnished provides no flight improvement (or degradation), but adds more splash to the already colorful kite. What you have, finally, is a lot of color in the sky for your investment in money and persistence—which works out to about \$21 plus time-and-effort to correct the bridle lines and glue the connectors.

## Books

By Margaret Greger

### GOOD AND SIMPLE

*Kites for Kids*, by Burton and Rita Marks, illustrated by Lisa Campbell Ernst (New York: Lothrop, Lee & Shepard Co., 1980), 128 pages, \$6.95.

A book called *Kites for Kids* should be judged by its own criteria; that is, are the kites "easy to make and easy to fly...made of materials that you probably have on hand or that you can buy at very low cost"?

On these terms, the kites (a two-stick diamond and arch-top, fighter and square diamond variants; a gusset-spined delta and diamond and round variations made by the same technique; and three versions of the ever-popular snake) qualify; though, in a book devoted to quick and easy kites, it is a surprise not to find a sled.

The diagrams and instructions are clear, patterns are made on the fold so symmetry comes naturally and construction is minimal. For example, the two-stick diamond is just that, two sticks taped to a cover, with a one-point bridle and a tail.

I do quarrel with the authors' statement about this diamond: "If you have never made or flown a kite before, this is

a good one to try first." No diamond is a good First Kite, and this one is no more tolerant than its fancier cousins.

All the kites are framed with 1/8" dia. dowels and covered with lightweight wrapping paper, paper bags or plastic. They fly well in light breezes, although, as expected with such light construction, spars snap and unreinforced edges buckle if the wind gusts over 12 miles per hour, a point which the authors also make.

The gusset-spined delta is the only new (to me, at least) kite in the book. Using the gusset or pleated side of a paper bag as the spine is ingenious, perhaps adapted from Dave Checkley's paper bag design. Two side spars and one spreader bar frame this delta, the spine being formed by and the keel being attached to the taped-together gusset. It is a lovely little kite, with a serious flaw. The unreinforced tip buckles and folds back on the kite in even a medium wind. A dowel in the spine would give the durability and wind range capability of a true "kid's kite." As given, it can be bent out of shape on the way to the flying field.

The rest of the book is standard fare: vocabulary, materials, construction tips and techniques and flying (with a helpful trouble-shooting section). The illustrations and text are nicely keyed together. The book is free of the typical chapter on kite history. Instead, palatably scattered here and there, are a few sidebars, "Amazing Moments in Kite History."

A nine-page listing of kite shops seems a bit much in a book which lacks a bibliography. Acknowledgements and credits are due here, since much of the material is drawn from the work of others. A good resource list of other publications would help widen the horizons of successful users of this book.

*The Art of the Japanese Kite*, the classic book by Tal Streeter, having sold out in the regular edition, has recently been reissued in paperback at \$9.95. The entire contents and all the color pictures are reprinted exactly as in the original. If it's not in your nearest kite store, order from the publisher, John Weatherhill, Inc., 149 Madison Ave., New York, NY 10016. ◇

## a little puff:

Q. What distinguishes a kite from other aircraft?

A. The line.

Q. What distinguishes an all-out kiter from a casual one?

A. KITE LINES—the international journal of kiting.



**P**ut some kite aficionados together and listen to them talk. Sooner or later they'll mention *Kite Lines*, the singular quarterly journal devoted entirely to kites.

**T**he growing worldwide community of adult kites draws not only most of its new information but much of its sense of kinship from this rare gem of a magazine.

**T**hroughout the United States and around the globe, more people are becoming kites all the time and *Kite Lines* is opening up new skies to all of them. Kiting's multiple layers of appeal as science, art, craft and sport give it enduring fascination. Kite clubs (about 40) and kite shops (over 100) are now active worldwide. These varied groups have one thing in common—*Kite Lines*, kiting's standard of reference since 1977 (and preceded by *Kite Tales* since 1964).

**H**ere you'll read about everything from dual-line stunting and air ballet to oriental fighter kites and inventive designs in space-age synthetics—all in this respected, exciting quarterly, *the* source of international kite news. Plans, techniques, reviews of kites and books, profiles of kiting personalities, in-depth feature articles—and unusual advertisements, too—fill the pages of *Kite Lines*. Noted for its fine photography, design and printing, in a generously visual 8½x11" format, *Kite Lines* is fit for your coffee table—if you can stand to leave it there. But it's likely to become dog-eared, used, saved and cherished for its authoritative information, available nowhere else.

**Y**ou can expand your knowledge of kites and find friends in the field—by reading *Kite Lines*.





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Valerie Govig

## Searching for the Real WILL YOLEN

By Valerie Govig

It's a New York City apartment building that was probably elegant 20 years ago. A uniformed guard contrasts with worn carpeting. An elevator takes us to an upper floor and we ring an anonymous number.

Will Yolen answers the door wearing neat, almost natty sportswear and a welcoming smile. A small man, now 72 and afflicted with the tremors of Parkinson's disease, he has always had—for me—a special stature.

It's about the fourth time we've met and talked. Although Will's speech is slower today, the words are as sharp a reflection as ever of the wit and spirit that make him an important figure in kiting. Is he, indeed, the champion and the personification of the International Kitefliers Association? Have we reached mecca here on 48th Street?

The spacious apartment has many windows and a balcony with a skyline view. It's a tad overdecorated, with mirrors,

hanging ferns and gilded chairs that are contradicted by such homey touches as a TV set often turned on even with guests present, family pictures, books and memorabilia—and kites. Of course.

When I first plunged into kites, I read anything I could find on the subject, which wasn't very much in 1967. The kite books in print could be counted on two hands and most of them were directed toward children. There were two exceptions: Clive Hart's *Kites: An Historical Survey* (1967), a rich and scholarly store, and Will Yolen's *Young Sportsman's Guide to Kite Flying* (1963).

Will's book was fuel for the imagination. No one else saw kites quite as Will saw them. The book was a sophisticated pastiche of facts and fancies about kites and their fliers as they existed in 1963. Living kitefliers and flying kites! For a long time, there was nothing like it, though it was joined shortly by two new developments: the beginning of Robert M. Ingraham's quarterly, *Kite Tales*

(predecessor of *Kite Lines*) in October 1964, and the opening of the first kite shop, *Go Fly a Kite*, in New York City, in May of 1965. Will's book led the way to the acceptance of kiteflying for adults and it implanted the idea of a worldwide kite community in the public consciousness—what Will called the International Kitefliers Association. “No dues, no meetings, no officers, no publications, no responsibilities—just kiteflying,” Will would say.

Over the years, Yolen has handed out over 35,000 membership cards (“Worldwide Friends through Kiteflying”) to his kiteflying friends and to anyone who writes for a card. He still does so, though the burden of correspondence increases as his physical abilities decline. And he still goes out to fly a kite or talk about kites on rare ceremonial occasions.

Though Will's book contains instructions for making kites, his one deficiency in the opinion of some kites is his personal disinclination to build kites. When



**Opposite page: "Kitefliers all wear caps," says Will Yolen, wearing a cap. He's flying his Grandmaster maneuverable kite from the balcony of his New York apartment. This page, Yolen the celebrity. Above, he autographs his book at the 1976 Maryland Kite Festival. Left, he presents a design award to Canadian artist-kitemaker Claude Thibaudeau as Richard Rowe of F.A.O. Schwarz and Gerard Hacquebard, noted kiter, look on.**

asked about this, his reply is always, "Did Babe Ruth make his own bats?" It's a feisty, much-quoted, Yolenesque remark.

It wasn't Yolen's skills as a kiteflier so much as his perception of kites and his talents in writing of them that nourished the kiting renaissance as we know it today. These very talents caused him trouble, too, at times. He was thought of by some as a mere huckster and egotist, especially as more and more kites came on the scene, building new kites and flying them ever more adventurously. Will did not always recognize these exploits or even know of them—though his second book, *The Complete Book of Kites and Kite Flying* (1976), was a gallant try. The fact is, the enthusiasm which Will helped generate had grown beyond the ability of any one person to embody all of it.

But today in the spring of 1980, Will's eyes still gleam as he talks about kites, including many craft sent to him from

admirers around the world. "I fly kites from the porch," he says. "I fly messages to the U.N." (Always pulling your leg a bit.)

He shows me his reel, carrying bag and kites. "This is one of the first kites Caleb Crowell made for me," he says of a Filipino-type kite. Crowell is the unsung collaborator in Yolen's second book who was responsible for many of its fine plan drawings.

Yolen enjoys a chance to reminisce. He is sure to talk about his two children: Jane Yolen, noted children's author of 54 books, three of them on kites; and Steve Yolen, Bureau Chief in Brazil for Fairchild Publications. And then the tales roll out, slowly, the stories from his books, the quips, the claims. In oral form, these tales sound somehow more believable. One can sense the solid stuff as the lighter particles sift past. It's all there, it all happened. And it started quite naturally.

Will Hyatt Yolen, a native of Connecticut, was a very successful editor, reporter and public relations man for a string of broadcast and print media, including *Life* magazine. He is still on call as a consultant

to the well-known public relations firm Hill and Knowlton. Active in many associations, he has served as president of both the Publicity Club of New York and the Overseas Press Club. *Who's Who* has listed him as the "kite flying champion of the world."

Yet, as Will says, "I never flew a kite until I was 30 years old, right after the war. I had a brother-in-law, Edward Garrick, who was the chief physicist for the old NACA [National Advisory Committee for Aeronautics], now known as NASA [National Aeronautics and Space Administration]. He and Francis Rogallo came up to my house in New York City. I was living at Central Park West at the time. My daughter Jane was about 4 or 5 years old and I'd come back from the war. Then my brother-in-law shows up with this guy Francis Rogallo. He says, 'He's the chief of the wind tunnels at Langley Field [VA]. We're working together on a new way of getting down from the stratosphere. He's got a kite here and he wants to know what he can do to make everybody know about it.'

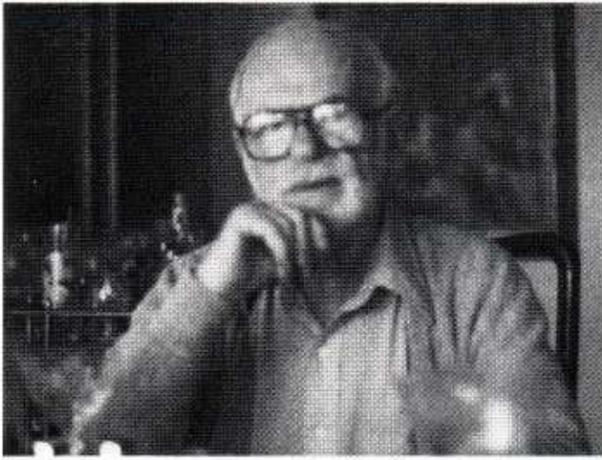
"Rogallo takes out a piece of plastic, flat and square, with strings on it. I said, 'That doesn't look like any kite I ever saw.'

"He said, 'Well, I'll show you how it works.' His theory was that if you had a nonrigid flying object you could go through Mach 1, 2, 3, 4, 5—through the sound barrier because it would just go through the atmosphere without any friction, it would just bend with the turbulence in the air.

"I said, 'Very good, let's try it.' And we went out into the park, but not before I told the editor of the *Daily News* (he lived in the apartment below me) that we were experimenting here with some high level stratospheric flying where we could reach the moon. (I made that up quickly to get his interest.)

"I couldn't understand how a piece of plastic with no sticks in it could fly. But he put it up on a line and it just took the wind and bellied out like a parachute opening, and it was so responsive to every change of the breeze. It moved like nothing I ever saw in a kite.

"Jane flew it and she was ecstatic. Isabelle, my wife, was waving (we had windows that faced the park about 200 feet away) and the editor in the apartment below was waving and up above us Arthur Burns, the economist, was waving us on—everybody in the building who had win-



Mel Govig

Will in a pensive mood offers his table and long skeins of yarn to his visitors.

dows facing the park saw this crazy kite, the kite with no sticks in it. We got back and I found out that the first time I'd ever flown a kite—just imagine, this is how I started my kiteflying career—I was flying the most sophisticated kite. Instead of starting at the bottom I started at the very top. And after I got to flying kites, I never flew anything but Rogallo's kite."

Yolen's initial self-consciousness as a kite loner was dramatized by the oft-told tale of his making a cut-out figure of a boy which he staked to the ground so that to a distant viewer he appeared as a father-like instructor to his child. As a public relations man, he knew image was important. He began using a deep-sea reel

to improve his handling and this became part of his persona.

And then there is the story of his defeat of Pablo Diablo, the legendary evil kiteflier whose razor-studded craft was the scourge of 110th Street. Yolen's knowledge of the winds gave him the advantage in maneuvering his opponent over some trees just when the wind dropped—causing disintegration of the "dirty" kite.

The same techniques served Yolen in the course of the most fabulous of all his deeds, his overthrow of the Maharajah of Bharatpur in 1959 on the grounds of his hunting palace in Uttar Pradesh, India.

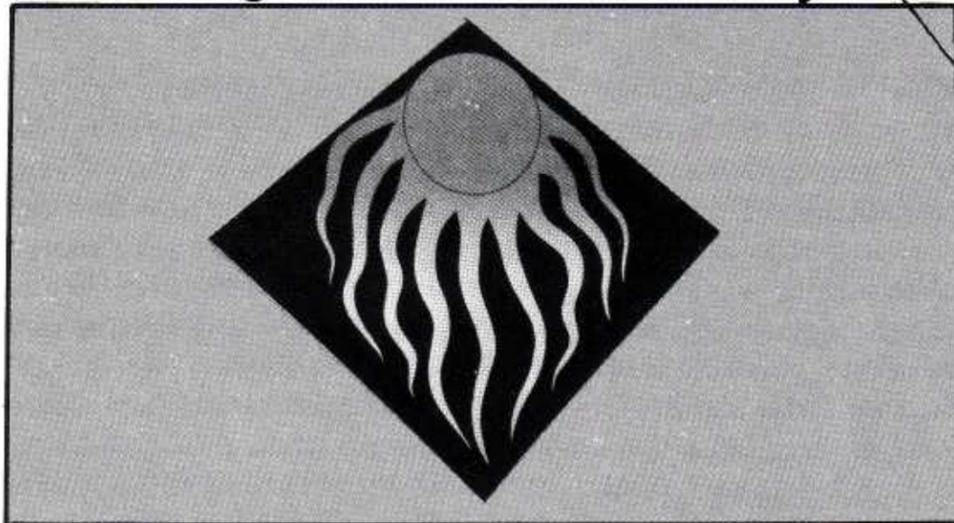
Yolen begins, "One day I was sitting around in Toots Shor's. . ." and we hear the way Yolen recruited new enthusiasts in the famous restaurant from among the writers and theater people there. It was in this establishment that he was invited on a tiger-hunting expedition. With the tigers out of the territory, an alternative diversion was chosen—a kite fight. In a previous trip to Nassau, Yolen had been proclaimed Western Hemisphere Champion among six kitefliers from diverse nations. The Maharajah was regarded as the Kite Champion of the East, and it was agreed that the victor would, obviously, become the World Kiteflying Champion. Yolen won, and the title was his. But it was not until

Yolen had lunch at the Overseas Press Club with Red Smith, the noted sports writer, that his tale of derring do became published news. Smith found enough to write about to fill a four-part series in February, 1961, in the New York *Herald Tribune*. Yolen was an overnight celebrity.

Although Yolen had essentially created his own title, he was in a curious position. A title can be strengthened but also threatened by challenges. And the first kiteflier to challenge Yolen was Baltimorean Edward Hanrahan at Compo Beach, CT, in 1962. Like Yolen, Hanrahan was an amiable, voluble public relations man of compact build. However, Hanrahan was 18 years younger than Yolen and had just brought out a fine Brazilian-type papagaio kite. He called it the Falcon kite and hoped to market it to sports stores. (This was before the days of kite shops.) The Falcon was a dueling kite but no cutting lines were used; one kite simply felled another with an overpowering dive. Sometimes, though, a pair of dueling Falcons would merely tangle in an indecisive spiral lock. In such cases, it was the tongue that had to move quickly to recover from the damage done to dignity. In these oral skills, Yolen and Hanrahan were very well matched. Hanrahan claims to this day that microscopic examination

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of the documentary photos will show his line to have been in a superior position. Yolen never relinquished his title, but Hanrahan counterclaims it anytime he is asked. Only the participants themselves really know who "won" the battle.

As time went on, Yolen thirsted for new glories. He sought to place his name in the record books for kiteflying. *The Guinness Book of World Records* handled only a limited list of kite records. For any others, there was no certifying body to either ratify or deny—or even to educate—aspirants to kite world records (a condition not yet cured today). Yolen designated himself sole arbiter in the areas he selected: most kites flown from one line and duration. In the first category, Yolen's 178-count attempt at multikiteflying in January, 1974, was demolished by William R. Bigge in October of that year with 261. Bigge had some help from the Maryland Kite Society, myself as Executive at the time, in convincing Guinness the category was important enough to add to their book. Bigge's subsequent listing in *Guinness*, though an important symbolic breakthrough, was short-lived, for the Japanese soon smashed the record overwhelmingly and presently hold the record of 4,128 kites flown on one line in 1978 by Kazuhiko Asaba.

Yolen's second effort for a kite world record was duration. He used a team of fliers at an inn in Ft. Lauderdale, FL, for a week in May, 1977. Accomplished through periods of rain and zero-wind (by repeated pull-ups), the effort went to 170 hours, only 2 hours over Walter Scott's claimed record of the early 60s. But the trifling increase was enough to satisfy Guinness. Yolen had at last made the coveted pages.

Yolen's career, though marked with controversy, has also seen some very real triumphs. Signal among his acts was his November 2, 1965, arrest for advertising Lindsay for Mayor by kite in Central Park, New York City. On December 8, defended by the American Civil Liberties Union, Yolen was exonerated. Thus freedom of speech celebrated a victory and all the air spaces over New York's parks were opened to kiteflying.

Of equal publicity value for kiting was Yolen's coaching stint in the summer of 1976 as the head of the Yale Kite Team. *The New York Times* on August 9 of that year said of Yolen:

"At his team's table at Morey's, the 128-year-old eating club, he regales his followers with tales of his kiteflying exploits." It ended:

"Kiteflying is a gentle sport, but the

participants have to be tough," said Mr. Yolen, a taskmaster who insists that his team members forego the fifth martini at lunch during periods of intensive training."

The hope was to encourage other colleges to field intercollegiate teams, each with its own uniforms and cheerleaders. There were real possibilities in that one. The only problem seemed to be that each team needed an inspiring coach and there weren't too many Will Yolens available.

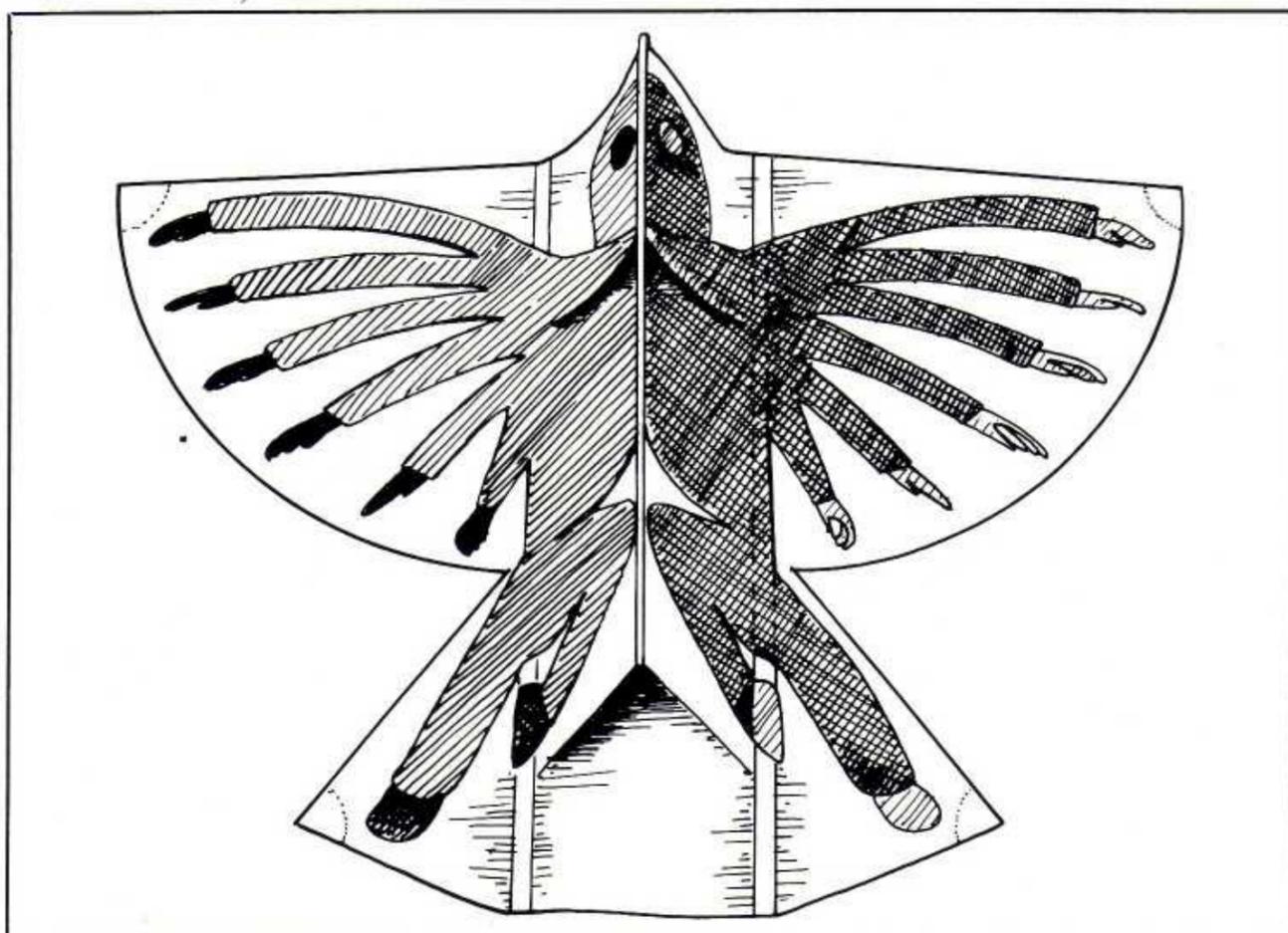
Pet dreams in Yolen's recent years are to persuade the Olympics to include a kite competition and to establish a kite museum with himself as curator. But the years have caught up with Yolen and he says now, "I have to forget the things I still want to do."

I asked Will what he wanted to be remembered for.

His ready answer was, "I want to be remembered for my kiteflying trips. I got something out of every trip I've ever taken, other than just a story. It's very ego-satisfying."

Through good luck and bad, success and controversy, Yolen and the IKA (which he wryly calls "my monument") are the embodiment of two qualities every kiter requires: *wit* and *grit*. Or, as Yolen says, "Get it up and keep it up." ♦

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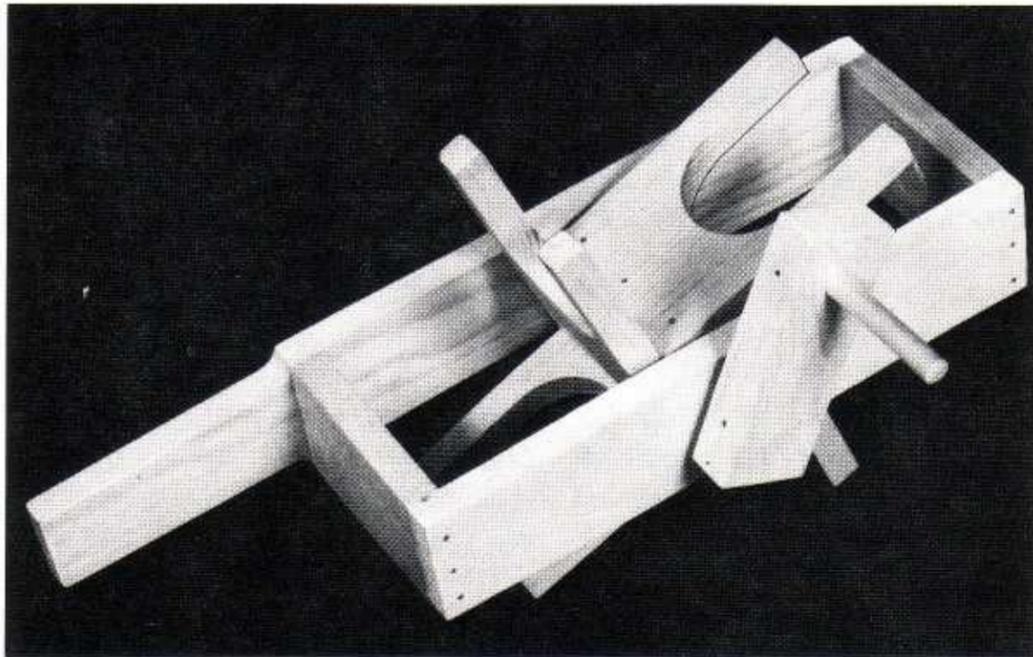
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By Malcolm G. Russo

My family and I rediscovered the fun of building and flying our own kites about three years ago at the annual Loch Haven Kite Festival in Orlando, FL.

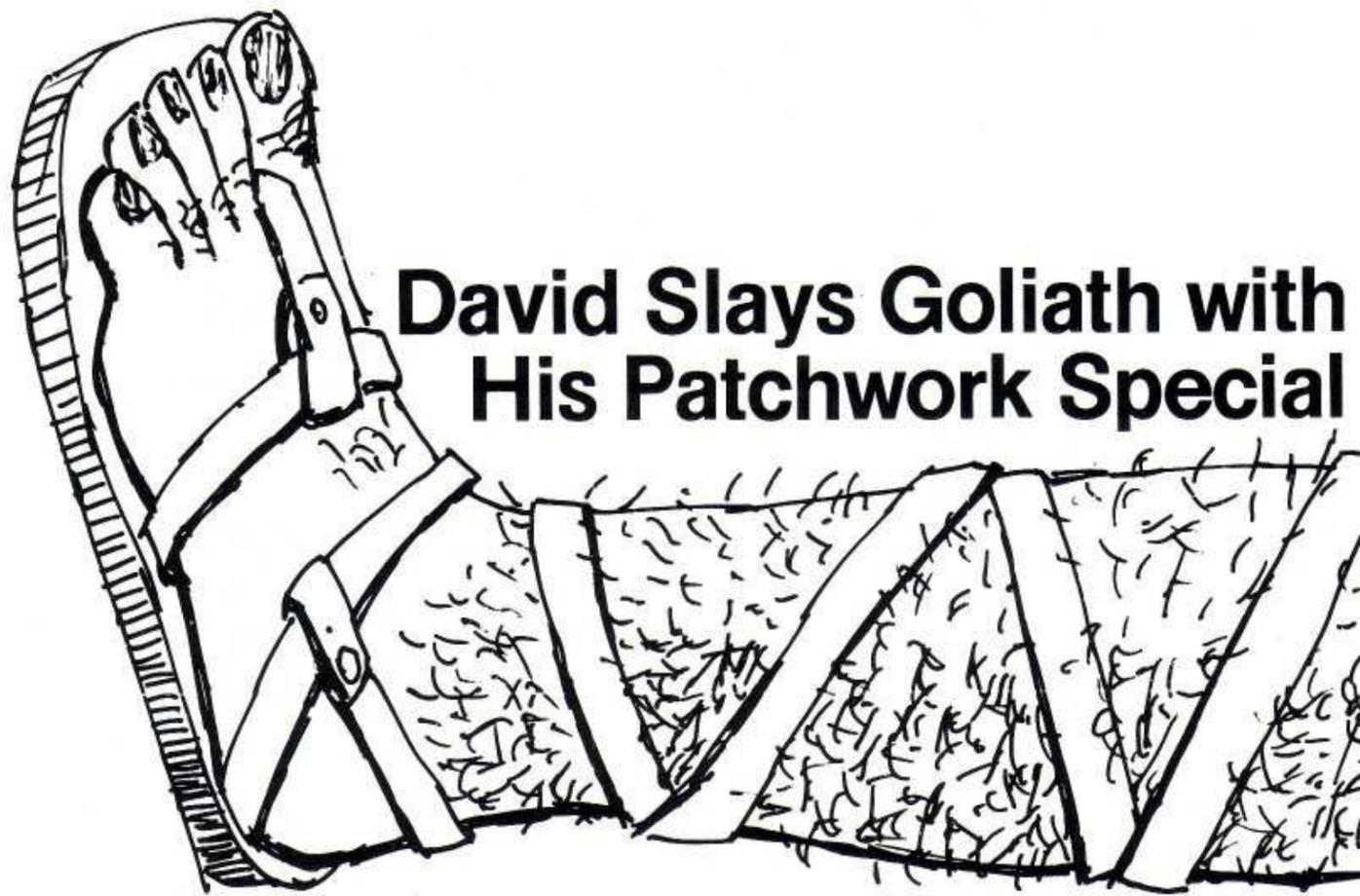
Our first attempt, an authentic Japanese Edo kite (split bamboo and all) looked great but flew like the proverbial "lead balloon." Being only the more determined, we built for the second year a four-foot Conyne of basswood and tissue paper, and returned with the second place trophy for family entries. Feeling like the U.S. Olympic team preparing for its date with destiny, we began to plan for the 1978 festival before we even got home.

Our plan was to build a 9' x 6' double Conyne to carry a light Polaroid camera. We would fly a messenger up the line and pull the kite in to present the judges with a "kite's eye view" of the kite festival—a feat we were sure would be a winner.

My schedule was busy as the time approached to begin construction. It was a week before the festival, and we were scrambling to have our behemoth ready for lift-off. There was no time to build and test the camera mechanism, so we postponed that idea, confident of a trophy on sheer size and performance. After several long nights and early mornings, Kite Day was here and we were ready.

Daddy was probably the most excited with visions of a beautiful launch to the oohs and aahs of friends who had come (including two visiting from Nottingham, England) just to see our "Champeen."

But I was having a little problem with my nine year old son, David, pestering me



## David Slays Goliath with His Patchwork Special

to let him enter the "individual under 12" competition with the "champ" from the previous year. Time and weather had taken its toll on the tissue and frame, and I was sure it would never even get off the ground. My pep talk to David about "team spirit" and the glamour of our new winner-to-be didn't work, as I saw a tear run down his cheek. Finally, as our team was called up, I turned in desperation to a friend and asked him to help David do a quick patch job on the old kite and register him at the entry booth, which was closing at any minute.

Our team stepped up to launch on the judge's signal. My wife, Marty, and our 12 year old son, John, prepared for final release as Laura, our eight-year-old, coached the cheering section. A gentle gust caught the broad face of our beauty as I felt the line tighten and watched the graceful rise that is the final reward of tedious hours of effort. She flew like a champ.

As we finished bringing in the big kite, I glanced over at David, in line waiting to hear his number called. I saw him standing there with the confidence of another David, waiting to face Goliath, and something inside said, "You're watching your son grasp that elusive confidence and courage that will sustain him as he reaches for manhood." He had never looked so grown up, standing there with his "patchwork special" ready to conquer the world. I thought to myself with fatherly piety, "I'm sure David will handle his inevitable loss well. Somehow, he always manages to smile through his hurt." Boy, never was I so all wet!

The public address rang out: "Number 217—on deck." I got the OK to assist David's lift-off. I watched that old kite rise perfectly under the skillful control of

my son, and as he reeled in a judge whispered in my ear, "Make sure your son is present for the awards."

Most of the crowd had gone home by late afternoon as a small group gathered around the booth for the awarding of ribbons and trophies. "First place for craftsmanship . . . First place for the largest entry . . . First place for the smallest entry . . ."—it seemed like an eternity until we heard coming through the crisp cool afternoon air: "First place for the Under 12 Division goes to—David Russo!" The group applauded as a beaming nine-year-old strode forward like a victorious soldier to receive the trophy. There were at least four who shared the joy of David's victory—and at least one old salt who had to bite his tongue for ever doubting the strength of a nine-year-old's determination.

Our high-flying leviathan brought the family crew the second place ribbon for the Team Division competition. With a proven kite, we have set our sights on first place next year when our "eye-in-the-sky" makes its Festival debut. But there is no doubt that around our house 1978 will always be remembered as the year Daddy learned that if you want to know what kites and kite contests are all about—just ask a kid who's been there! ◇

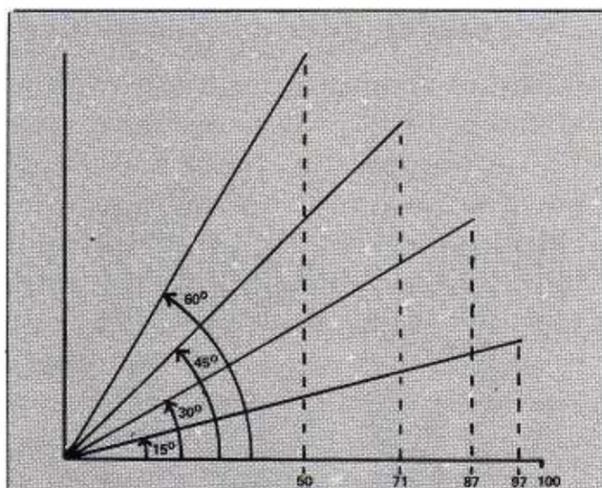
*Malcolm G. (Jerry) Russo is "an engineer by profession and a tinkerer by confession." He and his family have continued to participate and win prizes in the Loch Haven Kite Festival each year.*

## Variations on a Theme

The symposium on tetrahedral kites which appeared in *Kite Lines* (Winter 1977-78) inspired Bevan Brown to do a systematic analysis of the kite's efficiency. Though Bevan stretches the definition of "tetrahedron," he shows us that his drawing board is a particularly good one when you have to "go back to the drawing board."

By Bevan H. Brown

I have always admired the tetrahedron for its clever structure, but it tends to be heavy for the lifting area, as this graph shows:



### % EFFECTIVE LIFT AREA VS DIHEDRAL ANGLE

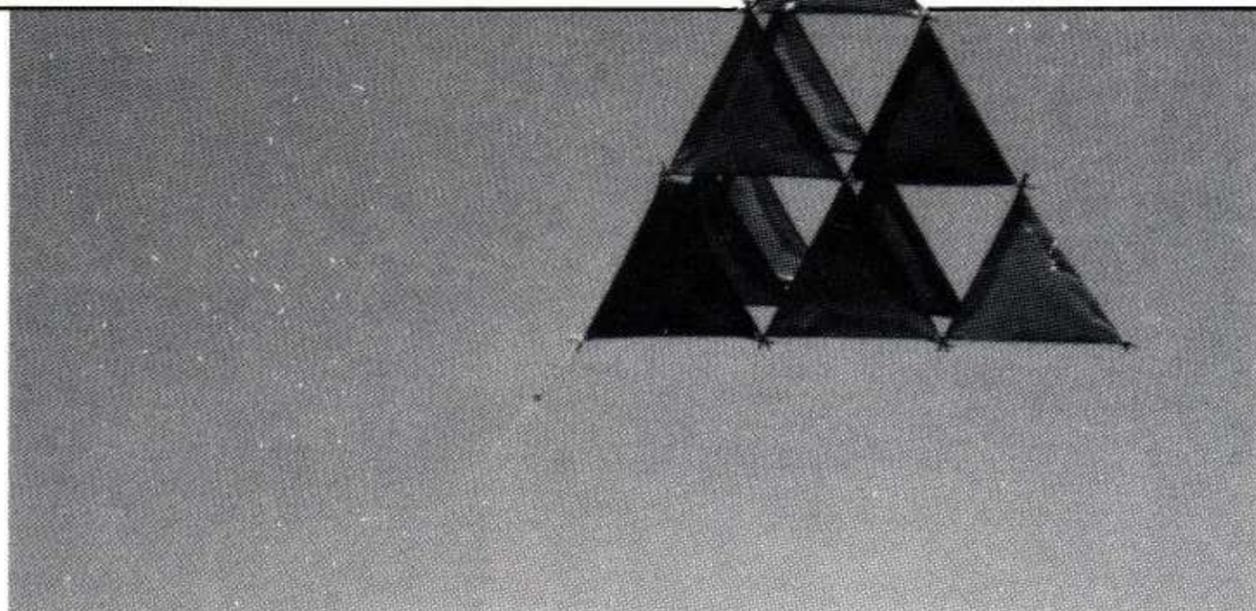
The "standard" tetrahedron, with equal length sticks, has a dihedral of about 55 degrees and about 58% of the cover area is effective lift area.

Effective lift decreases rapidly above 25 or 30 degrees dihedral. Decreasing the dihedral from 55 to 30 degrees increases the effective lift area by 50% with an increase in weight of 8.3%.

The graph suggests that the lifting performance could be improved by decreasing the dihedral angle.

Variation I increases the spreader stick for each cell to give a dihedral angle of 30 degrees, which makes the lifting surface 87% effective. This is about 50% better than the standard, and the stick length

© Bevan H. Brown 1980



Ed Grauel

increases by about 8%. The stability will decrease.

While this version is potentially more efficient than the standard plan, it is very poor in lifting ability compared to an Eddy kite. The Eddy, with about a 15-degree dihedral, has a lift area to kite stick length ratio of 8.5 compared to 1.38 for the 30-degree dihedral tetrahedron or the standard tet with a lift area to stick length of 1.0.

Variation II is a 90-degree tetrahedral. The cover is now a square folded on a diagonal. This requires a 17-inch stick for each keel with 12-inch sticks for all others. This increases the covered area and slightly decreases the dihedral.

Variation III spreads the 90-degree tetrahedral to a 30-degree dihedral.

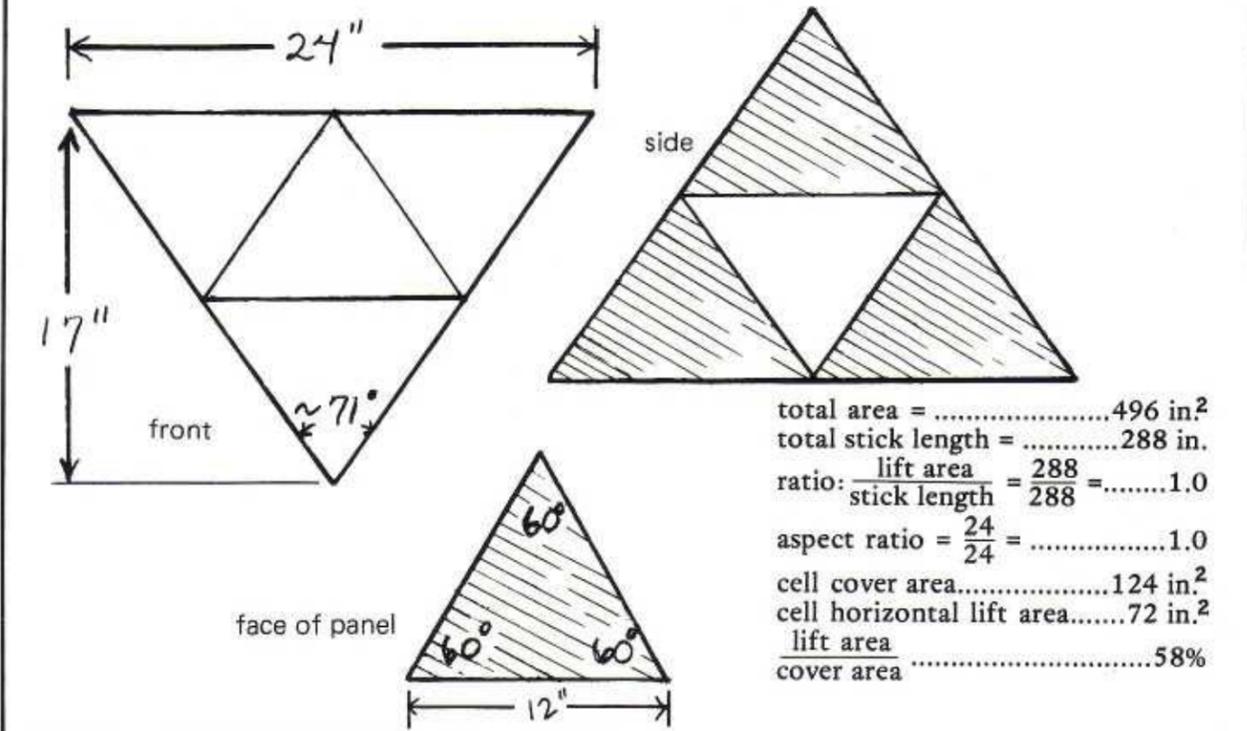
Variation IV uses square panel cells, which requires two more sticks per cell, but doubles the cover area. This gives a lift area to stick length of 3.2 at 30 de-

grees dihedral compared to 1.0 for the standard tetrahedron. These cells can be covered at the top, which will give an added lifting surface. Diagonal bracing strings may be needed, to add rigidity.

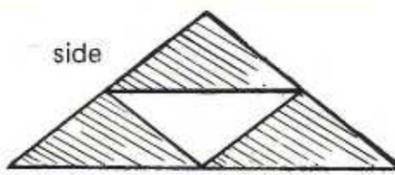
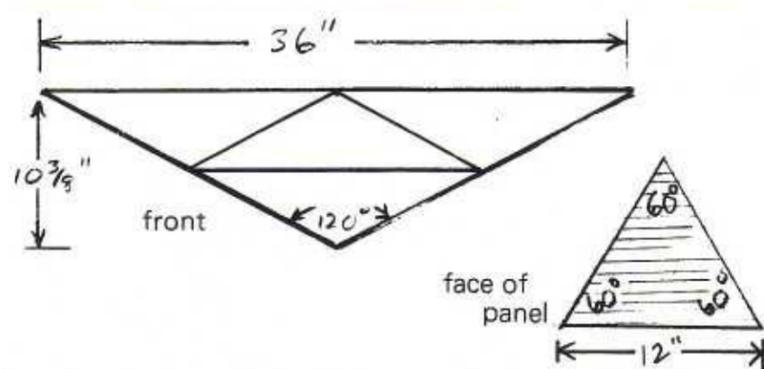
Variation V is a negative image of the standard tetrahedral cell, with the point at the bottom, and wide at the top. This requires 15 extra sticks, and with a 30-degree dihedral has a lift area of .95 compared to 1.0 for the standard tetrahedron. The tops of the cells can be covered, which would double the horizontal lift area and offer some double lift surface. A top cover over the two lower cells would probably need to be vented to aid stability. This would present an interesting hexagon shape from the side.

The tetrahedron as strictly defined will never be efficient, but there is room for experimentation as illustrated by these variations. All retain the same building block characteristics.

### "STANDARD" TETRAHEDRON 54.7° dihedral 12" sticks (24)



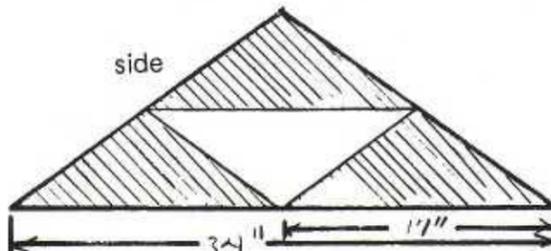
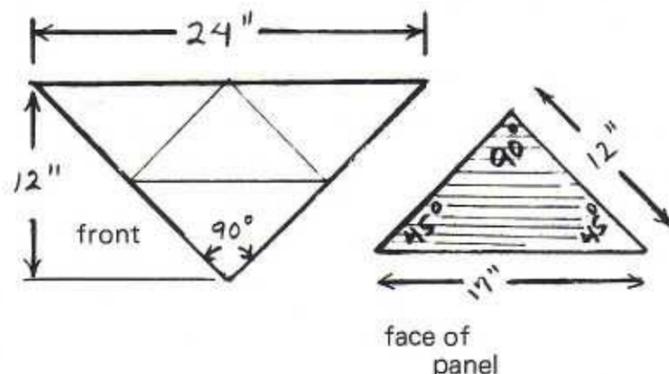
### VARIATION I. 30° dihedral tetrahedron



Comments: An Eddy kite has a lift area / stick ratio of 8.5. Variation I represents an increase in effective lift area of 50% from the "standard;" weight will increase about 8.3%.

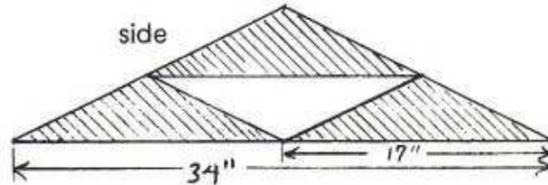
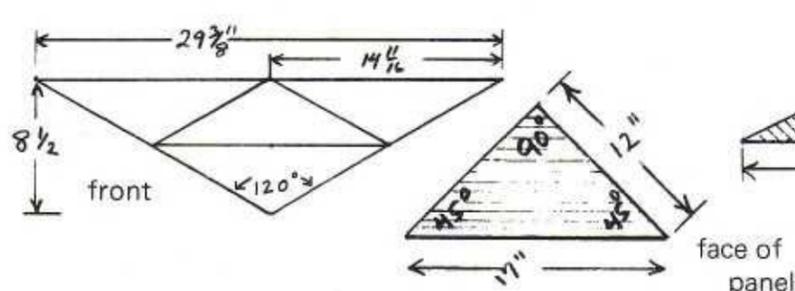
sticks.....	$\frac{12''}{20} \frac{18''}{4}$
total area =	496 in. <sup>2</sup>
lift area	432
stick length =	$\frac{432}{312} = 1.38$
aspect ratio =	$\frac{36}{24} = 1.5$
cell cover area.....	124 in. <sup>2</sup>
cell horizontal lift area.....	108 in. <sup>2</sup>
lift area	432
cover area	496
	87%

### VARIATION II. 45° dihedral, square cover, tetrahedron



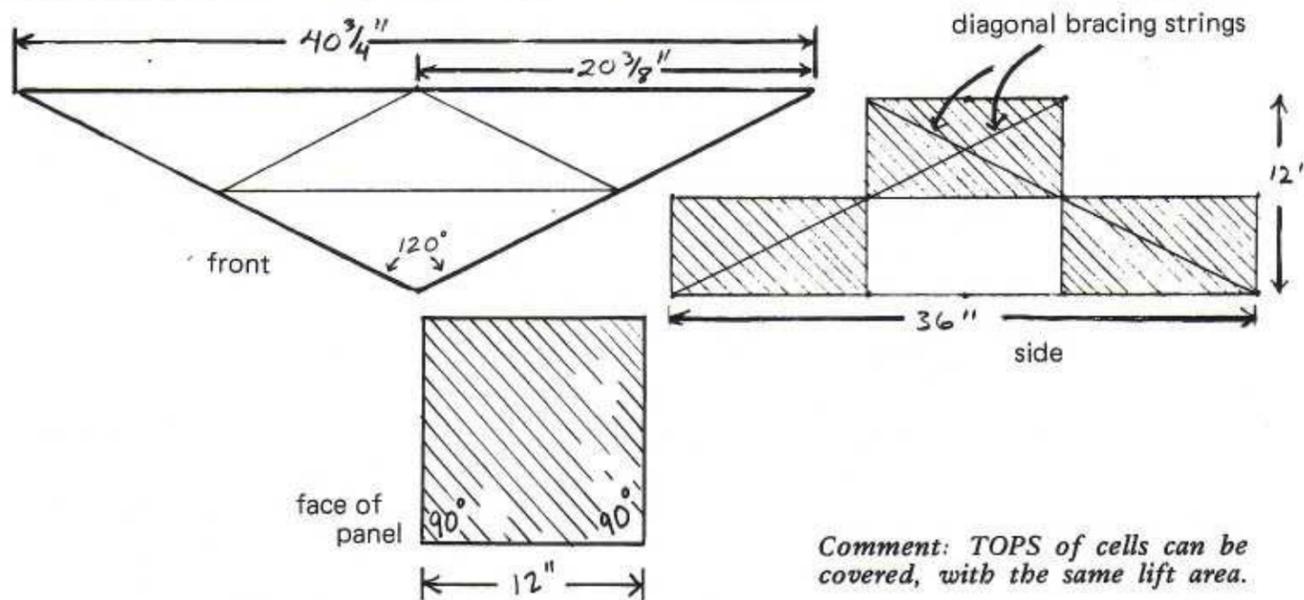
sticks.....	$\frac{12''}{20} \frac{17''}{4}$
total area =	576 in. <sup>2</sup>
lift area	408
stick length =	$\frac{408}{308} = 1.32$
aspect ratio =	$\frac{24}{34} = .71$
cell cover area.....	144 in. <sup>2</sup>
cell horizontal lift area.....	102 in. <sup>2</sup>
lift area	408
cover area	576
	71%

### VARIATION III. 30° dihedral, square cover, tetrahedron



sticks.....	$\frac{12''}{16} \frac{14\frac{1}{16}''}{4} \frac{17''}{4}$
total area =	576 in. <sup>2</sup>
lift area	500
stick length =	$\frac{500}{319} = 1.57$
aspect ratio =	$\frac{29\frac{7}{8}}{34} = .86$
cell cover area.....	144 in. <sup>2</sup>
cell horizontal lift area.....	125 in. <sup>2</sup>
lift area	500
cover area	576
	87%

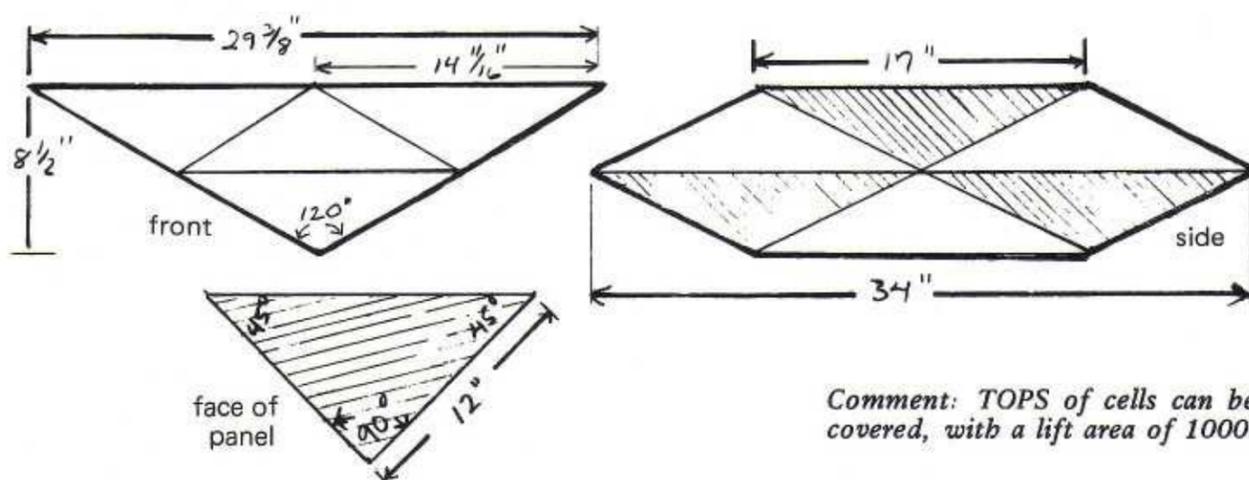
### VARIATION IV. 30° dihedral, tetra/square, 12" x 24" covers



sticks.....	$\frac{12''}{24} \frac{20\frac{3}{8}''}{8}$
total area =	1152 in. <sup>2</sup>
lift area	998
stick length =	$\frac{998}{309} = 3.2$
aspect ratio =	$\frac{40.75}{36} = 1.1$
cell cover area.....	288 in. <sup>2</sup>
cell horizontal lift area.....	249 in. <sup>2</sup>
lift area	998
cover area	1152
	86%

Comment: TOPS of cells can be covered, with the same lift area.

### VARIATION V. 30° dihedral, 90° cover angle, reverse tetrahedron

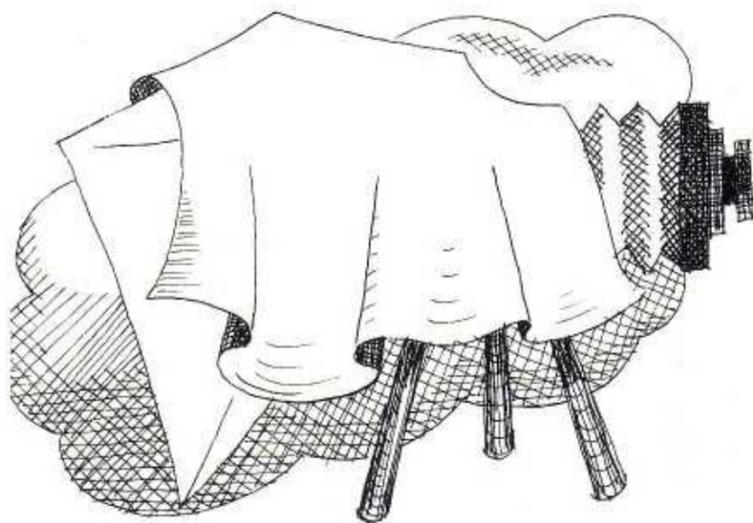


sticks.....	$\frac{12''}{24} \frac{14\frac{1}{16}''}{7} \frac{17''}{8}$
total area =	576 in. <sup>2</sup>
lift area	500
stick length =	$\frac{500}{527} = .95$
aspect ratio =	$\frac{29.4}{34} = .87$
cell cover area.....	144 in. <sup>2</sup>
cell horizontal lift area.....	125 in. <sup>2</sup>
lift area	500
cover area	576
	87%

Comment: TOPS of cells can be covered, with a lift area of 1000.

# KITE AERIAL PHOTOGRAPHY

## Who's done it and how



Drawings by Weston Phipps

This list of kites is united and distinguished by an unusual achievement. Each person has succeeded, at one time or another, in taking photographs by kite.

No such list could be complete in these yeasty kite times. But the 12 names show the strength of a trend in kiting toward welcoming the challenges and incorporating the opportunities of today's technology as it applies to kites.

What kiter hasn't at least *thought* of taking pictures by kite? It's the natural extension of the kite-wish to fly: to wish to see the world as an eagle can. Today the means (and temptations) come ever closer to hand. The Polaroid challenges us, too—sticking its tongue out! And now, sensitively timed, a kite aerial photography contest has been announced by the Cerf-Volant Club de France. (See box.)

### Pigeons and History

Kite aerial photography enjoys an honorable history. It predates the airplane-carried cameras that are so common today—still cameras, movie cameras, even video. Humanity's first kite view of the world was provided by the English meteorologist E. D. Archibald using a kite train in 1887. In 1889, A. Batut of France attached a camera to a kite and snapped the shutter by means of a slow-burning fuse.

America's first kite picture was taken by William A. Eddy of Bayonne, NJ, on May 30, 1895, using a separate string to click the shutter. In these years, claims of "first" kite photograph kept appearing, including Gilbert Totten Woglom's for his effort on September 21, 1895. With the cooperation of photographer George E. Henshaw, he had first lifted a basket of eight homing pigeons and released them to test his mechanism and the amount of pull necessary to lift a certain weight. Woglom was successful and later wrote of taking "many very fine bird's-eye views" of New York City—using glass plates.

Eddy went beyond single pictures and mounted eight cameras to a round wooden base, flew it by a series of kites and took pictures from all the cameras at once to capture a complete circle of the horizon. Eddy's tailless kites were later used in the Spanish-American War in Puerto Rico to take reconnaissance views for the U.S. Army.

In 1907, the early days of Kodak, George Eastman added his bit to the history of kite aerial photography by taking a kite-lofted picture of Kodak Park.

But it was George P. Lawrence, a photographer from Ottawa, IL, who caught the largest and most dramatic photograph ever taken by kite—perhaps by any means. He assembled 17 huge kites, a giant camera (as long as a car), and a crew of 15 men to take a photograph of San Francisco in 1906 just after the earthquake and fire. The historic printed photo, large enough to cover a single-size bed, sold all over the country and beyond and earned Lawrence a sum of \$15 thousand dollars.

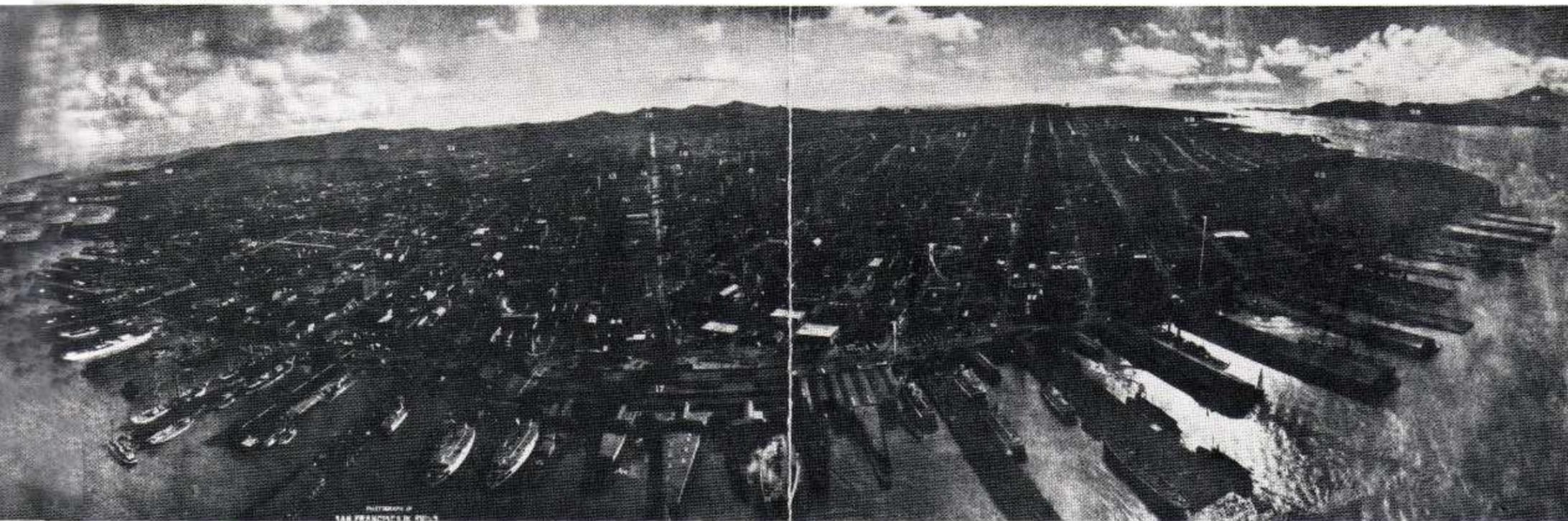
### The Variables and Options

Today's intense competition for our camera dollar has brought us models ever lighter in weight, more automatic and more resplendently gadgeted. Kite aerial photography is within the reach of any determined enthusiast.

The practitioners on the *Kite Lines* list (to left) have worked out their own methods independently. Although all share the same universe of general technology, none of the kites has had much opportunity to compare notes; thus this gathering shows varied adaptations to the problems of kite aerial photography.

For example, Garry Woodcock uses a light 35mm camera built of balsa wood and triggered by a model airplane gas cut-off timer—all very simple and lightweight. Lucien Gibeault uses a very good 35mm

Count Geoffroy de Beaufort  
Chateau de Libois, near Namur, Belgium  
Michel Berard  
Vincennes, France  
Stanley E. Crinklaw  
St. Mary's, Ontario, Canada  
Frank S. Crowell  
West Yarmouth, Massachusetts, USA  
Richard Fox  
Looe, Cornwall, England  
Paul Edward Garber  
Arlington, Virginia, USA  
Lucien Gibeault  
Valleyfield, Quebec, Canada  
Robert M. Ingraham  
Silver City, New Mexico, USA  
Ao Loo  
Etobicoke, Ontario, Canada  
Curtis Marshall  
Baltimore, Maryland, USA  
Robert S. Price  
Burtonsville, Maryland, USA  
Robert C. Reichert  
Lawrence, Massachusetts, USA  
Hank van Meekeren  
The Hague, Holland  
Mike Ware  
Manchester, Lancashire, England  
Garry Woodcock  
Mississauga, Ontario, Canada



Above, George Lawrence's picture of San Francisco after the 1906 earthquake/fire taken from a kite flying above the ferry slips. Below, Lucien Gibeault's kite/camera rig.

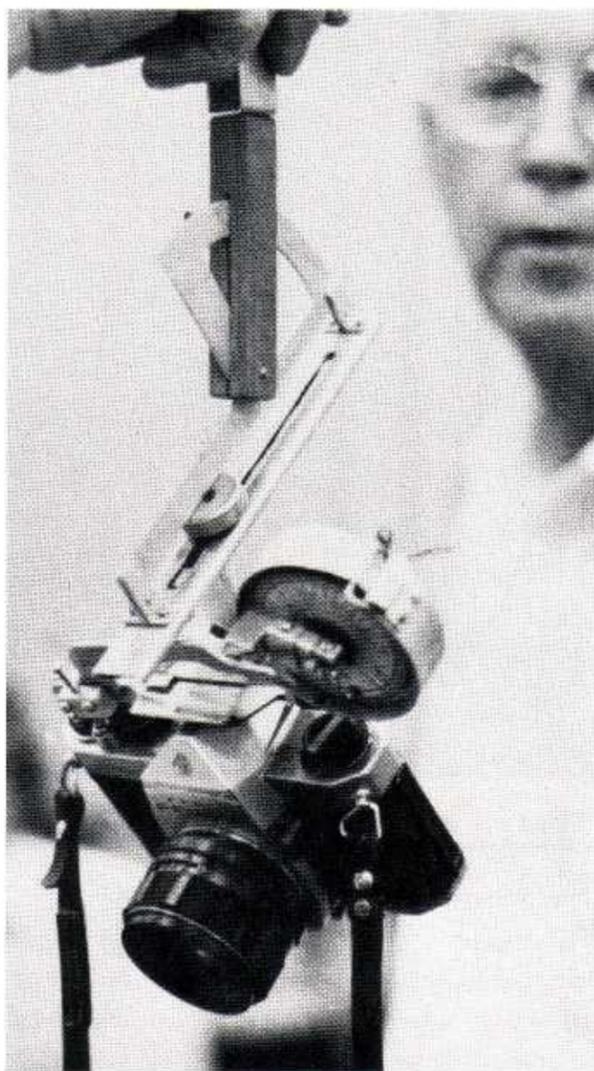
camera with a special timer and a very solid but adjustable mounting. Bob Price says, "I use a 35mm Kodak Retina camera which falls between the other two in weight and refinement."

At the extreme of perfection, of course, is radio control, known to Ao Loo, Curtis Marshall, Mike Ware and probably others. Dr. Marshall has modified a Polaroid SX-70 camera to drop its photos into a box. His mount attaches to the line below the kite, a Marshall delta-Conyne or a Jalbert Parafoil. His radio link uses a garage-door opener and lights up to indicate anything that is not working. Marshall has never suffered a misfire from interference by citizen's band radio. The all-automatic SX-70's shutter speed and aperture vary synchronously in relationship to the conditions and create a greater risk of blur than would a nonautomatic or fixed-shutter-speed camera. Marshall offsets this risk by using steady kites and stabilizing drogues.

Mike Ware has achieved some celebrity for his authorship of a two-part article in the newsletter of a prominent British club, the Northern Kite Group. Titled "Archaeo-kitoaerophotogrammetry," the article describes in droll style the development and testing of kite-lofted radio-controlled photography for an archaeological dig in Cumbria. The system was utilized again later in an expedition to the Libyan desert. A very flexible pivot system aided adaptability for low-level work and produced photos deemed preferable to the customary site tower photography in archaeology.

Few kites are so lucky as Mike Ware to have a scholarly justification for spending lavish hours and money on a kite aerial photography project. For practical advice and information, *Kite Lines* has turned to the experienced practitioners whose writings follow.

Valerie Govig



Hank Szerlag

#### References:

- Wyatt Brummitt, *Kites: A Golden Handbook Guide* (Racine, WI: Western Pub. Co., 1971), pp 101-3.  
 Harry Edward Neal, *The Story of Kites* (New York: Vanguard, 1954), pp 41-45.  
 David Pelham, *The Penguin Book of Kites* (New York: Penguin Books, 1976), p 35.  
 Mike Ware, "Archaeo-kitoaerophotogrammetry," *Kite* (Northern Kite Group, £ 2.50/ 4 issues, Treasurer Martin Powell, 213 Manchester Rd., Rochdale, Lancs., OL11 3RB, England), no. 4, pp 7-9; no. 5, pp 4-5.  
 Gilbert Totten Woglom, *Parakites* (New York: Putnam, 1896), pp 41-43.  
 Jane Yolen, *World on a String* (Cleveland: Collins, William & World, 1968), pp 37-39.

## Everything I know (so far) about kite-lofted photography

By Garry Woodcock

Taking aerial photographs from kites has been a problem-filled challenge that has obsessed me for two years. Having achieved some success, via disappointments, I hope the following information will make it easier for fellow kite photographers to fulfill their ambitions.

### Decision 1 Camera Location

We begin here, since this will determine other factors, such as the type of kite used.

*Camera Off the Kite:* Suspending the camera at least 200 feet downline from the kite makes it easy to handle, fast climbing and more successful at low levels, since the kite is up in less turbulent air. Ground operations (changing film, etc.) with the camera may be done while the kite is still flying. When the camera is attached directly to the kite, on the other hand, the flier must land and relaunch after each exposure.

Parafoil kites are ideal here, providing strong, constant lift with reliability and stability even in strong winds. Particularly heavy gusts could destroy another kite, along with the camera. My 16-square-foot Parafoil flies on 100-lb-test braided nylon line which I keep dry and inspect regularly.

Constant lift of at least five times the

camera weight is needed; remember, the camera is hung out on a line, not lifted straight up. If wind speed is not high enough, wait for it to pick up. My Parafoil will barely lift my 10-oz camera rig in eight-mile-per-hour winds.

Low wind soaring kites (e.g., deltas) are *not* suitable because the weight of the camera will pull down on the line, bringing the kite right overhead, at which point it will lose lift and you will be scrambling to save your rapidly sinking camera.

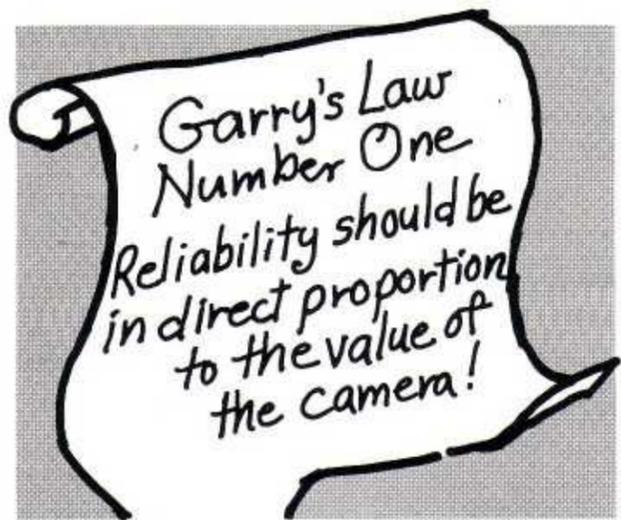
Constant lift is needed to keep the line fairly taut. Camera motion is a major problem, and even at 1/250 sec or faster, an undulating line may cause pictures to be unsharp.

*Camera On the Kite:* Only kites of proven stability should be used, since the camera's extra weight multiplies the instability that occurs when the center of lift is changing during launch and turbulence.

Flying a lifter kite above the camera kite will assist in relaunch, but both should fly smoothly together.

Rigid Hargrave and Weather Bureau box kites with very *tight* covers have proven successful, as have French military (Conyne) and rigid airplane types. A loosely covered kite will shake and tremble so that shutter speeds faster than the rate of vibration must be used. Because it seems difficult to cure or prevent this jarring, it is more usual to attach the camera to the line than to the kite.

## Decision 2 The Kite Camera



Light weight and high shutter speeds of 1/250 sec or faster are necessary for your camera unless very large kites are used. Larger kites move more slowly and are less affected by the extra weight.

There are many suitable miniature 35mm cameras available, particularly the Rollei 35, Olympus XA, Minox 35 and Ricoh. The Rollei is the heaviest of these, at about 10 oz, and the highest quality. All are priced around \$200. The beautiful little Pentax Auto 110 single lens reflex accepts wide-angle lenses and other accessories, but the tiny 110 film size doesn't



A kite's eye view of Garry Woodcock photographing himself in Toronto, Ontario, Canada.

allow much enlargement past 8x10".

Compact 35mm SLR's offer lens interchangeability plus motor drive units. These will weigh over two pounds and require the use of large kites with all their handling difficulties and expense.

Making your own cameras offers an even greater challenge and possibly even better results. Lenses and shutters from old folding cameras can be housed in balsa, thin plywood or aluminum. Frequent the camera stores in your area and if there is an antique camera club you are bound to find what you need.

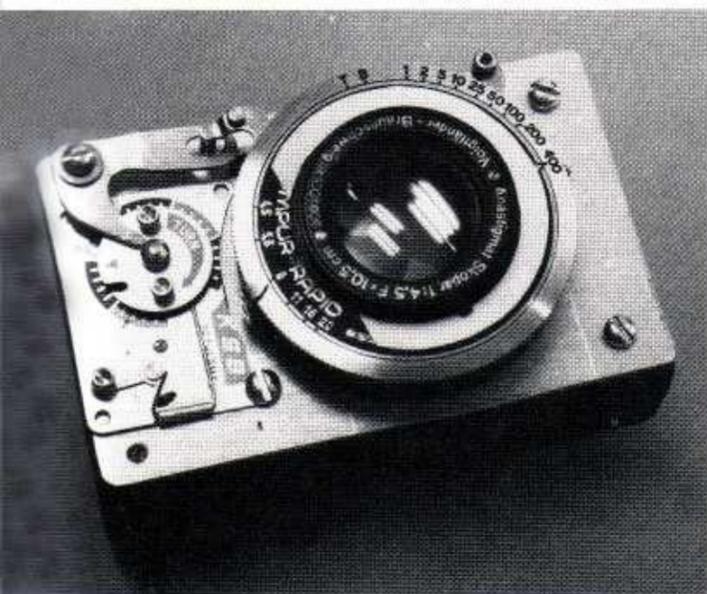
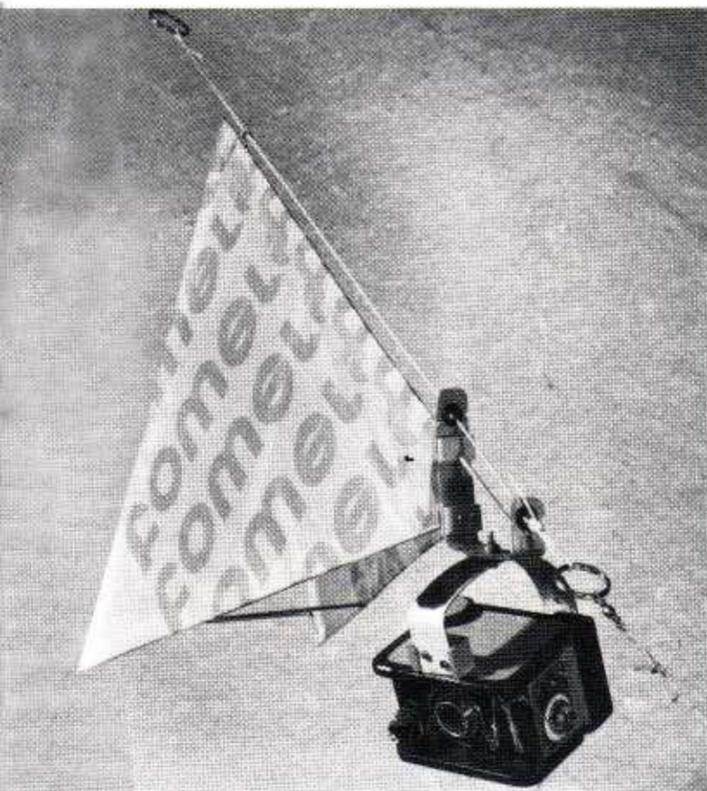
Popular 120 size film is easy to build around and provides a big negative, and 75mm to 105mm lenses are still quite plentiful. Some of the ones found on Zeiss-Ikon folding cameras are superior to modern lenses.

Paper-backed film sizes such as 120 and 126 are easiest to use. Just look through a hole in the camera back to line up the frame number on the paper.

A shutter releasing timer and kite mounting attachments can be built right into the camera body. Test the camera thoroughly on the ground so that it functions properly—so many other things can go wrong!

## Decision 3 The Camera Mount

Vertical and horizontal axes provide a choice of viewpoints. A bent piece of aluminum curved around the camera with holes at intervals along its length for attachment to the line bracket works just fine. Predetermine the angle of inclination that the line will have and make the bottom of



Above is Garry Woodcock's kite-line mount with vane to stabilize his custom camera. Below is his schematic showing holes in the arm to permit vertical angle adjustment.

the line bracket horizontal—or make it tiltable for perfectly level horizons every time! See to it that your line is not subject to abrasion from rough-edged holes or surfaces. A cut line and falling camera is a serious safety hazard over a crowd! I install rubber grommets (from electrical supply stores) in the aluminum where the line goes through.

A stabilizer vane will help stop a line-mounted camera from rotating around the line like a pendulum. My dihedral vane has two surfaces so that oncoming wind is always pushing it straight back. It is affected by side winds, though, and a revised design vane would have its vertical surfaces equally above and below the line. This would dampen the sidewise movement of the whole apparatus. The surfaces should be tight, to avoid fluttering. Small vibrations like this also affect image sharpness.

For mounting the camera directly on the kite, use the bottom center longeron of double box or rigid Conyne kites, just behind the front cell. On an Eddy kite attach it to the spine, just below the center of lift. Open keel deltas can also be used, but experiment carefully. Eddys and deltas both are sensitive to changes in centers of gravity and lift.

At the steep angle of lift-off, the whole camera and bracket will flop to one side, so attach it firmly. Lines running to the sides of the kite will also minimize this.

#### Decision 4

#### Shutter Release Mechanism

I have found delayed shutter release is easiest with dethermalizing timers found in hobby shops for around \$8. Made to

bring free-flight gliders down, they are very light and consistent and strong enough to trip most shutters. They run for six minutes, long enough to gain plenty of altitude. They are also excellent for making dropping mechanisms if that is your interest. Sergeant Renfrew, the Toronto Kitefliers Para-Mountie, likes to be aloft for at least three minutes before he is forced to jump!

Burning fuse timers, also from hobby shops, will release shutters after burning through a tensioning elastic and releasing an indicator piece of paper or paper cup.

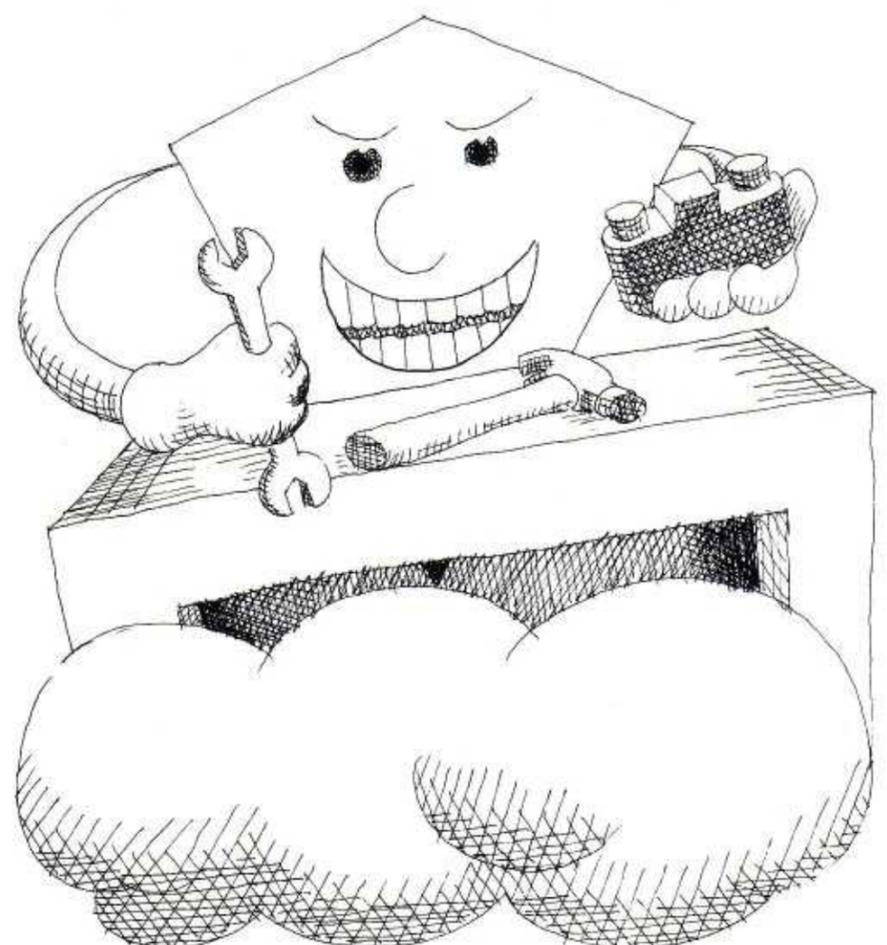
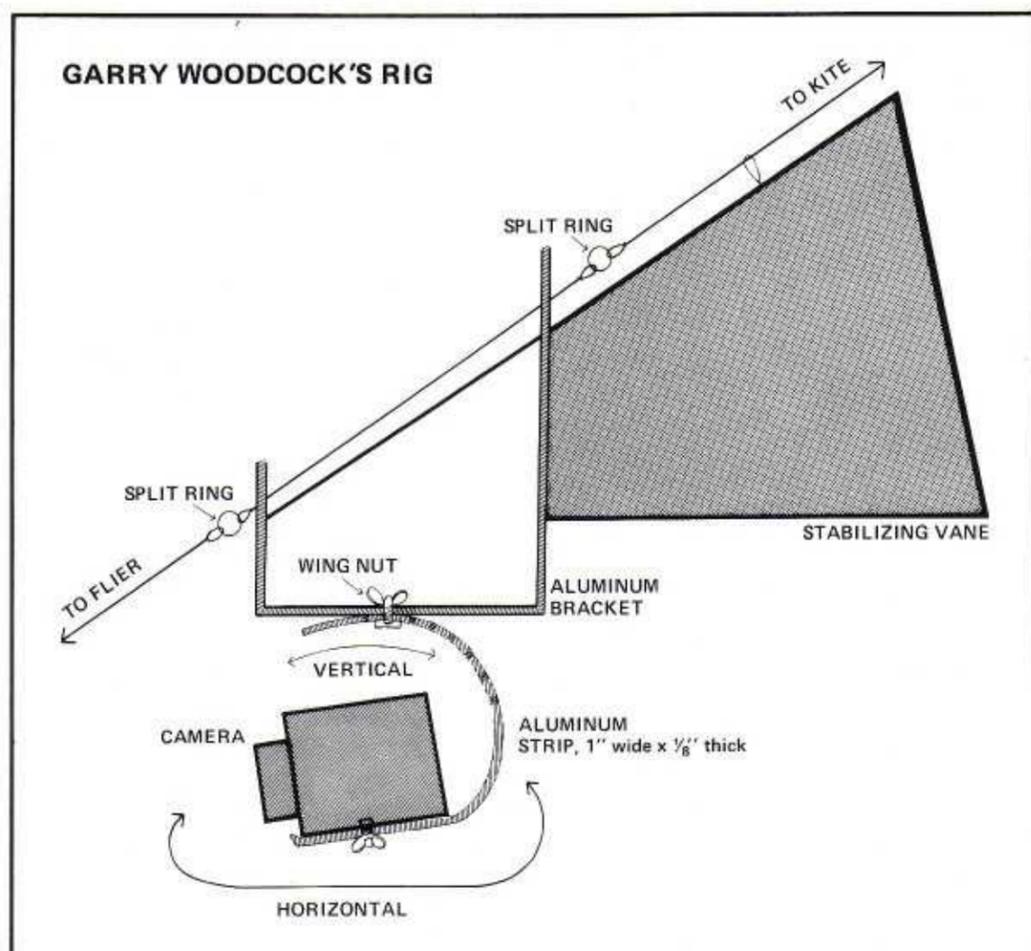
Another system uses a trigger line to the camera. This allows the exposure to be made at the flier's will, such as when the kite is flying at its best or there is some action on the ground. This is a clumsy system, though, requiring a two-line reel, one to fly the kite and one to operate the shutter. Reeling in and out can be quite tricky. Some kind of elastic or spring-powered shutter release device is needed.

Radio-controlled motor-drive cameras for large kites, such as the J-30 Parafoil, and truck-driven winches are expensive solutions I've not believed worth trying.

#### Garry's Ultimate Aerial Kite Photography System

An ultra-light high-resolution stereo camera with miniature closed-circuit television camera would transmit a field-of-view display to the ground. The radio control would operate the shutter, zoom lens, and vertical and horizontal movements. It would all be mounted inside a rock-steady airplane kite that could fly in any wind!

*Kite Aerial Photography Continues...*



# Notes to the would-be kite aerial photographer

By Robert S. Price

I will describe my set-up so that you may compare it to others. I use an eight-foot-long box kite of either square or rhomboidal cross-section. I have made several of these kites; some have been good, some only fair in flying capability and camera lifting. In a 15 mile-per-hour wind some will generate up to 20 pounds of lift over the kite weight (five-to-six pounds). In 20 to 25 m.p.h. winds the lift is upwards of 50 pounds. The kite should be flown in steady winds; this may require high altitude flying. If the wind drops, the camera and kite may fall like a rock!

I believe shutter speed is the most critical camera requirement (next to a light trigger pressure and light weight). Even with stabilizing fins, the camera is always in motion. Therefore, the shorter the exposure, the sharper the picture. The old Kodak Retina II camera, which weighs about one pound and which I have used, when new had a 1/500-second shutter and f/3.5 lens. The camera should always be used at 1/500-second and the exposure adjusted by setting the aperture stop. The focus is always infinity. Automatic exposure control by aperture setting (rather than shutter speed variation) is very desirable and is available in a few cameras.

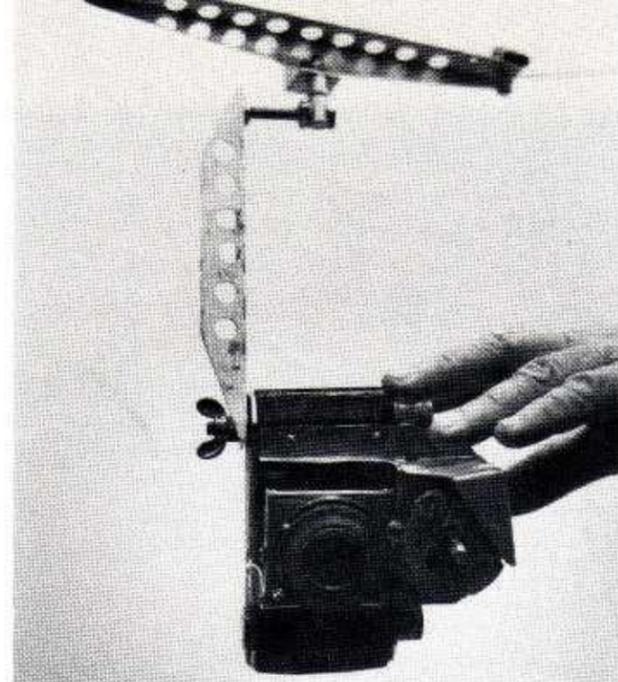
For attaching the camera to the kite line, I made brackets out of aluminum (suspended ceiling material) with holes drilled to lighten weight. I incorporated a string angle swivel, an azimuth adjustment and a horizontal angle adjustment.

I use an oven timer clockwork to set the camera off about two minutes after setting. The exact method of linkage depends on the camera button. The impulsive push of the bell hammer (with the bell removed) triggers the shutter. Cameras vary in the amount of pressure needed to trigger them. I suggest you remove friction-producing parts in the shutter linkage if possible. On the Retina II, the automatic film advance and double exposure prevention linkage was removed to make the shutter release very easy to activate.

Pictures taken from an altitude of 100 to 500 feet have the most detail and human interest. In pictures taken from an

altitude of 1000 feet or more, interest decreases, probably because the shadows and objects are less distinct. Also, unless the scenery is spectacular (mountains, skyscrapers, etc.) about all that is visible from high up is the horizon. Human scale things become so small. Pictures taken early or late on sunny days are particularly interesting because of the shadows which accentuate the depth effect, relief or three-dimensionality of the subject.

**Bob Price's rig incorporates a kitchen timer. With it, he has taken photos of his neighborhood in Burtonsville, MD, capturing the four seasons of the year as well as suburban development.**



Hank Szerlag

## THE FIRST KITE AERIAL PHOTOGRAPHY CONTEST OF THE CERF-VOLANT CLUB DE FRANCE

### RULES AND REGULATIONS:

**ARTICLE 1:** *The Cerf-Volant Club de France is holding a kite photography contest, open to all enthusiasts.*

**ARTICLE 2:** *Entries must be postmarked not later than the 30th of September, 1980, and must include:*

- A: At least three and not more than six black-and-white or color prints in 18 x 24cm format, one of which must show the flying line of the camera-carrying kite.*
- B: A sworn statement that the photographs were taken by a kite-carried camera and were taken during the period of the contest.*
- C: A brief report of place, date and approximate height from which the photograph was taken.*
- D: A brief description of the equipment used (kite, camera-carrying device and anything else of interest) accompanied by a photograph. Also state the make and format of the camera.*

**ARTICLE 3:** *The jury will be made up of members of the Cerf-Volant Club de France.*

**ARTICLE 4:** *The photographs will be judged on the basis of technical quality and of the interest of the site photographed.*

**ARTICLE 5:** *The following prizes will be awarded:*

- First, 300 francs*
- Second, 200 francs*
- Third, 150 francs*
- Fourth, 100 francs*
- Fifth, 50 francs*

*First through tenth place winners will also receive our official newsletter, Le Lucane, free of charge for one year (four issues).*

**ARTICLE 6:** *This contest is not open to members of the Cerf-Volant Club de France nor to kitefliers who are regular visitors to the Polygon de Vincennes. A similar contest will be held for club members only.*

**ARTICLE 7:** *The Cerf-Volant Club de France reserves the right to use the prize-winning prints in documents for circulation within the Club. Entrants will retain full rights as regards other publication.*

**ARTICLE 8:** *The documents submitted will not be returned.*

*Cerf-Volant Club de France  
17, rue Lacharriere  
75011 Paris  
France*

Translated by member Bayard (Bill) Corson.

# My method of photography by kite: 100% reliable

By Stanley E. Crinklaw

A successful picture taken by kite is the result of the union of several favorable conditions, some of which the kiteflier-photographer has control over and others that occur mostly by chance. The controlled circumstances involve a well-designed kite, a reliable method of releasing the camera shutter and the right selection of wind and light conditions. The element of luck is provided by the exact position of the camera when the shutter clicks and the inherent capriciousness of the supporting wind.

There are several means of pulling the shutter, such as: a burning fuse and elastic; electrical control, through connecting wires; radio control; and (as Robert C. Reichert of Lawrence, MA, does so successfully) a string from the shutter lever to a crew member on the ground. However, I have found that a clockwork device, such as one of the dethermalizers used on model aircraft (available in hobby stores), is light in weight, easy to install and—most important of all—one hundred percent reliable. I have used one for over two years and while I've had many failures none has been due to the timer. It has a maximum setting of six minutes, and four minutes seems to be a good length of time.

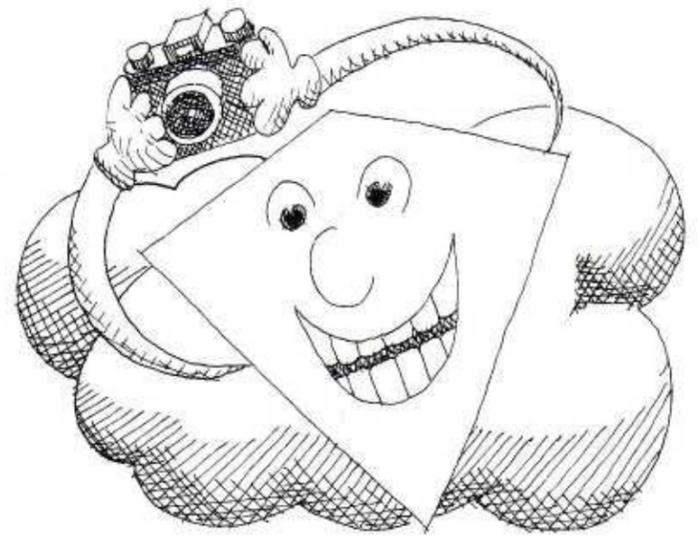
Paired with the timer must be a lightweight camera with a protruding shutter lever. The airborne equipment includes: elastics (rubber bands) to secure the camera *tightly* to the frame (important to prevent jarring when the shutter releases); light copper wire with loops, one over the shutter and one connected to the elastics); a hardwood toothpick or similar sliver; and a wooden frame nailed together with stubs left (the stubs, while unsightly, are very convenient for securing elastics). Tipping the top of the camera forward slightly makes for easy shutter firing. In operation, the right end of the toothpick is released by the timer. The elastic, which should be enough rubber to pull properly, is connected to the shutter by the copper wire. It contracts and the wire pulls the shutter lever and snaps the picture.

I have used two ways of hauling up the

payload. The simpler one is merely to tie the wooden frame some 50 feet or so below any kite capable of lifting the load and "let 'er climb." An objection to this is that there is almost no control over the direction that the camera points when it takes the snap. The motion of the kite and the swaying of the dangling load in the breeze aim the camera by pure chance. I have put a tail on the camera frame and also used two points of attachment on the kite line in efforts to gain directional control. I have also used two smaller kites attached at separate points on the frame. This arrangement keeps one's hands—and feet, too—quite busy (especially if you're alone) when you are hauling down the kites to reset the camera! However, I have a few snaps that are rather good which were taken by this method.

The second means of lofting the camera is to mount the photo frame directly on a steady-flying kite such as a large stub-wing box. The wooden stringers are fastened to the open part of the frame on either side of the kite in such a position that the camera unit when mounted will face down on an angle. I have found that this kite is a very forgiving vehicle as far as balance is concerned. The camera unit does not affect it noticeably.

A few notes regarding the stub-wing box kite: about six-foot-long size appears to be the best for this job, where a Kodak Instamatic X15 or similar camera is used. My eight-foot model flies well in light winds and does lift the equipment easily, but a craft of this dimension is unwieldy and difficult to store. A four-foot model



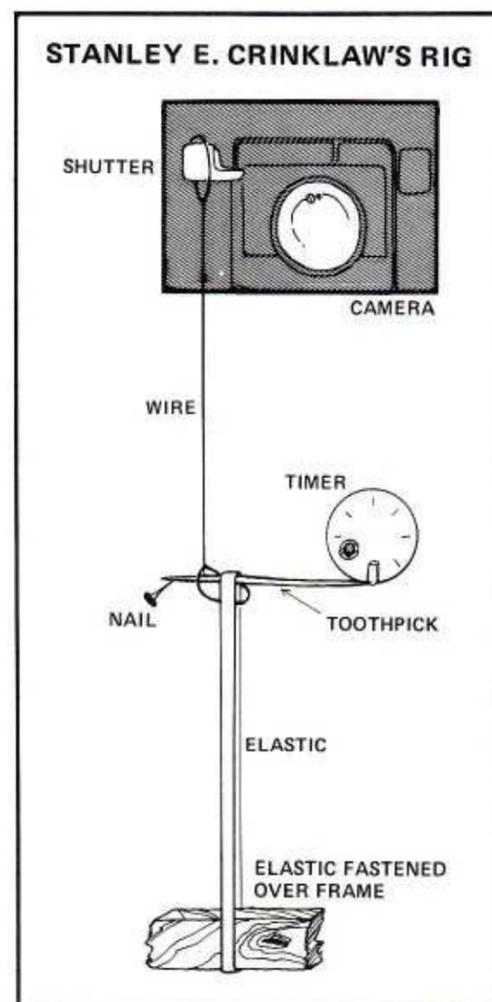
is unbalanced when the camera is mounted on it, though it is quite capable of handling the weight when the camera is merely suspended a few feet below it.

As for aiming the camera on the stub-wing, it is possible with experience to guide the kite over the desired general area. If you want to photograph a particular house and lot or perhaps a park area, the kite can be launched nearby and the six-minute timer will give enough time for the gaining of altitude and maneuvering over the subject. Actually, 400 feet is plenty high enough for most vertical shots. One can vary the angle of the camera by changing its mountings. I have found, too, that pictures taken over hillsides or early or late in the day are more interesting due to shadows cast by trees, buildings, etc.

As you may guess, I have gotten a great amount of pleasure and challenge from this and many other facets of kiting.

*Kite Aerial Photography Continues. . .*

Crinklaw's camera installation on his box kite.



# Preset intervals for photography by kite (a very fancy frill)

By Dale Fleener

Here's a circuit for an interval-ometer I use. I haven't had the wind to try it after building it, but it works great on the ground. The DIP switch varies the time between contact closures according to the various combinations of "Offs" and "Ons." An afternoon's experiments can give you time values to set up your firings (truth table shown will assist). The circuit can be made to fire about as frequently as once every second or about as infrequently as once every four minutes.

This plugs into the winder of my Olympus OM-1 camera, but other winders should work as well.\*

Comment by Curtis Marshall:

This idea is very nice if you want to have a series of pictures done at preset intervals from the time you take your kite off until it lands.

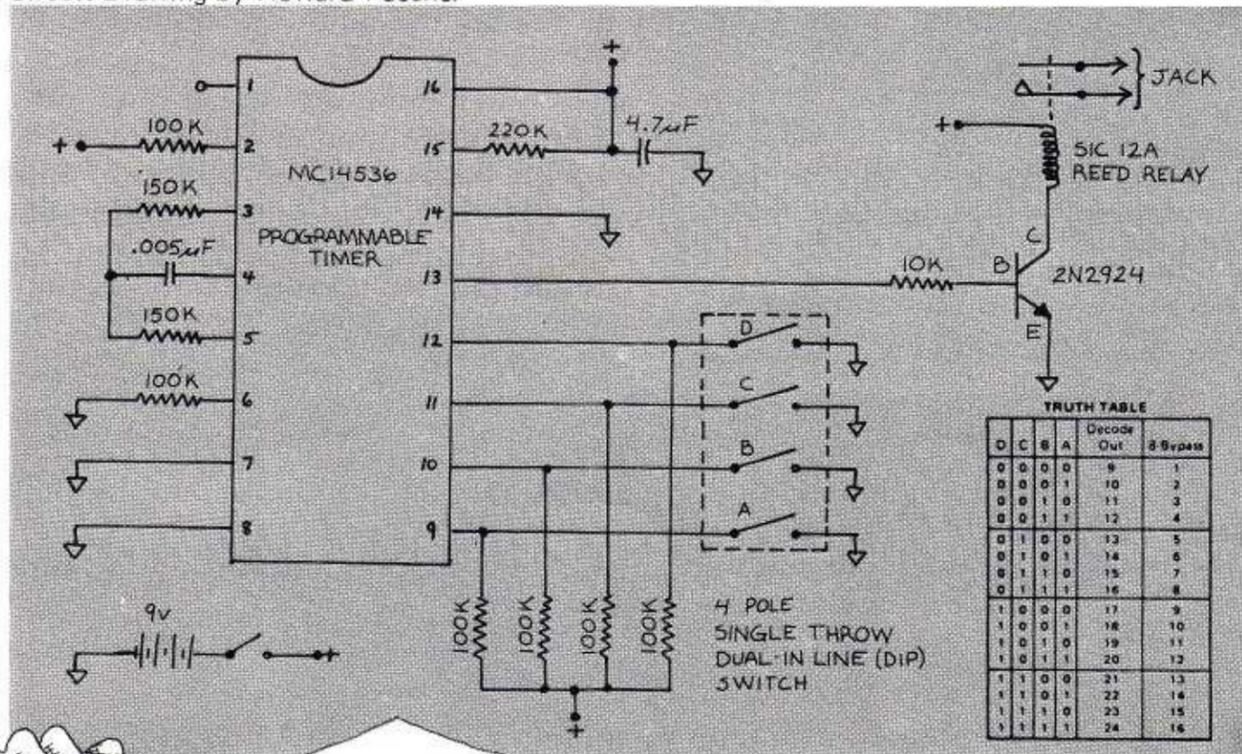
I was unable to locate any of the integrated circuits (Type MC 14536) that Dale Fleener used. However, I did find in the Radio Shack Engineer's Notebook† an equivalent circuit using very cheap parts, such that I think this thing could probably be built for under \$3, mostly out of junk parts. It uses a very common Type 556 integrated circuit.

The greatest difference between the circuit in the Engineer's Notebook and Dale's circuit is that Dale uses a four-pole DIP switch, whereas the other circuit uses a continuously variable resistor to achieve the same function. Certainly a DIP switch could be used with the Notebook circuit with no difficulty. ♦

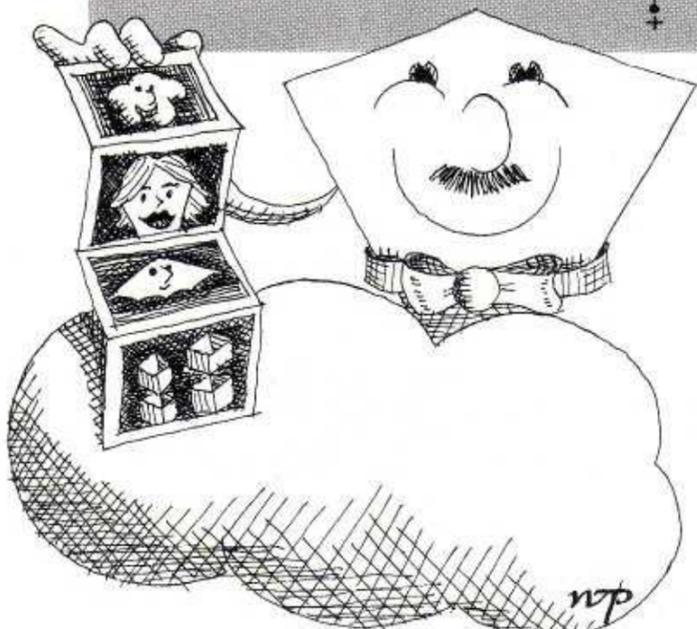
\*The pertinent Motorola catalog pages with data specs are available in photocopy for 50¢ from Kite Lines, 7106 Campfield Rd., Baltimore, MD 21207, USA.

†Forrest M. Mims, III, *Engineer's Notebook: A Handbook of Integrated Circuit Applications* (Ft. Worth, TX: Radio Shack, 1979), p. 118.

Circuit Drawing by Howard Faecher



Below, Curtis Marshall's rig for kite-lofted photography using a Polaroid SX-70.



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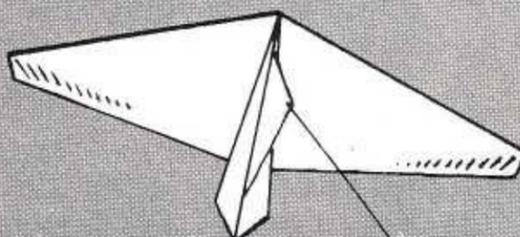
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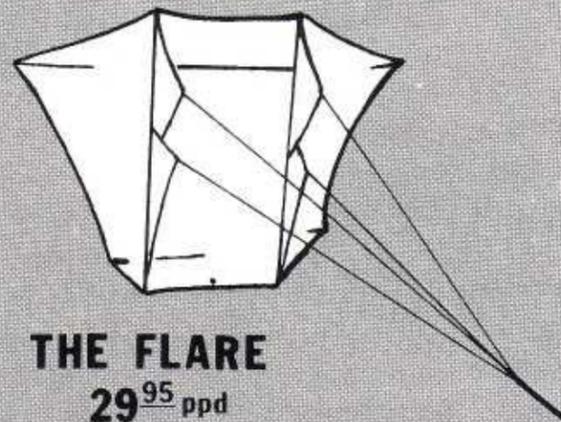
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# Behold! Antique Kites

By Robert M. Ingraham  
 Founder, *Kite Tales* (predecessor of *Kite Lines*)

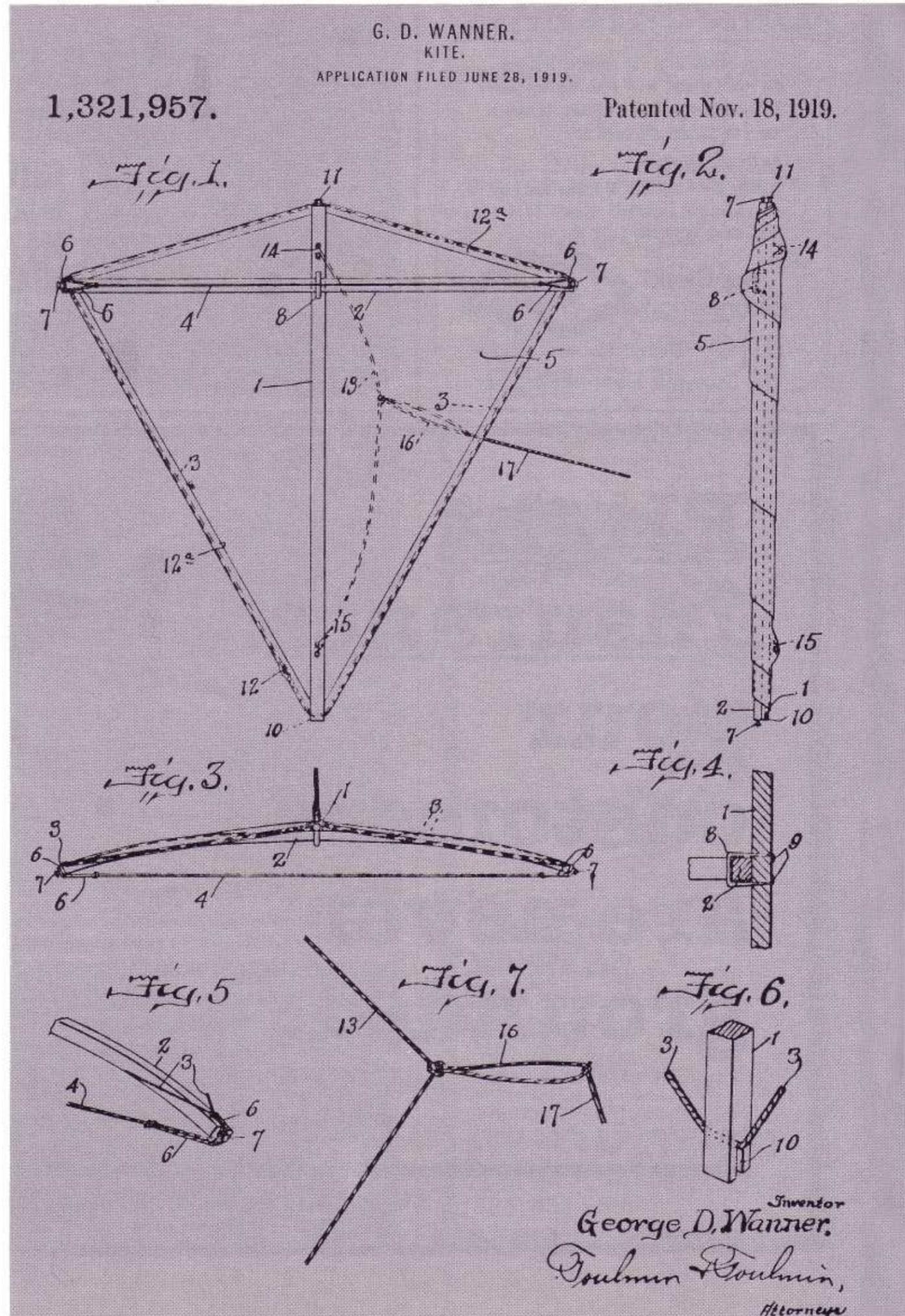
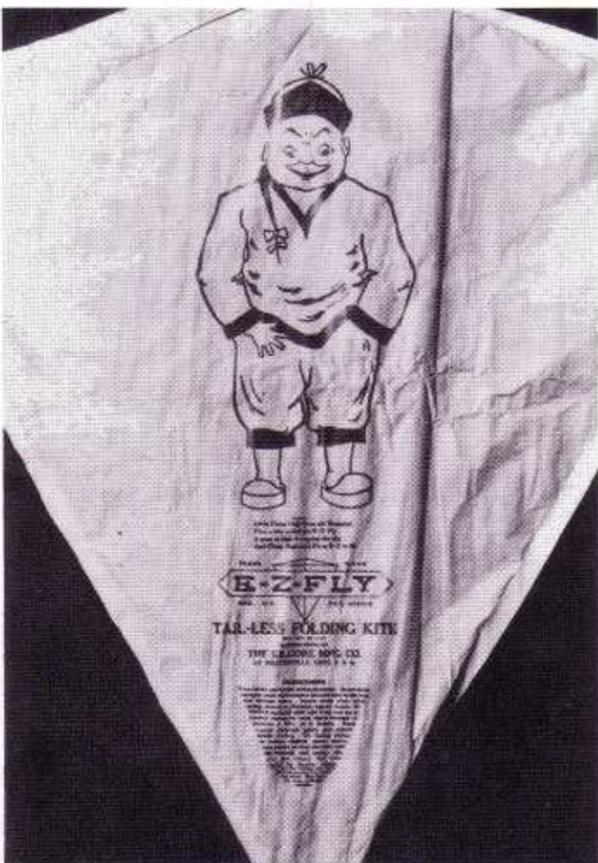
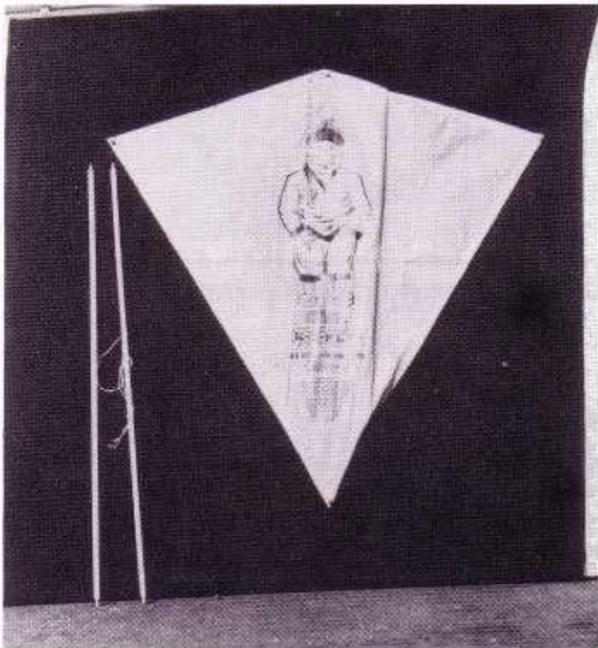
George Hurtado describes himself as a high school dropout who is not a kiteflier and not a subscriber to this magazine. But George found some very old kites some time ago, one of which had never been taken out of the original package. George had something of the "collector" in him, and he determined to learn how old the

kites were and something of their origin. Come to think of it, how many kites have you ever seen that were more than a few years old?

George contacted me as the first move to determine if his find was of any great interest or value. I assured him it was, since old kites are as scarce as old Saturn rockets. From there he launched into a research program that would have done credit to a university graduate.

A patent search proved the kites he found were from the E-Z-Fly kite line patented in 1919 by G. D. Wanner of Dayton, OH, and produced by the Kilgore Mfg. Co. of Westerville, OH. The search did not prove, however, the exact age of George's kites in particular, as the models seem to have been manufactured over a period of time. Additional Wanner patents were granted in 1920 and 1924, suggesting the kites were probably sold through

Photographs by George Hurtado show old American Eddy-type paper kites perhaps 60 years old. It would be in the interest of kite scholarship for an individual or institution to make a systematic effort to collect one of each of all kites sold in the U.S. KITE LINES presently knows no one who is really doing that. We would be glad to hear from anyone who is and we stand ready to offer our assistance in such an effort.



those years. (Wanner was issued a fourth patent in 1951 for another type of kite.)

Most kitefliers know that during the period between 1900 and 1964, kites were not sold in great variety; most commercial springtime models of light sticks and paper were of two or three basic designs. And it was a rare one of these that lasted more than the year in which it was born.

We can assume that, considering the last patent date, George Hurtado's kites are at least 55 years old. If the earlier (1919) date is used, you can add another six years to that, making these kites real antiques as we might define them for kites.

There are quality differences in antiques, of course. Used antiques are sometimes more valuable than ones never uncrated but very old. Among other items, though, an unused original ("mint" condition) is more valuable than a used one. The kites George found apparently were in unused condition. They were probably sold in their day for as little as 15 or 20 cents, but their value today might be in many dollars. There are few antique kites in existence because of their innate fragility. Thus, these kites, intact even though not very old as compared to some antiques, may have a real value. That value would be hard to determine, for in the end it would come down to how much some collector might be willing to pay for one. ♦

#### GEORGE HURTADO ASKS FOR HELP

George D. Wanner got his first kite patent on November 18, 1919, his second on July 27, 1920, and his third on May 20, 1924. The later patents show improvements on the first kite. I still do not know how long the company manufactured the kites I have or how old they are exactly. I have called museums, kite manufacturers and everybody I can think of, and nobody seems to know anything about these kites.

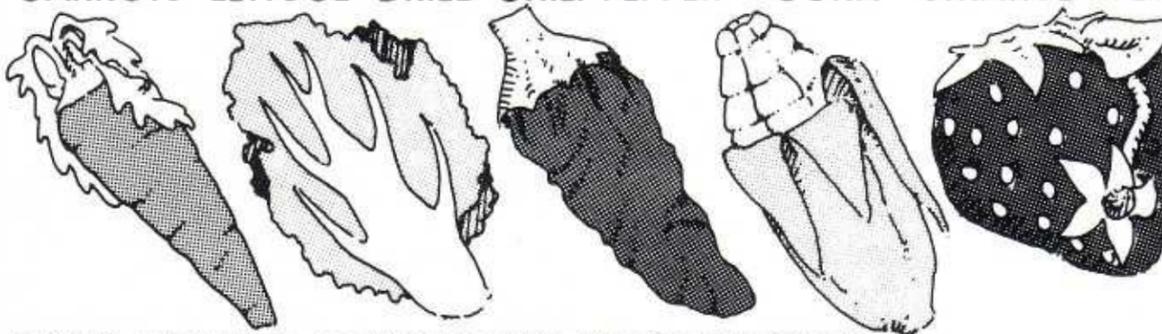
The kites themselves measure approximately 35½" x 35½" and the sticks measure approximately 35". The sticks are rounded off at each end and fit into a hole in each corner of the kite. You will notice also that the sticks are exactly the same size.

Here are some questions that I would like to have answered: (1) Did the maker change the illustration on the kite from year to year? (2) Did the company change the poem from year to year? (3) The second patent shows an improvement that my kite doesn't have; when did the company start using this?

If you know anything or want more information, please contact me through *Kite Lines*, 7106 Campfield Rd., Baltimore, MD 21207, USA.

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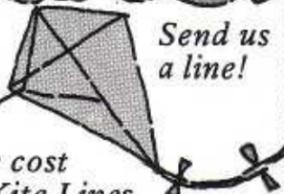
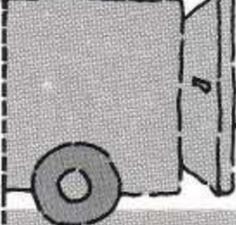
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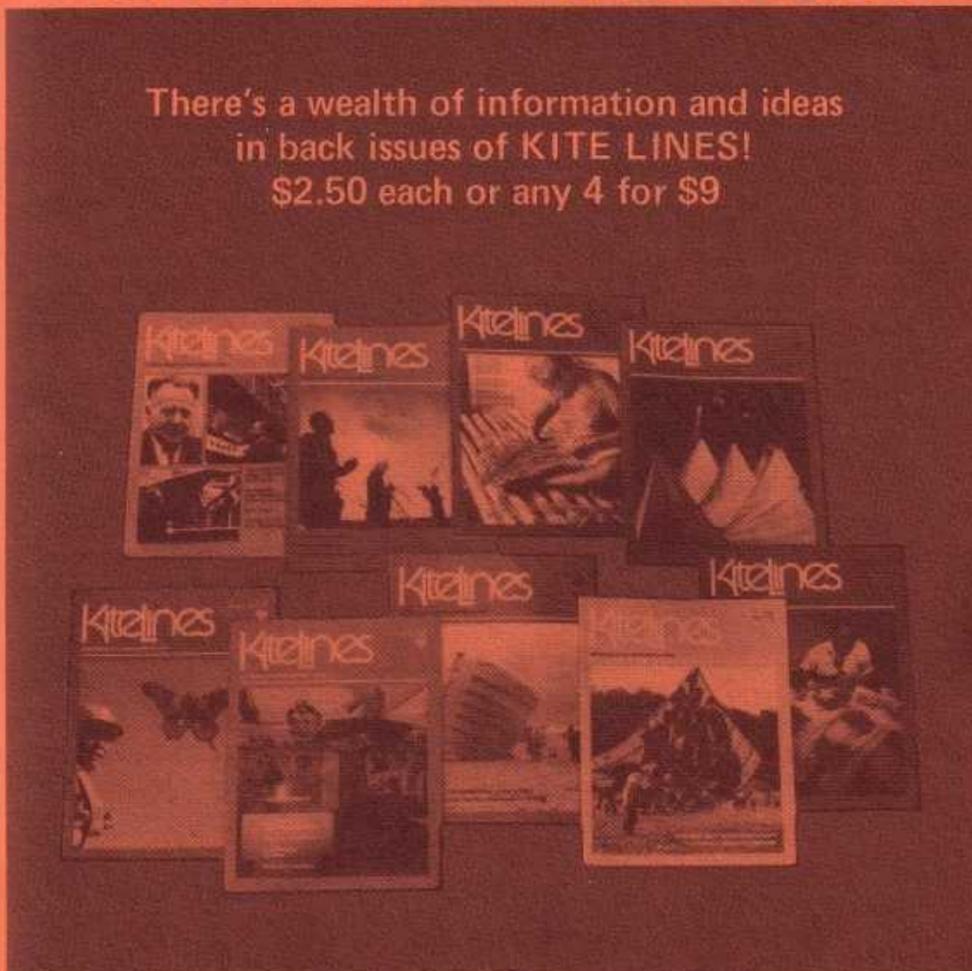
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Of our 9 back issues, 8 are still available, although a few are in scarce supply. We suggest you ask for back copies first at your nearest kite store. If they can't fill your order, use the order form below to get your copies from KITE LINES. Here's a brief rundown on contents of our back issues for your reference and convenience:

#### SPRING 1977 (Vol. 1, No. 1):

Outrigger Kite Plans; Tracing Japan's Customs; Brummitt's Kite Categories; Profile: Paul Garber; Exhibits in New York and Paris; Two Marconi Kite Plans; Use of the Glue Gun; Featherstone-Kite by Rowland Emmett; Heart-Stopping Kite Festivals of Japan, by Tal Streeter; Reviews: kites—Octopus Kites, Corner Kite, Fighters, Better Builts and Wright Flyer kit; book—Greger; News from AZ, CA, FL, ME, MD, OH, WA, WI, National Kite Day and Japan (1,585 kite train record); Talking About Tails; Ingraham's History of the Magazine; Brown Bag Kite Design.

#### SUMMER 1977 (Vol. 1, No. 2):

Which Is the Perfect Kite?; Person-Lifting Kites in History; Trains—The End Is Not in Sight: The Multikite Phenomenon and Proposed Standards for World Records; Profile: Mike Weletyk; How to Conduct Trains, by John Van Gilder; Tom Van Sant's Trampoline; Reviews: kites—Flare, Firebird and 8 Stunters, with Pfund on Dynamics of Controllables; books—Dolan, Lloyd et al and Dickson; Survey of Readers; News from AL, CA, CO, DE, DC, FL, HI, IL, IN, LA, MD, MT, NY, NC, OH, TN, TX, WA, Australia, Canada, Japan and New Zealand; Greger's Dutch Kite.

#### FALL 1977 (Vol. 1, No. 3):

Gull Delta Drawing; Tail Selection Study; Profile: Ansel Toney; All Saints Day in Guatemala's Hills; Stormy Weathers's Kite Fishing System, Sled Designs and Fishing Story; Kite Fishing in Micronesia; Kite Reels Analyzed (and 12 samples reviewed); News from CA, CT, MD, MA, MI, NJ, NH, NY, NC, OH, TN, TX, WA, Australia, Canada, England, Japan, Malta, Netherlands and New Zealand; Flags, Banners and Kites Exhibition in Seattle; The Sycamore Fire; Ingraham on Temperature Effects on Kites; Greger's Vietnamese Kite; The C.P.S.C. and the Aluminized Dragon: Excerpts from Hearings Transcripts.

#### WINTER 1977-78 (Vol. 1, No. 4):

Letter with college kite course prospectus; A "New" Medieval Dragon; Thorburn's Stacked Deltas; Reviews: kites—Grandmaster Kite, New Dragons, Spinning Janny; books—"Create-a-Kite," Thomas, Bloch-Laine et al; Symposium on the Many Facets of the Tetrahedrals: Opinions and Theories (17 expert comments); Comparison Table of Equivalent Kites; Simplified Construction; Trials of the Tetras; Tips for Tets; News from CT, HI, MD, MA, NY, OH, PA, TN, WA, Australia, Canada and Japan; England's Jubilee Year; Ingraham on Shipping Kites; Making Kites with Hundreds of Kids.

#### SPRING-SUMMER 1978 (Vol. 2, No. 1):

Rogallo Corner Kite Plans; Lincoln Chang's Modified Rokkaku Kites; Profile: J. C. Young's Chinese Kites; Reviews: kites—Flexifoil, Prof. Waldof Box, Wind Mill Kites and Firebird; Reels by Shanti; book—Dwiggins; Death of the Rotoki Inventor; Aydlett's Rebuttal of Brummitt; Spendlove's Towards a Taxonomy of Kites (poster pull-out); New American Tradition: Kite Festivals! (why, how and the Longevity Factor); Braswell's Figure Kiting; Cerf-Volant Club de France, Announcement, First National Meeting of AKA; Issues for Kiteflying and Safety Council Report; Ingraham on Early Publishing Problems; Directory of Kite Clubs.

#### SPRING 1979 (Vol. 2, No. 2):

Reviews: A New Roundup of Kite Reels (12 samples reviewed); kites—the Covered Wagon kit; books—Tyrrell, Hiroi; Van Gilder's Hand-Hold Reel Design; Kites in Museums—the Tokyo Kite Museum and the Smithsonian; Deaths of Shingo Modegi and Frank Motts; Streeter in Paris; Kites in the Wilderness; Record Efforts—altitude, most on a line, indoor duration; Nirvana in Nags Head; Braswell's Two-Stringing the Delta; News from CA, CO, KY, MI, NM, NY, OH, WA, England and Japan; Profile: Stephen Bernstein and his Chinese Bird Kite Plans.

#### SUMMER 1979 (Vol. 2, No. 3):

Letters disputing altitude record effort; Reviews: kites—Flying Lines, Winged Victory, Cloud Pleasers and Rainbow Stunt Kites; book—Bahadur; Flow Form Kite Plans; Kitechnology Report: Marshall's New Nylon Cutting Technique; Photo Spread of AKA Meeting and Grand National Kite Festival in Ocean City, MD, Sept. 21-24, 1978; Brummitt: The Sky Is Big Enough for All of Us; News from CA, CT, NY, OR, Canada and England.

#### FALL 1979 (Vol. 2, No. 4):

Reviews: kites—Craftsmanship from Sri Lanka (6 samples reviewed) and the Soaring Wing; book—Mitton; Symposium on Monumentality in Kites: Is Bigger Better? (23 expert comments); Ianuzzi's Critique of Japan's Giants with Weight Comparison Chart and Bedsheet O'dako Plans; Profile: Louise Crowley; Trebilcock's Lighthouse Kite Fishing Method; Record Efforts—kite-boat traction, "junior" record; News from IL, MI, MT, NY, OH, TX, WA, Australia, Canada, England, Ireland, Japan, Malta; Announcement, International Exposition of Asymmetrical Kites; Kurle's Super Conyne Plans.

#### WINTER 1979-80 (Vol. 3, No. 1):

Reviews: kites—Rotors (3 samples reviewed) and Bull-Roarer Effect Digression; book—Lloyd-Thomas; A Brief Guide to Safe and Sure Kiting; Grauel Designs for Shooting Arrow and Bull's-Eye Target Kites; Profile: George Ham's Parafloils Par Excellence; Death of William M. Allison Learned; Innovations: Facet Kite by Robinson; Andrew Jones, Ray Merry and the Flexifoil (first in a series on the Great Contemporary Kites), by Tal Streeter; '79 Events: in Beulah Valley, CO; Kill Devil Hills, NC; Seattle, WA (visited by Shirone, Japan); and Manassas, VA; The Miracle of Sagami-hara; Kites and the Cambodian Spirit.

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# For the Record

This department is devoted to reports of record-setting achievements with kites. News will appear from time to time, as it arrives, in Kite Lines. Publication of a report is not to be construed necessarily as official recognition by Kite Lines or any other party of any attempt at a record.



A statement from the Shirone Kite Association sent to Kite Lines by Dave Checkley:

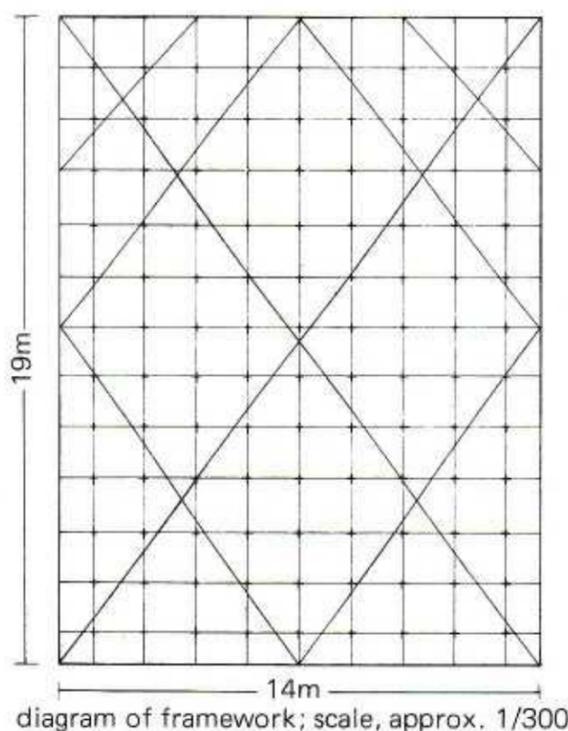
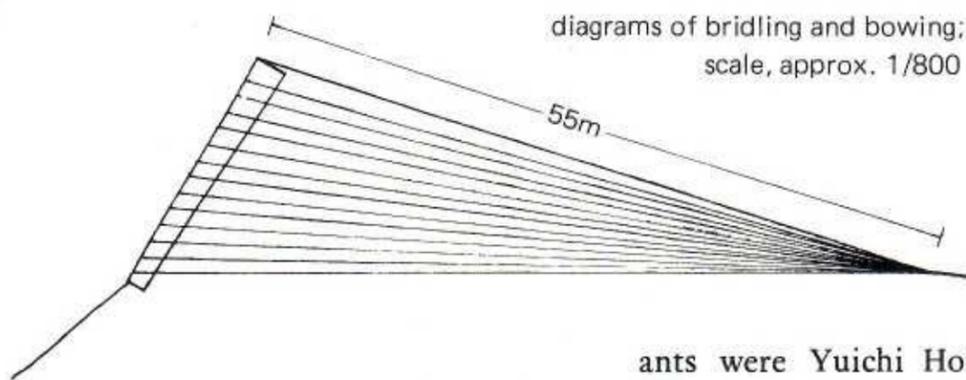
On March 20, 1980, the Shirone Kite Association in Japan broke the Guinness record in flying the world's largest kite. They tried twice that day and succeeded both times.

At 1:00 p.m., the wind was blowing so slowly that it seemed impossible to get the kite aloft. But when about 200 young men ran all at once pulling the thick rope, the kite gradually went up—about 150 feet above the ground for a minute.

At 2:00 p.m., when the wind seemed strong enough, they tried for the second time. The kite flew up about 250 feet above the ground with the rope going 550 feet long and was in the air for about 15 minutes. The pull of the giant kite was so strong that 150 men, getting tired, couldn't stand it and seemed to need a stake and more people to fly it longer.

It took four days (three hours and 40 men at a time) to make the kite. The kite was so large that with no place to keep it in they burnt it after the challenge on the very spot where it broke the record. Here are some more details:

Dimensions of kite:	63.3 ft x 46.6 ft (19m x 14m)
Weight:	792 lb (360 kg)
Flying line, length:	600 ft (180m)
dia., material:	1-inch hemp rope
Bridles, quantity:	127
length:	longest: 223 ft (67m) shortest: 183 ft (55m)
material:	nylon
Frameworks, material:	bamboo
quantity:	160 pieces
Covering, material:	washi (Japanese hand-made paper)
sheet quantity:	2600
sheet size:	ea. 1.5 ft x 1 ft
Duration of flight:	first flight: 1 minute second flight: 15 minutes
Altitude above ground:	first flight: 150 ft second flight: 250 ft
Flight crew personnel:	first flight: 200 men second flight: 150 men



Background on the Largest Kite effort was provided to Kite Lines by Dave Checkley:

Fuji TV, a private network like ABC in the U.S., had observed filming of an earlier lifting contest by the Shirone Kite Association, and the network suggested the "Guinness challenge." Fuji TV paid \$4000 for materials for the "largest kite" and all of the labor was donated by the Shirone Kite Association.

Materials included some 2400 [sic] sheets of washi, 50 liters (about 53 qts) of black sumi ink, 8000m (26,246 ft) of nylon bridle cord and lots of bamboo. The bamboo bones, after having been split, planed and sized, were taken to a cement pipe factory and heated to 100°C (212°F) in a steam autoclave to "sweat" the moisture out of the bamboo. This reduced its weight by one third.

Planning and building the big kite took two months and involved some 400 men. Most of the work was done on the five Sundays preceding the flight, with over 100 men at each session.

The commander-in-chief was Jinzaburo Hokura, President of the Shirone Kite Association. Some of the key lieuten-

ants were Yuichi Honma, in charge of engineering and a master bridler, Seichi Washio, who painted the Daruma face on the kite, and Mr. Yamamiya, who figured out the special crane hook with a quick release. Perhaps the most important man was Kazuo Tamura, who John Van Gilder described as the "holler man" when Tamura and other Shirone men visited Seattle last fall and who Hiroi describes as the "master sergeant" of Shirone.

At the first work session on February 10, the crew made the decisions: to use the Daruma face design, one of the most popular Shirone kites, and to build the paper covering in four panels, each with a very lightweight split bamboo frame, which could be rolled up to transportable size.

At the second session on February 17, the men pasted the paper together for the four cover panels—800 sheets each.

At the third session on February 24, the light bamboo frames for the cover panels were assembled and pasted to the paper.

This work was done in the gymnasium of a building formerly used as a school, now a municipal recreation center. The same building houses the Shirone Kite Museum, probably one of the largest collections of kites in Japan.

For the next two weeks, Seichi Washio painted the Daruma face on the four cover panels. He started out by drawing the design directly on the paper with charcoal. The other members of the group were concerned that it might not come out right, so they drew squares on a small drawing and enlarged it in the conventional way—only to find that Washio's



initial drawing was correct in every detail.

When it came to the final painting, Washio painted the outlines and other workers filled in the solid spaces. The eyes were one meter in diameter (39.37 inches) and the eyebrows 30cm thick (about one foot). Sumi ink was used for the black lines, water-soluble textile dyes for the other colors, in the traditional way.

On March 2, the main bamboo frame was assembled and tested in the gym, in quarter sections first and then full size. The frame was then taken apart and each member was numbered, marked for re-assembly and weighted individually. The total weight was computed from these weighings and of the bundles of paper and coils of bridle line. Nothing was included for the sumi ink, dye and paste.

The March 9 session was mainly confined to discussion of flying technique, how to raise the kite into the airstream (the crane with the quick release hook was decided on) and how the field crew was to be organized.

On March 16, the main frame was re-assembled outdoors on the flying field. On the morning of March 20, the four cover panels were rolled up and trucked to the site, then were lashed to the frame.

The kite was bridled *in situ* at the flying field. The men crawled under to attach the 130 strings, then about 50 men held the kite up in the air above their heads while the bridling lines were measured and tied. This was a new procedure, as normally the big kites are laid on their backs for bridling.

The bridle lines for the top half of the kite were laid out perpendicular to the top of the kite and those for the bottom half were laid out at the bottom. When both top and bottom sets of bridle lines were tied, the bottom cluster was carried around each side and gathered with the top cluster. The gathering pony of the bridle lines was about two meters (about 6½ ft) above the top or leading edge.

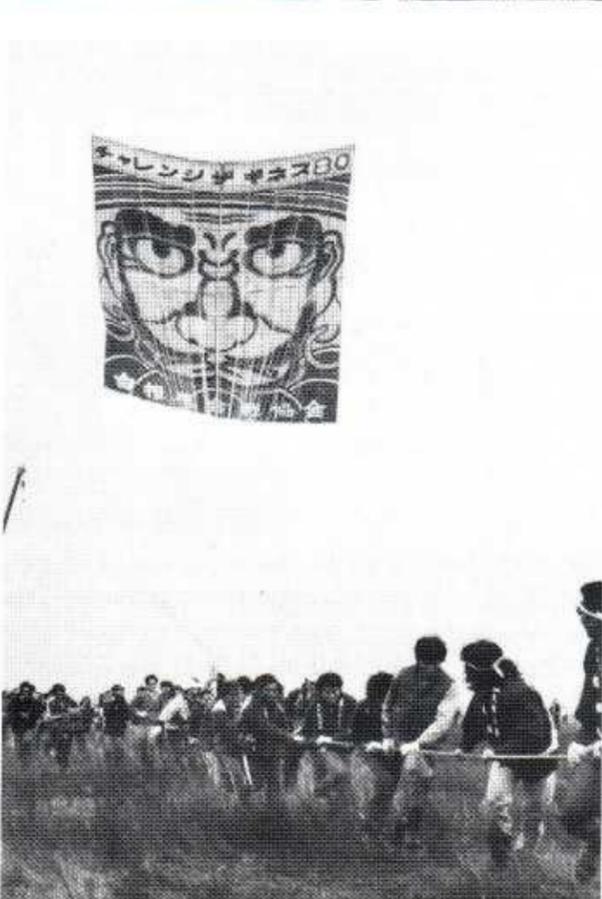
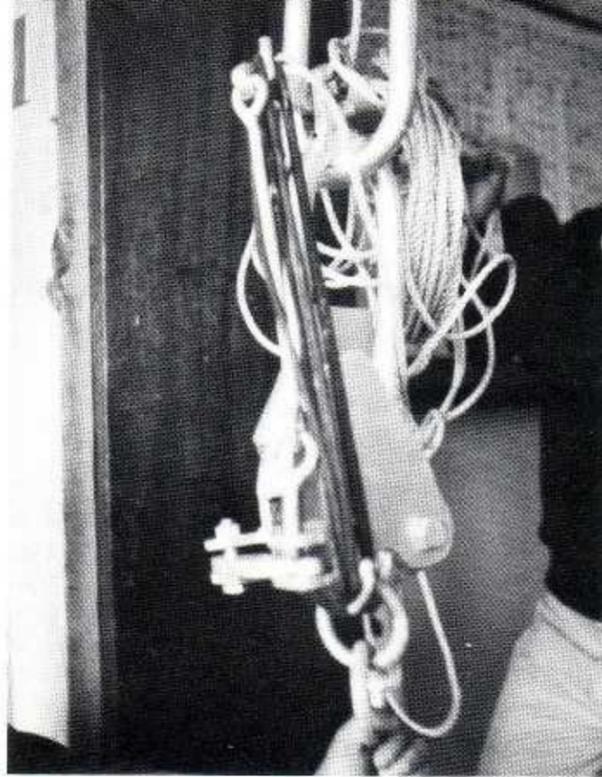
The final preparation was to attach the top (leading) edge to the crane hook by six lines gathered onto a single ring. The hook holding the ring was pivoted at one side and secured by a removable pin at the other end so that when the pin was withdrawn the hook dropped down, releasing the ring. The pin was held in place with elastic shock cord and was pulled up by a lever, which in turn was connected to a line to the ground. The trick, of

course, was to pull the string at the exact moment the kite was airborne.

The first launch, with 200 men on the line, was successful as long as they were running, which was for only two minutes [sic]. The leeward end of the field was extremely muddy, so the kite fell face down in the puddles—to the consternation of the makers. The bystanders and kitefliers immediately ran to the kite, crawled under and lifted it, and carried it back to a drier place—and held it up to let the wind dry the wet paper.

The rest of the story is contained in the documents by Kazuo Tamura. We will show a videotape of the achievement at the AKA meeting in Seattle in October (see page 6 for further information). ◇

Below, top picture shows quick-release hook used in (bottom photo) launch of Largest Kite.



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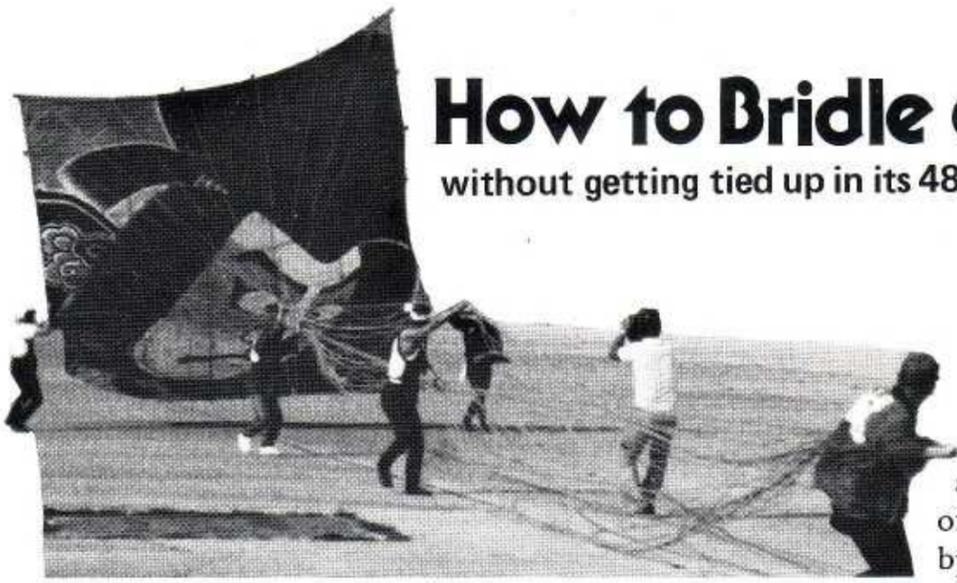
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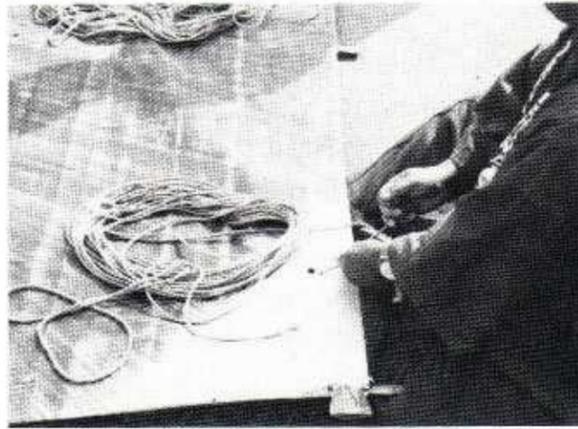
# How to Bridle a Giant Japanese Kite

without getting tied up in its 48 lines

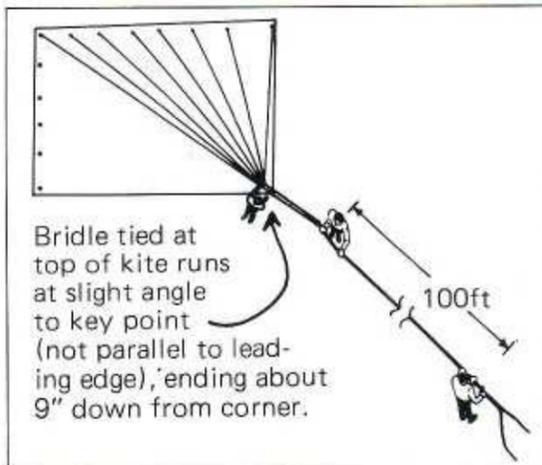


a photo sequence of the Shirone method by John F. Van Gilder

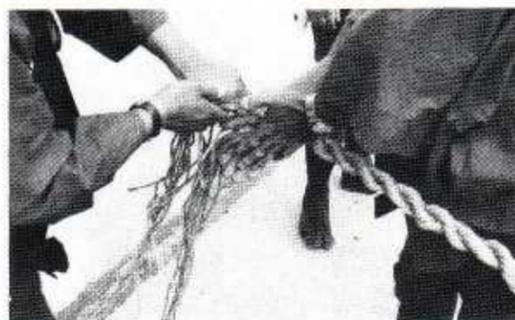
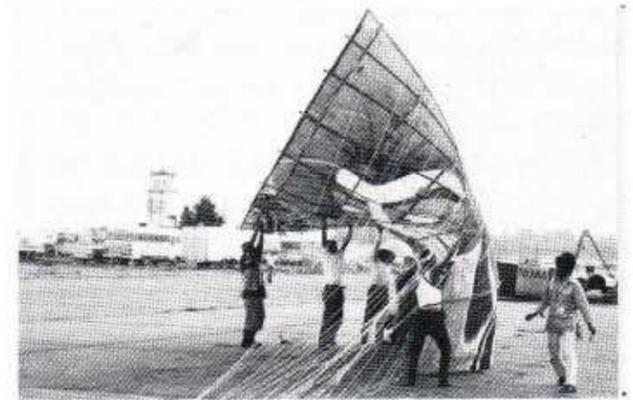
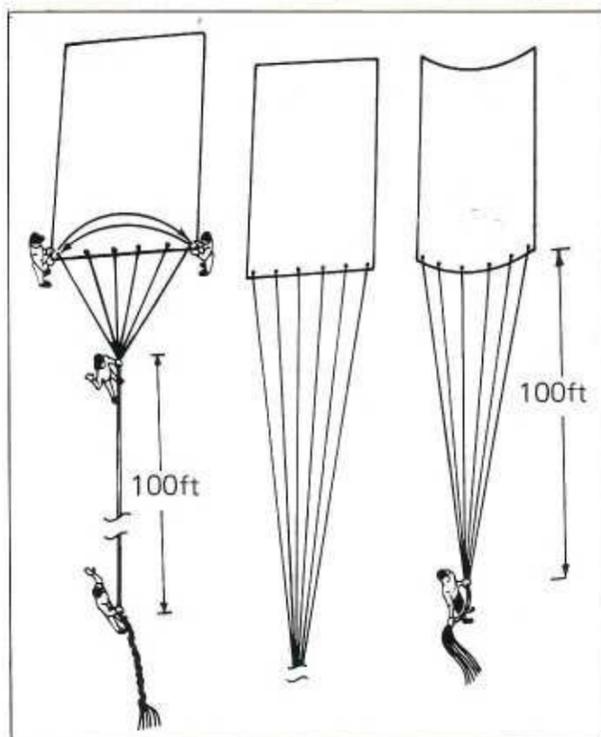
When the kite team of Shirone visited Seattle last September, Jack Van Gilder got a chance to see and document their all-important bridling methods. Although each kite requires a different bridling, the techniques used for the 16 x 23 ft kite in Seattle had been practiced many times. From that knowledge, the Shirone Kite Association adapted its procedures in its Largest Kite record effort (see page 20).



Left, the kite is spread out flat on the ground, face up. The bridles are tied to the "bones" of the kite in eight rows of six bridles each. Observer Dan Kurahashi isn't afraid to walk on the kite, not stepping on the bones and wearing rubber-soled shoes. Center, the washi (paper) surface is punctured with a sharp jab of the forefinger. Right, Kazuo Tamura crawls underneath the kite to poke bridle ropes back up through.



Left, with all lines attached, two end lines from the last row are brought together at the "key point" and held while teammates stretch lines out to the "marker-man" 100 ft away. Center, all eight lines in the far-side row are stretched out evenly to the marker-man, 100 ft away. . . Right, and marked.



Left, the end line from each row of six is matched with the other five. To assure that each row is exactly centered, end lines are matched to each other by being crossed over to opposite side and brought out front. When they are matched, close to the kite, the marker-man holds tightly as all six lines are stretched evenly to him. Each row is measured and tied in a loose slip knot. Top center, to impart a bow and dihedral to the kite, the center lines in each row of six are shortened. Here, Taro Suda uses the "finger-measure" method (others use a ruler). Bottom center, each row-bundle is matched at the mark on one (end) line and the whole mass bound and formed into a rope. Top right, the kite is now turned over, face down (notice the flexibility). Bottom right, bow lines help the bridle to shape the kite's dihedral. Bowing is deeper at the trailing edge, but the second-to-last bow is a bit more bowed than the last rib (bone). Each kite requires its own bridling and expected winds on the day of flight are also taken into consideration.

# STATESIDE

News From Here and There

## CALIFORNIA

Last year in the city of Fremont, Gerry Korn was flying a kite and hoping to sell a few, as he had done for several years. His purpose was not to make money, however, but to bring kiting pleasure to children and adults; it was his custom to donate his profits to charitable causes.

In Fremont, this created problems for Gerry. After being cited for selling without a permit, he paid for one, only to find that the law carried various restrictions as to areas in which he might sell and a time limit of 10 minutes in any one place—impossible restrictions for him.

After two city police cars and a zoning officer came after him one day (“They watched me for a whole hour, as if a kite was cocaine,” Gerry said) and he was cited again, the news started to hit big in Fremont and around San Francisco. The town’s bureaucracy became a symbol for “government at its worst,” as Fremont’s mayor, Gene Rhodes, described it to *Kite Lines*. Rhodes believes it would have been possible for the 1894 law to have been interpreted to differentiate Korn from undesirable peddlers. But the bureaucrats have held fast and it seems that if Gerry is to sell kites again legally he must bear the cost of bringing action himself. After 33 years of clean living, Gerry doesn’t relish a confrontation, arrest and lawsuit—all over the selling of kites. So instead he is enduring frustration rather than costly battle over what he feels is a right.

*Neil Thorburn reports:*

Lew Merrill and I attended a kite fly in Sunnyvale, CA, in March. The fly was an activity of the YMCA Indian Guide and Princess program of Santa Clara County. The several chapters hold meets in various

**Lew Merrill shows his Ghost Clipper kite and Neil Thorburn a sled modification of his Stacked Deltas to admirers at YMCA fly.**



parts of the valley every year and local kites drop in to fly along with the kids.

This activity, the best attended “Y” parent-and-child get-together of the year, allows only kites made and flown by parent and child in competition. A great time is had by all. On this March day the winds were light and fitful and kites came to earth with regularity, but determined kites had them aloft with the next puff.

This activity is supposed to be a regular Y program in other sections of the country also, although the local directors have no idea how or when the flies got started or how many places have them.

*Another Y event reported by Donald Kent:*

More than 200 people gathered for the First Annual Orange (CA) YMCA Kite Festival on April 20 in Mile Square Park, Fountain Valley. It was preceded by a morning kite workshop headed by Chris Romswinkel. Over eight events were held with classes for beginning and advanced kites. Many well-known area



**Ken Bourgeois from Burbank, CA, shows off his decorative delta, winner of Largest Kite, Advanced Class, at the Orange YMCA festival.**

kites took part. The afternoon was highlighted by kite fighting and closed with a free-for-all, in which more than 30 kites took to the sky in an attempt to be the last kite up. After all the kites were cut, crashed or tangled, Tom Joe, from Los Angeles, remained the winner flying his Korean-style kite.

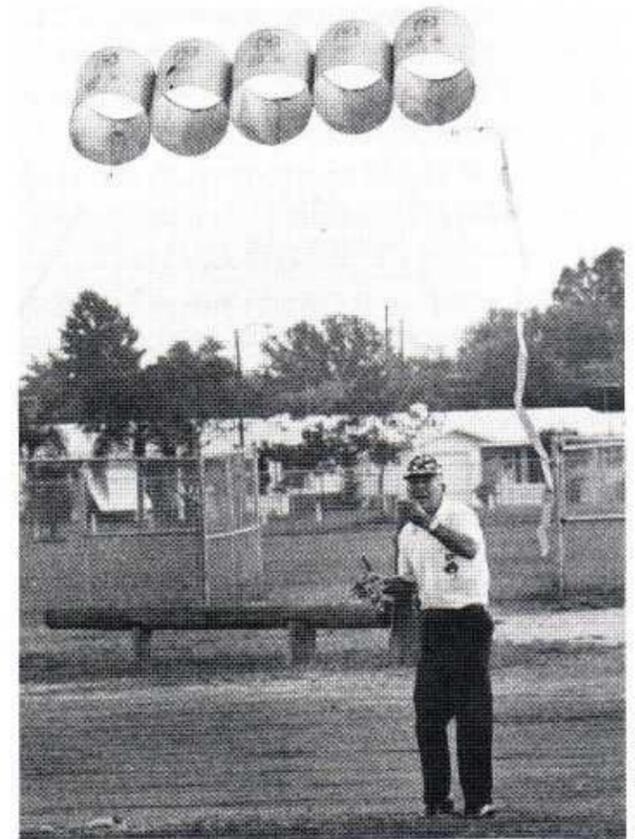
Winners of all events were presented with custom-made stained glass kites crafted by the festival coordinator Donald Kent, who is general director of the Orange YMCA, sponsor of the festival.

## FLORIDA

*After being featured in full color on the front page of the leisure section of the Clearwater Sun on November 7, Ray Fahrenbruck, 81, wrote to Kite Lines:*

One of the bigwigs in the Duneden Middle School saw these pictures and asked me to put on a show for the kids on November 21st. The wind was perfect and the area was several acres with no trees or power lines. I flew every kite in the car including Big Blue, my 24-ft delta now with aluminum tubing. There were three groups of kids, 25 or 30 in each group, and we all had a great time. It was one of the best shows I ever put on.

**Ray Fahrenbruck of Madeira Beach, FL, flies his multiple bag kite, called “The Monstrosity.”**



Joe Walltes

## WISCONSIN



The Kite Society of Wisconsin is less than two years old but it has 70-some members, a newsletter and many activities including seven flies from May through September. One is the Mots Memorial, September 14. Annual dues are: \$10 for adults; \$5 for senior citizens; \$1 for those 16 or younger; and \$15 for family memberships. For more information, write to the Society at 2943 N. Dousman, Milwaukee, WI 53212.

*News from Here & There Continues...*

## AUSTRALIA

Helen Bushell of the AKA (Australian Kite Association) reports on their big event of the year, the Moomba Kite Fly, held March 2 at the Royal Park, Melbourne:

Yesterday dawned dark and threatening with winds increasing and warnings on the bay.

Doris [Smith] began to give away the vertical paper-fold kites and some of them began to make it in the wind. Dragons and box kites stayed up in the 15-knot gale and so did the Eddy bows we were supplying to the public, but the deltas and the rectangles crashed.

The race to the zenith as recommended by you [*Kite Lines* Fall 1979 issue, Arthur Kurle's article, "The Super Conyne"] was a great success. We set up a 100-meter course with a set of flags at each end, had two strong lines ready and attached the kites and let them go at one end and anyone could see the winner at the other. With the weakies eliminated, one heat

was in reality neck and neck as two big Conynes rushed up locked together, but they parted in the sky and it was hard to pick the winner. In the end John Walker took the award and John Porter took the prize. The strong men can hardly wait till next year to produce another better, faster kite as the Moomba Master kite.

Tony Johnston [AKA president] had a heart attack two weeks ago and was with us but still not able to pull his weight. We had the usual jazz band and this year added a couple of clowns to take away the seriousness. Geoff Smith and Trevor Walding walked around and picked winners in the sky and told them to pick up prizes at the base so it was all very easy. We came away with that lively feeling that you have after a day in the wind.

## ENGLAND

An international kite exchange program has been launched by Clive Rawlinson, founder of the Essex Kite Group. Rawlinson

has already exchanged kites with kites from South Australia, Maryland and Washington state. Calling it "Sky Links," Clive has dedicated the program to *Kite Lines*. It is Clive's thought that, once a number of kite exchanges have taken place, a joint flying day worldwide might be arranged. Many nations could fly together at



Clive Rawlinson among his kites, including his own Skydelair stunt train member, left, and a Mel Govig Maryland state flag Nisei kite, right.

approximately the same time in a unified spirit of international friendship which kites represent so well. *Kite Lines* will be pleased to report the development of this program among groups of far-flung kites.

The Essex Kite Group's monthly meets through the winter-to-spring period of 1979-80 have seen the start of an interesting tradition. Each fly was named for an historic name in kiting. For example, there was the Hargrave Meet, the Woglom Meet, the Marconi Meet and so on—for Brogden, Eddy, Baden-Powell, Cody, Alexander Graham Bell and Saconney. An imaginative concept, presented in a nicely printed program well in advance, might well lend itself to emulation.

The Cornwall Kitefliers began life as a club in February 1979 and have 37 members at last report. Size and age notwithstanding, they do plenty of kiteflying and put out a bright and gossipy newsletter. Dues are £ 2 annually and the address is 78 Pendarves Road, Falmouth, Cornwall TR11 2TP, England.

Tessa Bell, secretary, recently wrote to us about some members' children:

One of our members, Mick Babbs, read the article "Junior Record Claimed" [in *Kite Lines* Fall 1979]. He thought the formula for comparing junior kiteflying achievements was a bit far-fetched, but it did cause him to relate to me the details of his own children's kiteflying. I know

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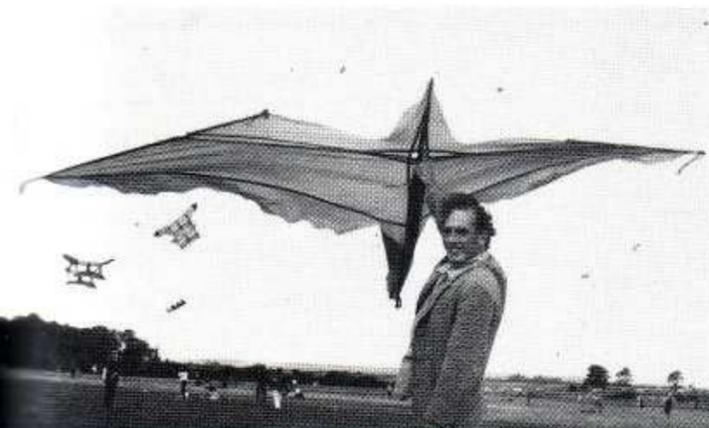
Nicky Babbs, 3, veteran kiter, of Mole End, Todpool, St. Day, Cornwall.

there is no exaggeration as I've witnessed some of the events described.

Mick and Julie's children are Christian, now 5+, and Nicky, just 3. They both now regularly fly kites completely unaided. They live opposite a valley where it's safe to fly and sometimes before school they go down to the valley and get their kites up to about 600 ft, while Mum's still indoors and Dad's off to work—and they bring them down unaided, too! Of course, they used to get frequent line tangles, but this doesn't happen anymore, or rarely. They even cope with breakaways and accidents and usually manage to retrieve the kites unaided.

I remember last year, September 1979, at our Truro Informal Weekend Fly-in, Nicky and Christian were busily helping the children of a friend of mine (those

The British Kite Flying Association flies each spring and fall at Old Warden Aerodrome. Seen in October 1979: top, 14 ft blue bird kite by Doug Lawrence of London; bottom, David Taylor with his Bermuda-type flower kite.



Ron Moulton

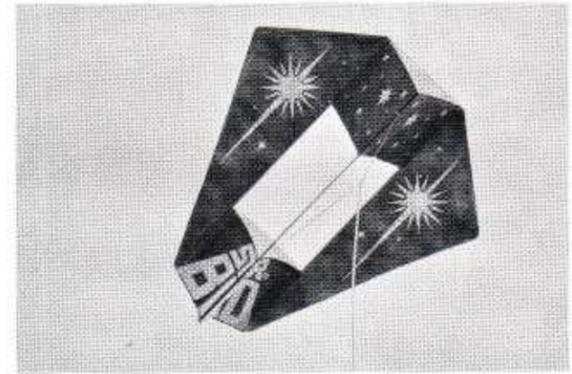


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children were aged 4 and 6). Nicky and Christian patiently explained and launched and showed the older children how to hold the line, etc. It showed me the difference between children of kites and children of "ordinary members of the public."

Christian started kiteflying at the age of 2½, when his father got interested. Nicky started kiteflying from his pushchair at 14 months of age. He held the line of an Eddy bow kite and was involved to the extent that if it started coming down he'd say "Ahhgghh." He lacked the language skill at that age but everyone knew what he meant! At 18 months he flew a big brown paper kite at the second Truro Festival in 1978, and he flew really tiny (less than six-inch) kites completely on his own at that age.

Christian, then 4, was flying bigger ones unaided. Nicky has always shown more enthusiasm and interest in kites than Christian, even though, when he was 2, Nicky was completely lifted off the ground by a pilot kite he was flying. He was deposited in nearby bushes. He found it upsetting, but, as Mick and Julie proudly pointed out, he didn't let go of the line!

At the age of 2 years 5 months, when Nicky watched his Dad trying to fly a "crow" unsuccessfully, Nicky kept insisting that if the kite (which was designed to be tailless) had a tail it would fly. His persistence paid off. Dad fitted a tail and the kite flew! Nicky is also very happy to launch and "repair" the kite he's flying (i.e., when a kite comes down he'll adjust the spars, etc., and relaunch it) and he finds this more interesting than just putting a kite up and keeping it there!

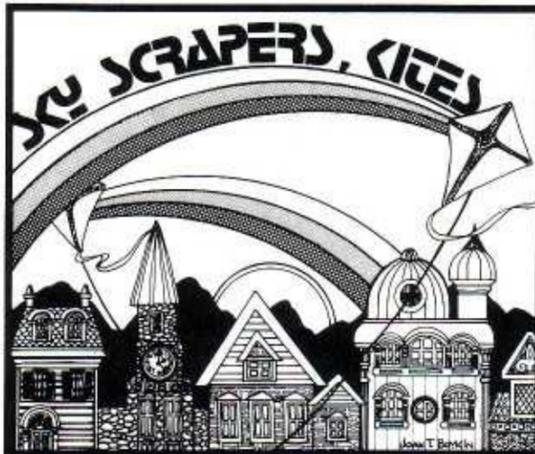
**JAPAN**

Richard S. Kimmel, an amateur radio operator of College Park, MD, recently put *Kite Lines* in touch with a fellow "ham" named Doug Blakeslee of Brookfield, CT. Blakeslee had visited Japan and written about it for *Ham Radio Horizons* magazine. Blakeslee told of taking Japan's "bullet" trains which travel 120 miles per hour. These trains are entirely elevated, electrically powered and managed by computer. Any conductive path between the rails halts the rapid succession of trains. Blakeslee's ride was delayed this way because of a shutdown caused by—a kite. Blakeslee wrote, "Apparently the greatest threat to the world's fastest train system is kites. Fifteen times that year alone, electrical malfunctions had occurred when kites landed on the tracks. The software programs in the control computers apparently don't allow for damage caused by wayward kites." ◇



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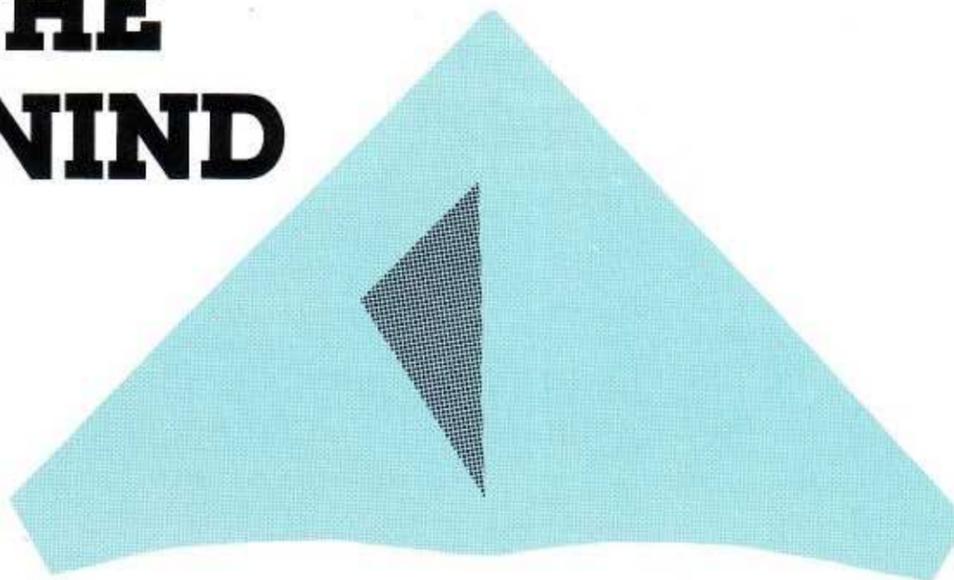
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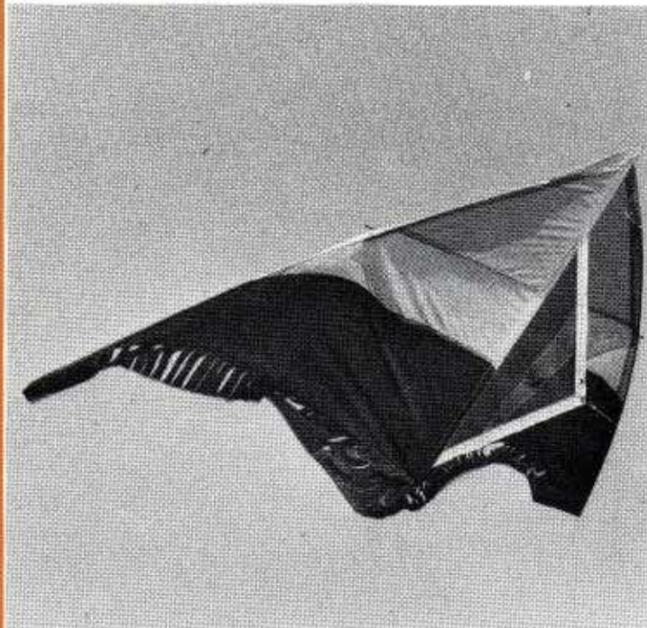


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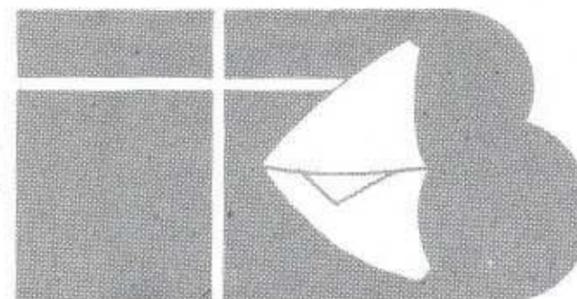


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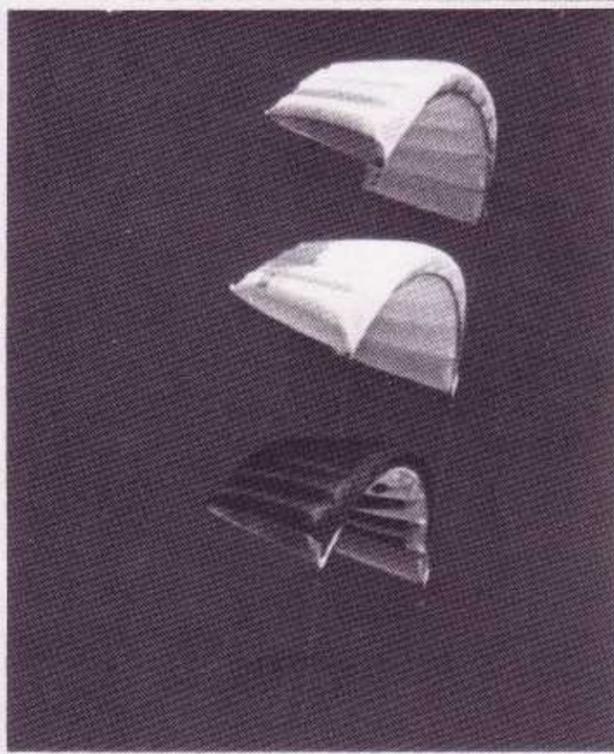
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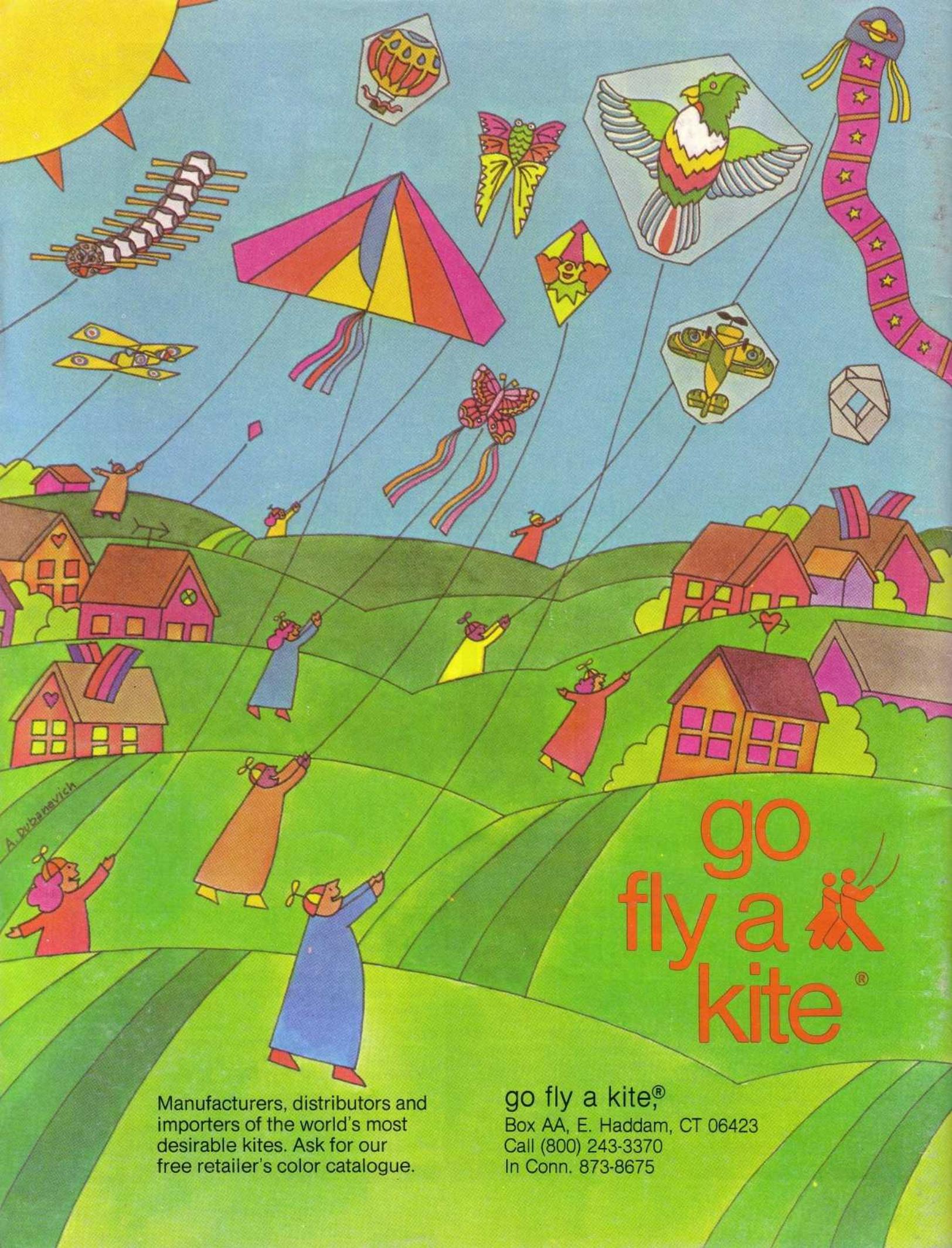
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