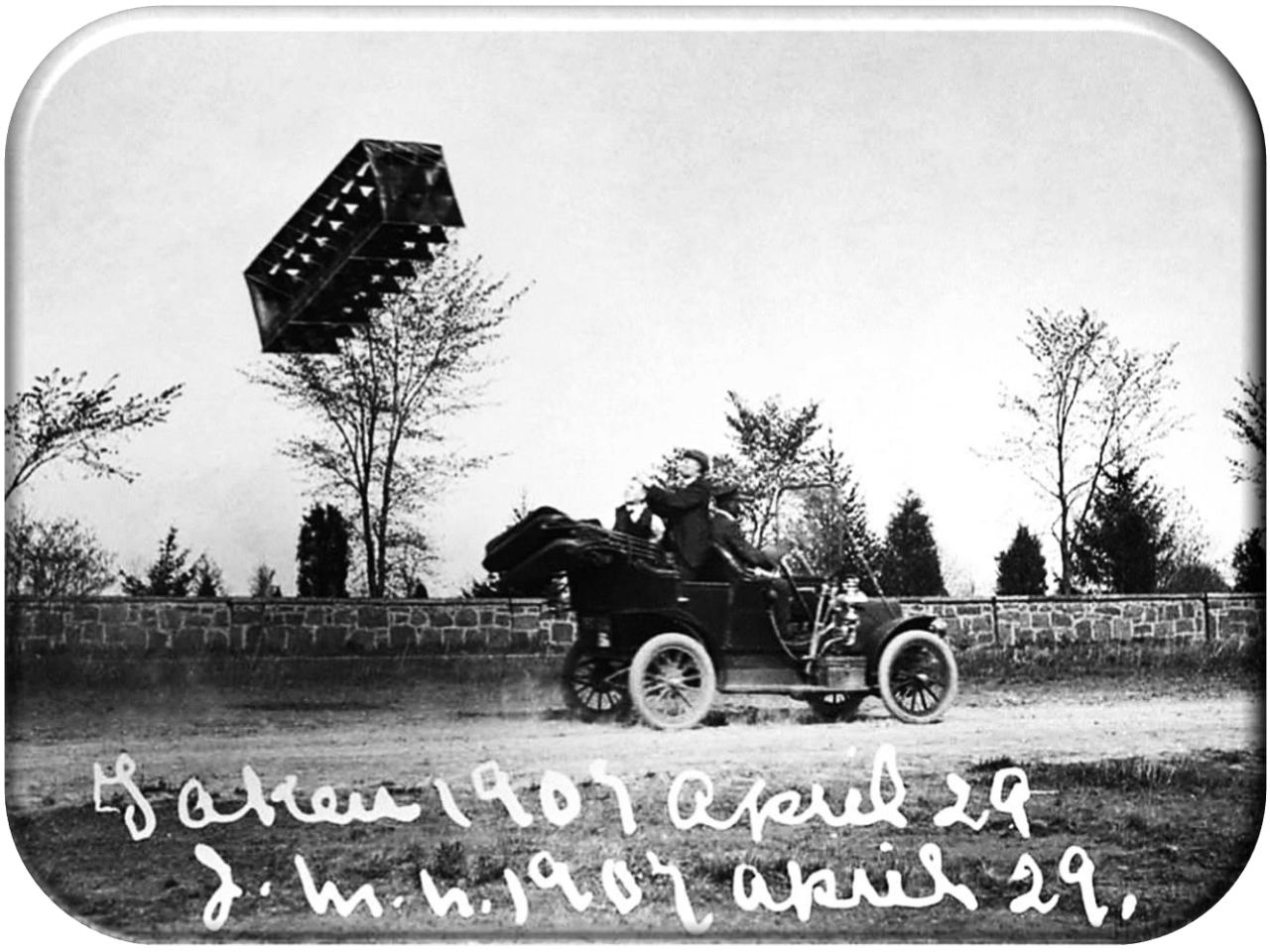
YOUR YULETIDE 2022

NEWSLETTER OF THE MIDLANDS KITE FLIERS OF GREAT BRITAIN



A tetrahedral kite being flown from the back of an automobile , 1907.

NEWSLETTER OF THE MIDLANDS KITE FLIERS YULETIDE 2022

GENERAL INFORMATION

CLUB FLY-INS

We hold club fly-ins each month (winter included) at various sites. These are informal events and are a great way of meeting other MKF members.

MEMBERSHIP CARDS

Your membership card may help you obtain discounts for purchases from kite retailers in the UK, and gain you entry to events and festivals free, or at a reduced cost.

Please keep them safe.

PUBLIC LIABILITY INSURANCE

All fully paid up members are covered by Public Liability Insurance to fly kites safely for '***pleasure***' anywhere in the world with the exception of the United States of America and Canada. If you injure anyone whilst flying your kite the injured party may be able to claim on the club insurance for up to **£5,000,000**. The club has 'Member-to-Member Liability Insurance'.

A claim may be refused if the flier was found to be flying a kite dangerously - e.g. using unsuitable line, in unsuitable weather; flying over people, animals, buildings or vehicles. This insurance does not cover you for damage to, or loss or theft of members' kite/s.

BUGGIES, BOARDS & KITESURFING

Unfortunately, we are not able to cover these activities within the clubs insurance policy.

The MKFNEWS is pleased to print articles and photographs submitted by any interested party. All submissions are reproduced at the Editors discretion, however the Club cannot be held responsible for any views or comments contained in any such articles.

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I am sorry but I don't do 'Facebook',
If you want me either email or phone ..... I'll always get back to you.

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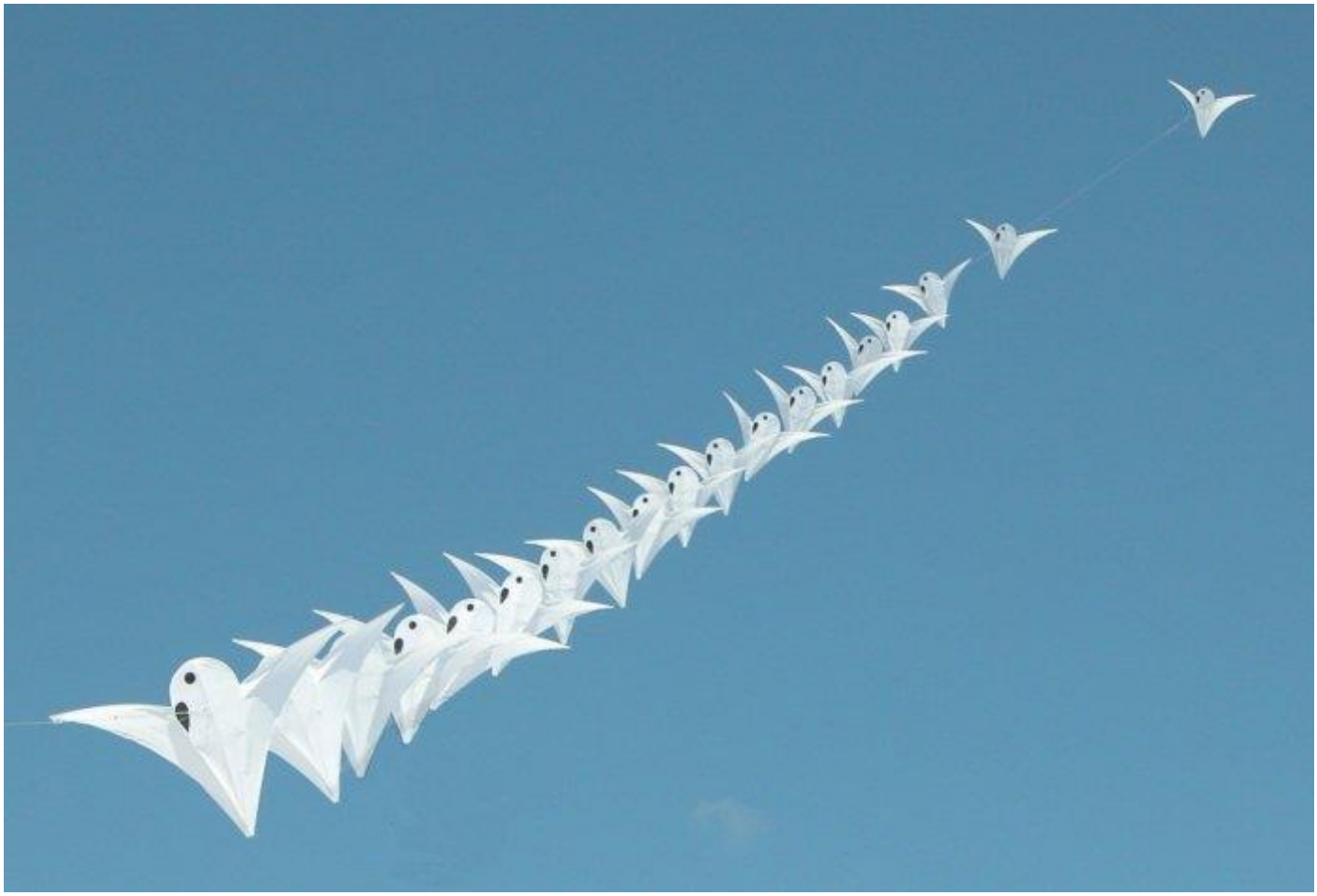
PHOTOGRAPH TO FOLLOW

'MKFNEWS' DEADLINES FOR 2022+

MKFNEWS B. SOUTEN - EDITOR	'COPY' DEADLINE	PUBLISHING DATE
42	25th December 2022	Mid January 2023
43	25th March 2023	Mid April 2023
44	25th June 2023	Mid July 2023
45	25th September 2023	Mid October 2023

Birds – Robert Brasington



Peace Train

Bird life in the garden is constant due to the continuous flowering and seeding of plant species. There is always some source of water and shelter, and for this reason, a wide selection of birds either pass through or have made a permanent home in the garden. Living with this, it was impossible not to be fully aware of their existence and a range of bird kites was just so obvious. I started to examine, in detail, the local specie and replicated them as kites.
The platform of the kite was perfect for individual specie representation and after reproducing Tasmanian specie I moved on to mainland birds. Following the acceptance of these, I was invited to represent the threatened and endangered species of water birds visiting the Great Salt Lake in Utah. This culminated in travelling to Utah, doing workshops and performances involving Brolly Arts (Utah) and the Drachen Foundation from Seattle.

Bird size 1.2M wing span x 600mm high.

Price is:
AUD $125
(Worldwide Postage Included.)

Over the years the following species have been represented:

- Blue Wren
- Flame Robin
- Green Rosella
- King Fisher
- Kookaburra
- Owl
- Oyster Catcher
- Aust. Pelican
- Pink and Grey Galah
- Puffin
- Red & Green Macaw
- Scarlet Macaw
- Yellow Tailed black Cockatoo
- Sulphur Crested Cockatoo
- Aust. Sea Eagle
- Toucan
- Wedge Tailed Eagle
- Western Scrub Jay
- American Pelican
- Avocet
- Cinnamon Teal
- Ibis
- Long Billed Curlew
- Snowy Plover
- Tundra swan
- Wilson's phalarope
- Swallow
- Bald Eagle
- Bullock's oriole
- Blackburnian Warbler
- Great Kissadee
- Green Winged Teal
- Lucifer Humming Bird
- Mountain Blue Bird
- Pileated Woodpecker
- Pyrrhuloxia
- Vermilion Flycatcher

Images of a few of the varieties.

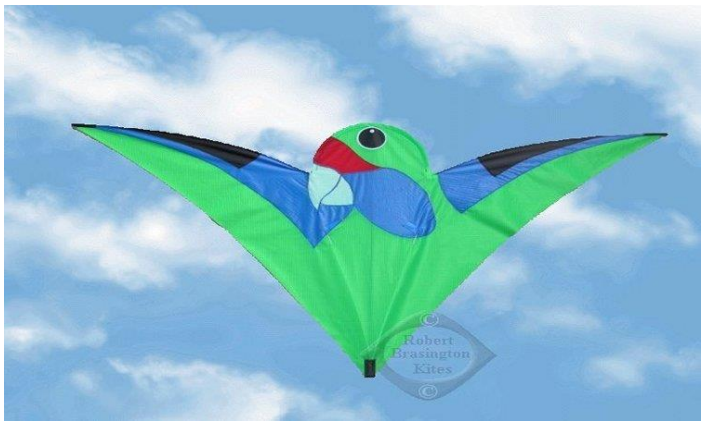
Birds

American Pelican
Birds

Blackburnian Warbler
Birds

Bue Wren
Birds

Great Kiskadee
Birds



Green Rosella
Birds

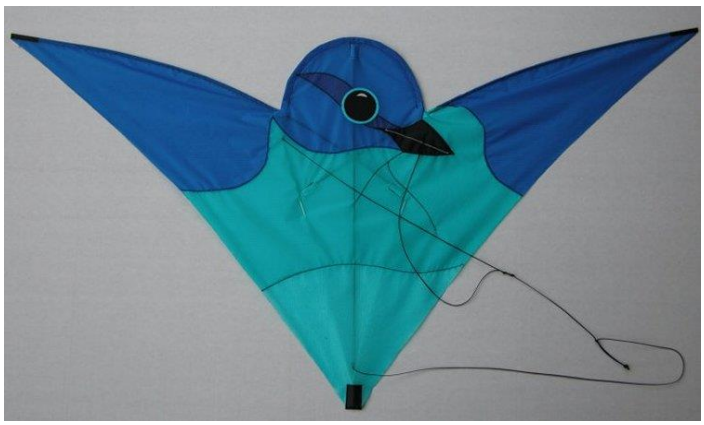
Oyster Catcher
Birds

Green Winged Teal
Birds

Pileated Woodpecker
Birds

Kingfisher
Birds

Puffin
Birds



Mountain Bluebird
Birds

Pyrrhuloxia
Birds

Snowy Plover
Birds

Vermillion Flycatcher
Birds

Toucan
Birds

Wilsons Phalarope

Brasington beim Bird Kite-Workshop auf der Kitemakers Conference

VÖGEL LEICHTGEMACHT

Text und Fotos: Ralf Dietrich

Bird Kite von Brasington

You may have read the portrait of Robert Brasington on the last few pages. If you are now in the mood for a Brasington kite, then we have just the right thing for you here: the building instructions for the Bird Kite, a kite that Robert recently presented at the Kitemakers Conference and his plan KITE & friends in the first publication may print. It should be noted that the plan may only be used for private, non-commercial purposes. And for those who don't dare to use a sewing machine, the Bird Kites from Robert's series production are recommended.

But now it's time to build it yourself. We deliberately chose the seagull. The design of this kite is not that exciting, but the model does not represent a major hurdle even for beginners. If you like, you can of course choose a different design. In addition to eagles and parrots, Robert has countless other birds on offer.

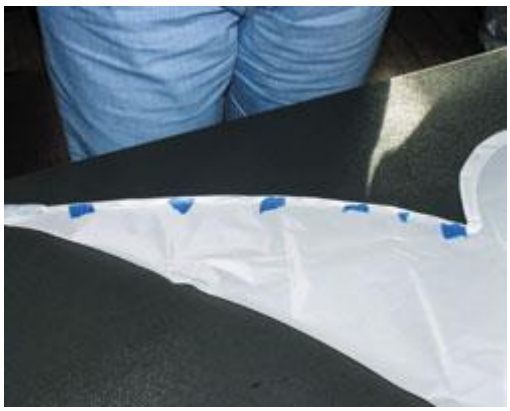
Finished kite from the front

Not marked as a single point in **Sketch 2** , but no less important is the pocket on the bird's tail. Right next to the pocket **C** and **C|** two holes are made two centimeters apart towards the wing on the **sketch 2**line marked in yellow, the head bar, fired. The head rod will later be inserted through this and thus fixed. Now slide the head segment, which has been turned inside out, onto the head part, fix it with adhesive tape and sew it to the main sail. The rod pocket for the head area should have

Begin the work on the kite by cutting out the sail according to **sketch 1** . Note the hem allowance in the area of the upper wing - marked in yellow in Sketch 1. This area will later be folded over to form the pocket for the wing stick . **The round segment is pushed onto the head, fixed and then sewn on**

MATERIAL-LISTE

- etwa 1,1 Quadratmeter weißes Spinnaker
- etwas schwarzes, selbstklebendes Spinnaker für Schnabel und Auge
- Dacron für die Stabtaschen und zwei Verstärkungen
- 1 x 4-Millimeter-CFK-Hohlstab (etwa 60 Zentimeter)
- 1 x 2-Millimeter-GFK-Stab (etwa 140 Zentimeter)
- 2 x 3-Millimeter-GFK-Stab (etwa 80 Zentimeter)
- Stabendkappen für die Stäbe
- Waageschnur



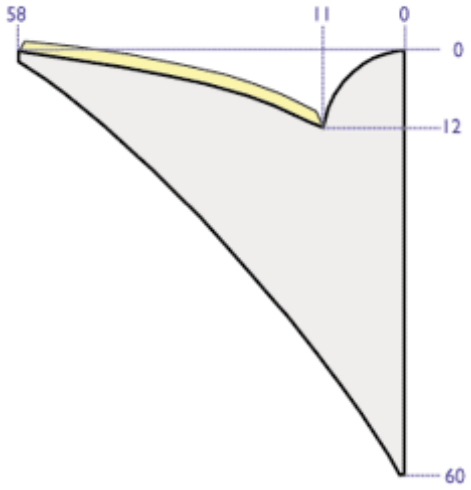
The wing pocket is also fixed before sewing

been created like this. In the next step, the hem allowance on the wings is folded over, again fixed with adhesive tape and sewn. Now the pockets for the wing rods should be ready.

Linkage

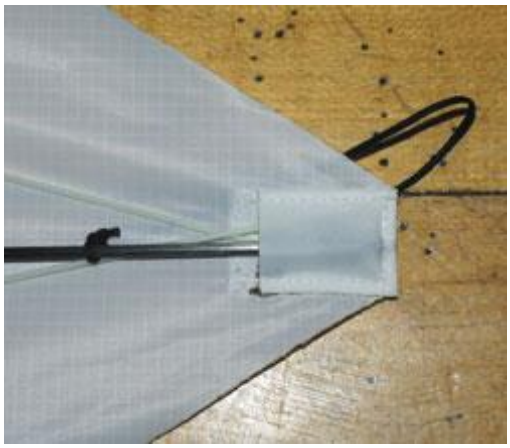
Assembly of the kite begins with the two millimeter GRP rod shown in **Sketch 2**is marked in yellow. First slide this through the holes in the sail, then through the pocket on the head, then through the holes on the other side. Finally, the rod is fitted into the lower rod pocket - please don't forget the rod end caps. In the next step, the four-millimeter CFRP center rod, drawn in orange in **sketch 2** , is fitted and finally the two, in **sketch 2**wing rods marked in red fitted. The Bird Kite should now be ready in front of you for the first time. Now glue the beak and eye to the front of the dragon. In the last step, the scale is assembled. This consists of the lines **A** , **B** and **C** **shown in sketch 3** . It should be noted here that **A** and **B** are continuous legs. Both **A** and **B** have a length of 87 centimeters, the length of loop **C** depends on your taste. First mount line **A** and then line **B** . **C** is attached to **B** with a sliding knot so that the balance point can be adjusted quickly and easily. The exact balance point depends on the prevailing wind conditions and must be determined on the meadow. As a guideline, 71 centimeters from point **D** can be taken.

Glue on the rod pockets



Sketch 1

The best way to shape the curves on the head and wings is to use the points indicated in **Sketch 1** are given, transferred to a template and then connect these points with each other using a GRP rod. If you have found a neat and, above all, even curve with this method, draw it in with a pen. Also cut out two strips about two centimeters wide that have exactly the same curve as the head. In the next step, these two strips are sewn together on their upper, longer side and then turned inside out. This part is later sewn onto the head and forms the rod pocket there. First, however, the reinforcements are attached. A Dacron reinforcement sits exactly in the bend between the head and the wing, another reinforcement on the outside of the respective wing.



The tail of the bird with a pocket for the middle stick Stick pocket for the wings including openings in the sail for the head stick Corresponding to the stick pocket on the head Pockets In the next

First put the head rod through the holes in the sail ...

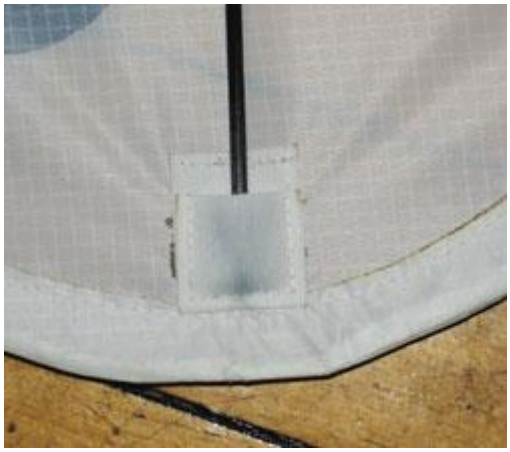
... then lead through the curve in the head ...

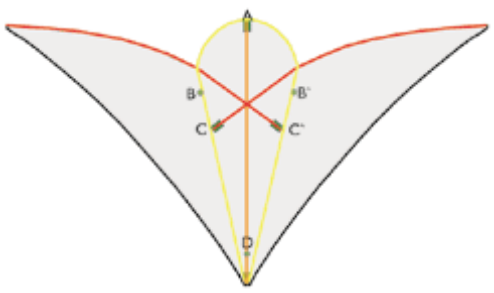
...then put it through the holes on the opposite side

Up in the sky

Now nothing should stand in the way of your kite's first flight. The Bird Kite has a pleasingly large wind spectrum. Due to its light linkage, it can be flown even in a light breeze, but due to the flexibility of the linkage, the kite can also withstand stronger winds without any problems. In the next issue of **KITE & friends** you can also read a test report on two examples of the Bird kite from series production .

step, the Dacron pockets are sewn onto the sail. The location of these pockets can be seen in **sketch 2** , the coordinates of the individual points are as follows: **A:** 0, 0 **B:** 10.5, 17 **B|:** -10.5, 17 **C:** 7, 25 **C|:** -7, 25 **D:** 0, 53 **This is how the head and wing bars lie on top of each other at the end Sketch 2**



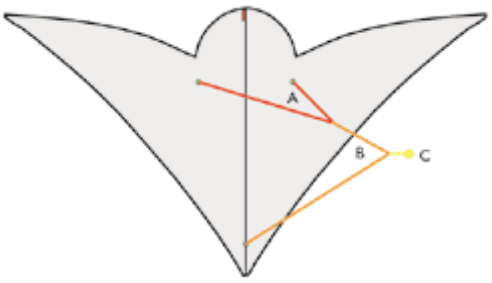


Robert Brasington can be reached on the Internet at www.newtechkites.com .

Fitting the center rod into the rod pockets provided

Reinforcements in the wing area

Glue on the face of the seagull



Sketch3

You can find this article and much more in **KITE & friends** issue 1/05

1906 Automobile and Aero Clubs of America Joint Show Photographs.

The Aero Club of America (AC) was the United States' oldest national aviation organization and is the mother organization from which all U.S. air sports organizations either directly, or indirectly, evolved. Founded in 1905, the ACA underwent reorganization in 1922, when it became the National Aeronautic Association (NAA). The club was the focal point of organized aviation in the U.S., and its early members were some of the most influential leaders in American science and industry. The ACA served United States aviation in a variety of roles and fostered the development of all forms of flight. It was the ACA, not the federal government, that began the practice of regulating flight safety by issuing flying licenses based on a demonstrated ability to competently operate a vehicle of the air. The ACA was also the first body of aviation experts in the U.S. to publicly endorse the efforts of the Wright Brothers and the club was instrumental in persuading Congress to fund military aviation. In January 1906, seeking a larger venue for their Sixth Annual show, the Automobile Club of America chose the newly completed Sixty-ninth Regiment Armory building at 68 Lexington Avenue, between East 25th and East 26th Streets in lower Manhattan, New York City, and invited the newly-founded Aero Club of America (ACA) to participate. Vistors to the show would have found the Armory's massive Drill Hall filled with automobile exhibits, with two full-sized ACA balloons and an airship hanging overhead. The main ACA exhibit was housed in the Armory's two-story high gymnasium on the third floor of the administration section of the building. Suspended overhead were kites, balloons, balloon baskets, gliders, airships (all but one displayed with deflated envelopes), and various gliding and powered model aircraft; at floor level were engines, additional balloon baskets and fittings, and tables displaying instruments, literature, and a U.S. Patent Office exhibit of flying machine models dating from 1878 to 1889. At the south end of the room, Israel Ludlow's massive towed-glider flying machine (a man-carrying kite design) was displayed standing on end, as it was too large to display in flying configuration. Other aircraft on display included the Langley Aerodrome Number 5 ("Langley 1897 Aerodrome"), the Langley Quarter-scale Aerodrome ("Langley 1903 Aerodrome"), the Lilienthal (Otto) 1893 Glider, Hargrave (Australia) 1888 Compressed-Air Ornithopter, Herring 1902 Gasoline Biplane Model, Herring-Arnot 1897 Glider, Chanute (Octave) 1896 Biplane Glider, Pichancourt Model Ornithopter (1879), Keil 1905 Ballo-plane, Dr. Julian P. Thomas' airship, Alberto Santos-Dumont's airship No. 9 airship "La Baladeuse" (1903), Thomas Baldwin's airship "California Arrow," kites and weather balloons from the Blue Hill Observatory in Massachusetts, and balloons from Carl E. Myers, Maurice Mallet, and A. Leo Stevens. Alexander Graham Bell displayed a number of tetrahedral-cell kite designs in varying sizes, ranging from a 4-cell design to the 1300-cell "Frost King" kite. The walls of the room were decorated with a large number of photographs, including over 120 enlargements provided by consulting electrical engineer and aeronautical enthusiast William J. Hammer (predominantly views taken by Hammer in Paris, France, during the balloon competitions which were part of the 1900 Exposition Universelle), photographs loaned by fellow ACA member George Grantham Bain, and photographs provided by exhibitors and other ACA members including Carl E. Myers and John Brisben Walker. The show officially opened to the public at 8:00 p.m. on Saturday, January

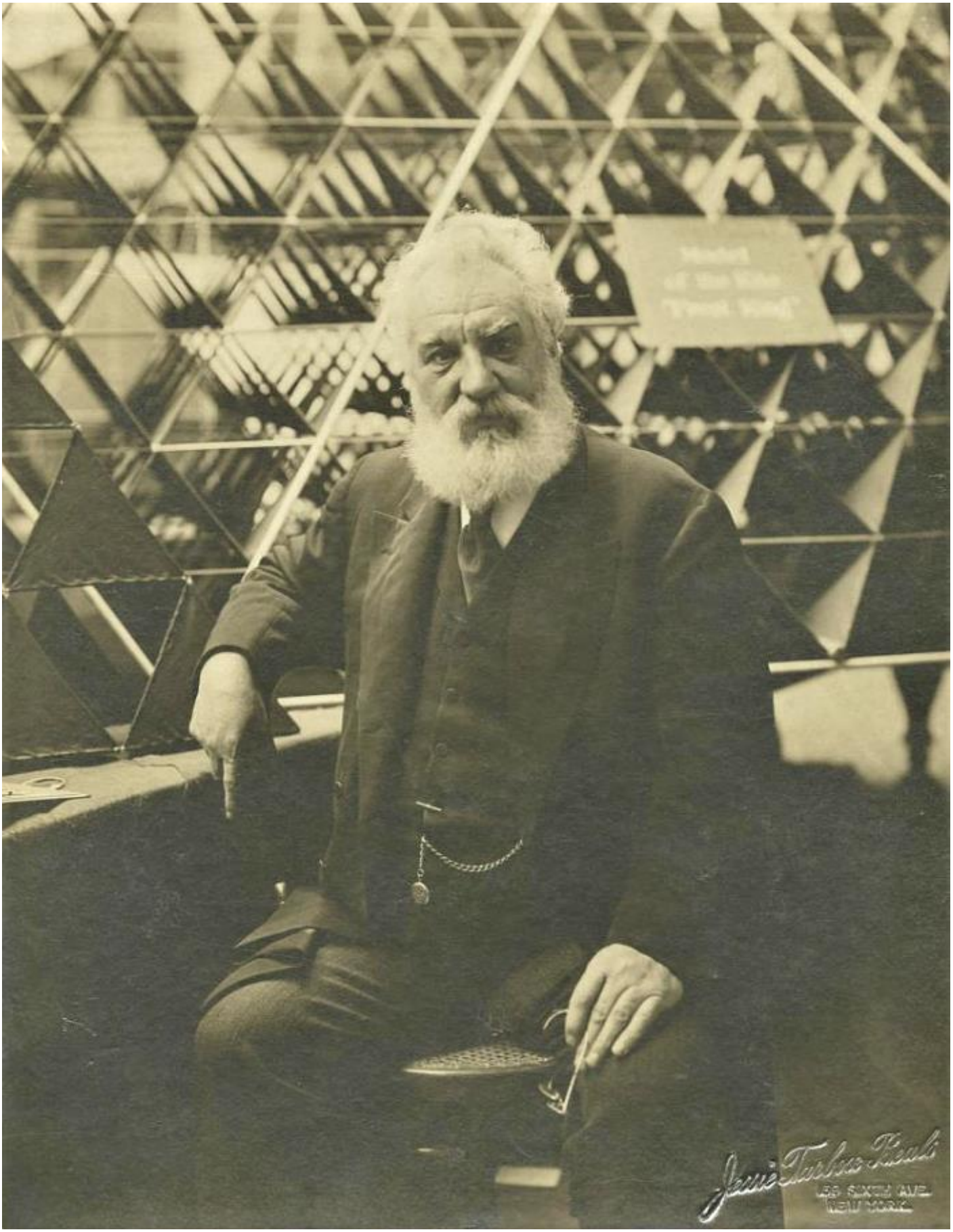
13, 1906, although members of the Aero Club were allowed to enter earlier at 4:00 p.m. Additional photographs (and possibly other of the gymnasium exhibit items) were installed later that night after the show had opened. The show concluded with a banquet on the evening of Saturday, January 20, 1906. Jesse Tarbox Beals (1870-1942) was one of the first female news photographers. In late 1902, Beals had been hired as a photographer by the editor of The Buffalo Inquirer and The Courier in Buffalo, New York; two years later, the papers sent her on assignment to St. Louis, Missouri, to photograph the Louisiana Purchase Exposition. Hard-working and tenacious, Beals was soon providing her photography of the Fair to other major publications including the New York Herald. In 1905, Beals moved to New York City, and opened a studio at 159 Sixth Avenue in Lower Manhattan.
Sixteen photographs by Jesse Tarbox Beals of the aeronautical exhibits at the Automobile and Aero Clubs of America Joint Show held January 13-20, 1906, in the third-floor gymnasium of the 69th Regiment Armory, New York City.
The photographs are arranged as if the photographer is moving around the exhibit space in a clockwise direction, starting and ending at the entrance from the Armory's south staircase at the southeast corner of the room.

Scope and Contents

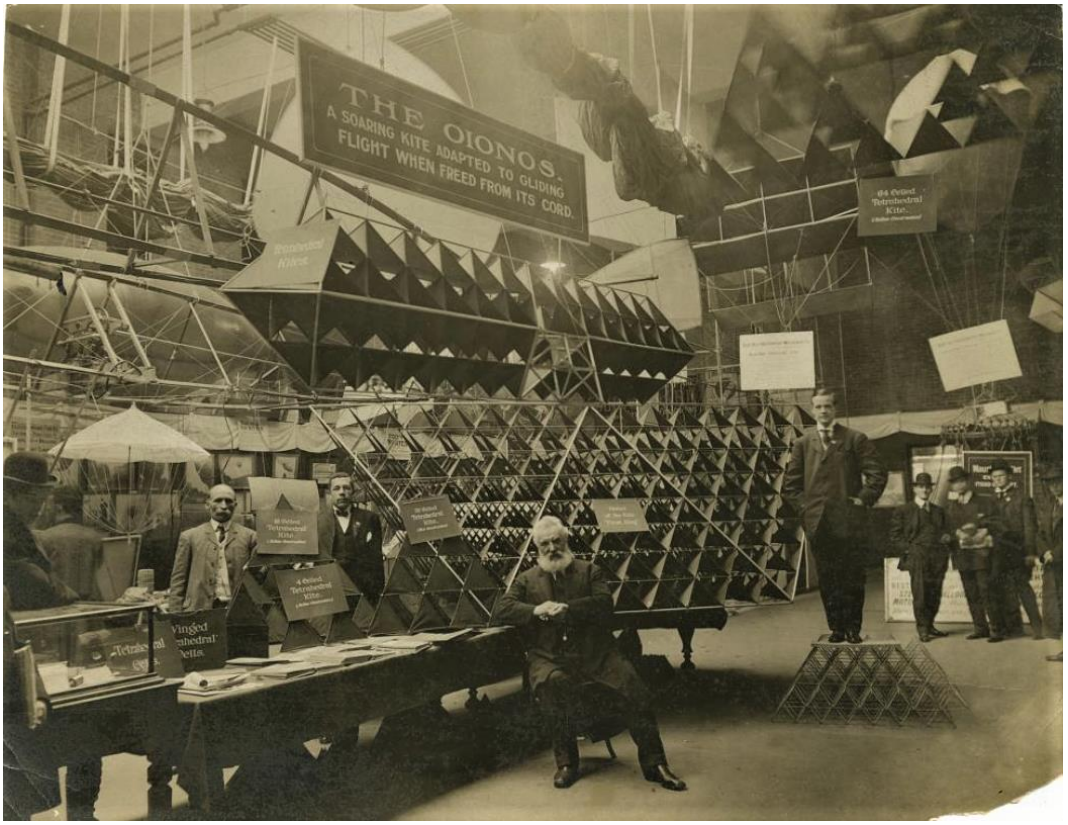
This collection consists of sixteen black and white photographs taken by photographer Jesse Tarbox Beals of the aeronautical exhibits at the Automobile and Aero Clubs of America Joint Show held January 13-20, 1906, in the third-floor gymnasium of the 69th Regiment Armory, New York City. Four duplicate prints are included in the collection for a total of 20 prints overall. The 13 mounted prints in the collection are embossed with Beals' name and studio address at the lower right corner; the unmounted prints have Beals' ink stamp on the reverse. All of the photographs were likely made during the day on Saturday, January 13, 1906, before the show opened to the public that evening. Some of the exhibits are seen in the midst of installation, notably the tetrahedral-cell kite designs of Alexander Graham Bell. In view 3, Bell and several of his associates (including Lewis Howard Latimer) can be seen posing with the kites for the camera; view 4 is a portrait of Bell alone.

Bibliography

"Auto vs. Airship: Speed Merchants of Earth and Ether at Armory Show." New York Tribune, January 13, 1906, 10. "BALLOONS THE FEATURE OF ARMORY AUTO SHOW; Aero Club's Exhibit Novel and Interesting to Big Crowd. AIRSHIPS HANG FROM ROOF New Quarters of Sixty-ninth Regiment Filled with Motor Cars -- Handsome Decorations." New York Times, January 14, 1906, 10. "Auto Club Show Open: Attractive Display in New New York Armory." Washington Post, January 14, 1906, S1. "The Aero Club of American's Exhibit of Aeronautical Apparatus." Scientific American, Vol. XCIV, No. 4, January 27, 1906, 93-94. Myers, Carl E. "A Visit to the First Show of the Aero Club of America." Scientific American Supplement No. 1572, February 17, 1906, 25193-25194; via Library of Congress Manuscripts Division, Wilbur Wright and Orville Wright papers, 1809-1979, Series: Scrapbooks, Scrapbooks; January 1902-December 1908: page 0100, " A Visit to the First Show of the Aero Club of America [Carl E. Myers, Scientific American Supplement No. 1572, 17 February 1906]." https://www.loc.gov/resource/mwright.05001185 Brannan, Beverly W. "Jessie Tarbox Beals (1870-1942): Biographical Essay." Library of Congress, Prints & Photographs Division, January 2011. https://loc.gov/rr/print/coll/womphotoj/bealsessay.html



View No. 4: Alexander Graham Bell Notes: Informal portrait photograph of Alexander Graham Bell posed seated, with one of his large tetrahedral cell kites in the background.



View No. 3: Alexander Graham Bell with Bell Tetrahedral Kites Notes: Alexander Graham Bell (center) poses seated, in front of two of his large tetrahedral cell kites (including "The Oionos"); note one of Bell's associates (right) posed standing on a section of tetrahedral cells to demonstrate their strength. Man posed second from left, between Bell kites, is engineer and inventor Lewis Howard Latimer, who had worked for Bell previously.

View No. 2: Bell Tetrahedral Kites Notes: At center are several of Alexander Graham Bell's tetrahedral cell kites (including "The Oionos"). Man posed at left near U.S. Weather Bureau sign is engineer and inventor Lewis Howard Latimer, who had worked for Bell previously.

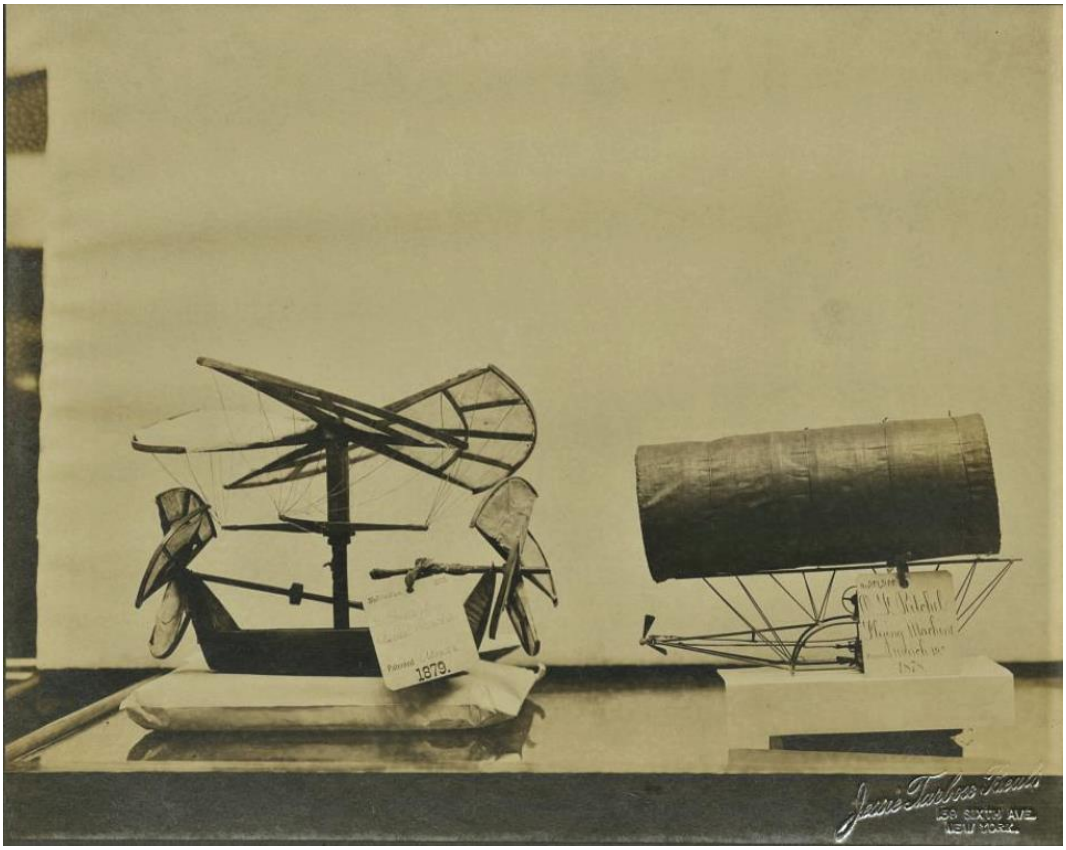
View No. 16: Southeast corner of east wall (Kites and Thomas Airship) Notes: A display of Blue Hill Box Kites patented by H. H. Clayton, Eddy War Kites patented by William A. Eddy, and the envelope (deflated) and frame of an airship belonging to Dr. Julian P. Thomas. Ballooning photographs taken by William J. Hammer at the 1900 Exposition Universelle in Paris, France, are displayed on the wall below

View No. 5: Looking north from center of west wall Notes: Models loaned by the U.S. Patent Office are visible in the foreground; hanging over the cases are (front to back) the Santos-Dumont (Alberto) No. 9 "La Baladeuse" airship, Hargrave (Australia) 1888 Compressed-Air Ornithopter and Herring 1902 Gasoline Biplane Model, and the 1897 steam-powered Langley Aerodrome Number

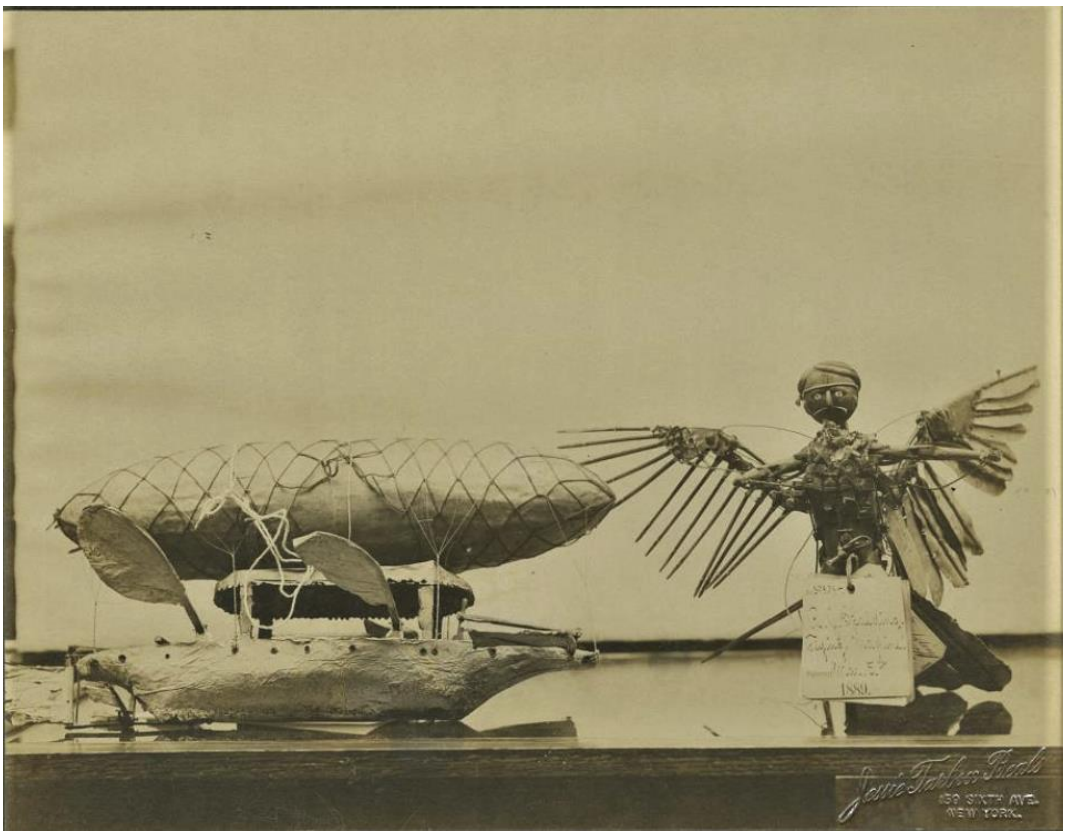
View No. 6: Looking southeast from center of west wall 1906 Automobile and Aero Clubs of America Joint Show Photographs NASM.XXXX.0902 Page 6 of 7 Notes: Closest to the viewer are Samuel P. Langley's two Aerodrome models: at left, the Langley Quarter-scale Aerodrome,andat topcenter,Langley Aerodrome Number 5. Hanging at center above the men inspecting a small patent model are the Herring 1902 Gasoline Biplane Model (left) and the Hargrave (Australia) 1888 Compressed-Air Ornithopter (right). Hanging behind these are the frames of Thomas Baldwin's "California Arrow" airship (left) and the Santos-Dumont (Alberto) No. 9 "La Baladeuse" airship (right, with wicker basket for pilot). At the far end of the room, both hanging and on the floor, are several of Alexander Graham Bell's tetrahedral kites.

View No. 7: West wall from northwest corner (William J. Hammer photography display) Notes: A wall of photographs from the collection of William J. Hammer (bottom row) and others; an Alexander Graham Bell tetrahedral kite design is seen suspended at far left background.

View No. 8: Looking northeast from center of west wall (Patent Office display) Notes: Models loaned by the U.S. Patent Office are seen at floor level in the foreground; hanging above are (left to right), Langley Aerodrome Number 5, Hargrave (Australia) 1888 Compressed-Air Ornithopter, and the tails of the Baldwin and Santos-Dumont airships. Hanging in background are the Herring-Arnot 1897 Glider (left) and, at center, the Herring 1902 Gasoline Biplane Model.

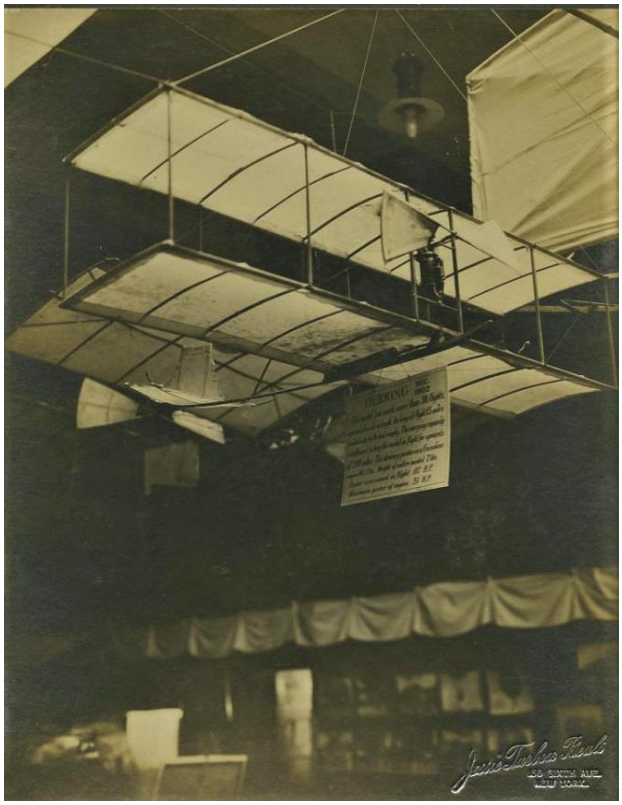


View No. 9: Badgley and Ritchel Patent Models Notes: Patent models on display; left to right: Badgley Aerial Machine by Henry Badgley, patent no. 214,546, patented April 22, 1879; C. F. Ritchel Flying-Machine by Charles F. Ritchel, patent no. 201,200, patented March 12, 1878.



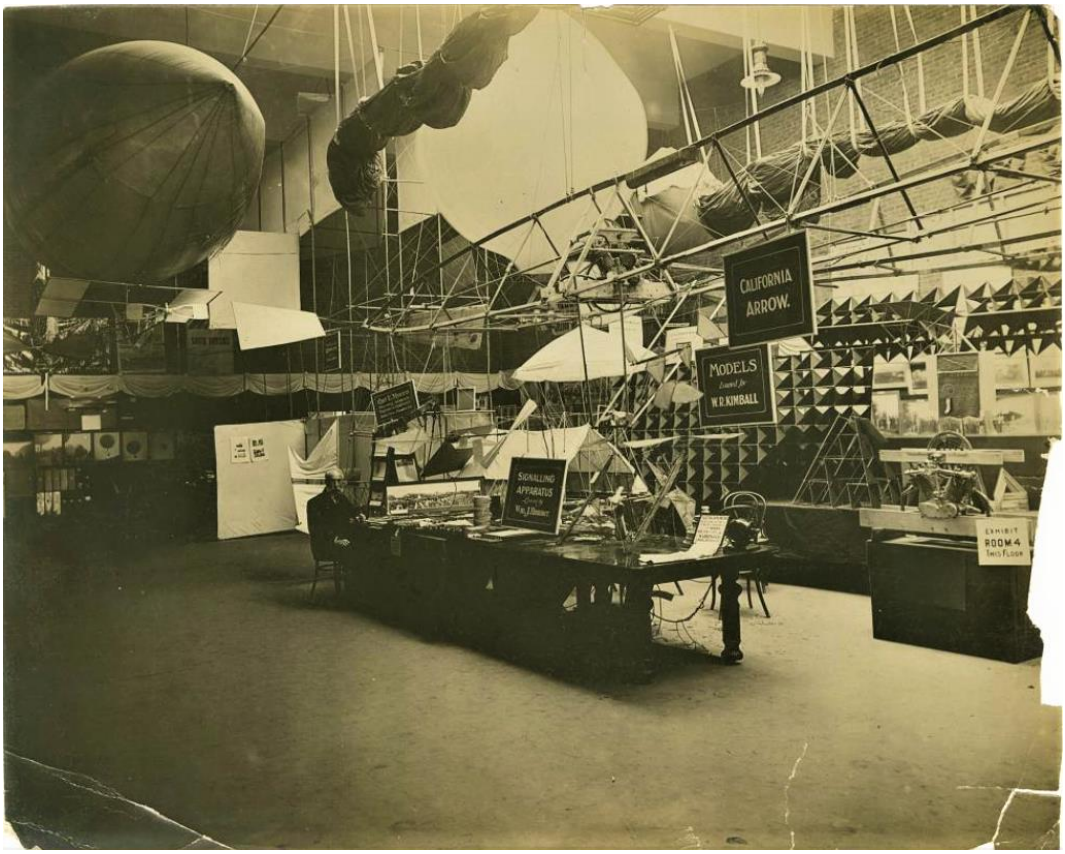
View No. 10: Airship and Spalding Patent Models Notes: Patent models on display, left to right: unidentified airship; R. J. Spalding Flying Machine, human-powered ornithopter design by Reuben James Spalding, patent no. 398,984, patented March 5, 1889.

View No. 11: Northeast corner from center Notes: The Lilienthal (Otto) 1894 Glider can be seen hanging on the left and a display of photographs loaned by William J. Hammer (bottom row) can be seen in the background. At right foreground is the Wright Brothers 1903 engine (4- cylinder inline).

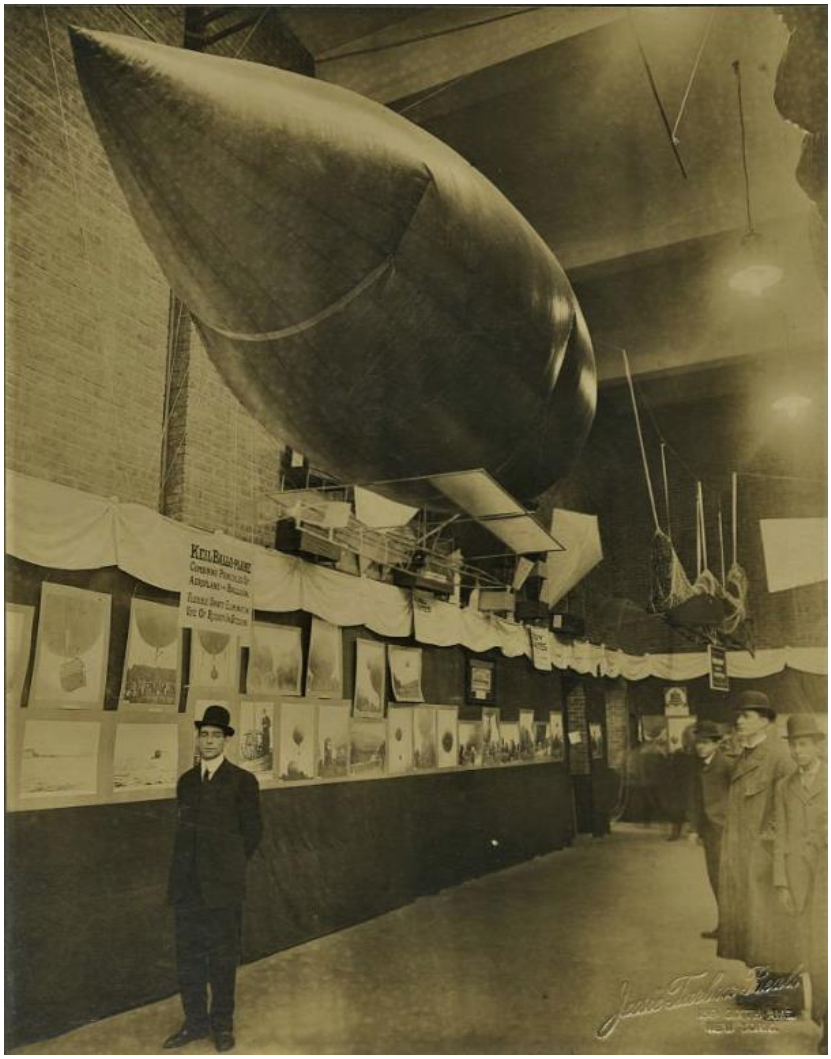


View No. 12: Herring 1902 Gasoline Biplane Model Notes: Close-up view, from below, of Augustus M. Herring's 1902 Gasoline Biplane Model. Sign suspended below the glider reads: "HERRING, DEC. 1902. This model has made more 1906 Automobile and Aero Clubs of America Joint Show Photographs NASM.XXXX.0902 Page 7 of 7 than 30 flights upward of a mile in length, the longest flight 15 miles failed only by the fuel supply. The carrying capacity is sufficient to keep the model in flight for upwards of 200 miles. The driving power is a Gasoline engine Wt. 2 lbs. Weight of entire model 7 lbs. Power consumed in flight, .07 H.P. Maximum power of engine, .51 H.P."

View No. 13: Looking south from north end Notes: Exhibit items from A. Leo Stevens are seen at floor level in foreground (ballon basket and engine); overhead are the Langley Quarter-scale Aerodrome (left) and Langley Aerodrome Number 5 (right). The Baldwin and SantosDumont airships are seen end-on at center. [Ghostly images of men moving about the room during the long exposure required to make this photograph are particularly visible at left.]



View No. 7: West wall from northwest corner (William J. Hammer photography display) Notes: A wall of photographs from the collection of William J. Hammer (bottom row) and others; an Alexander Graham Bell tetrahedral kite design is seen suspended at far left background.

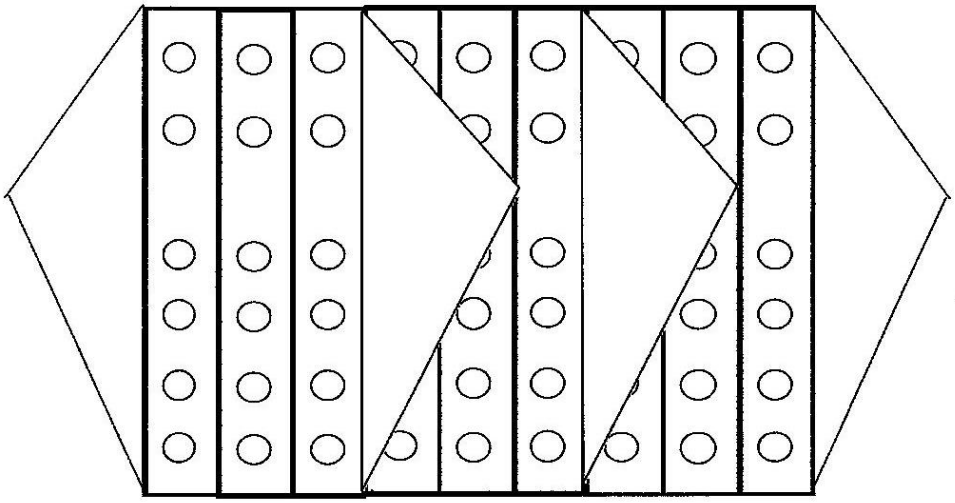


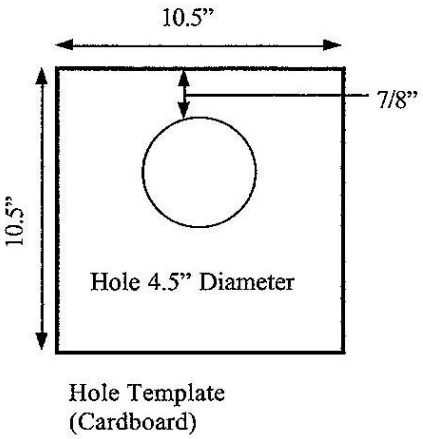
View No. 15: Southeast corner from center of east wall (Kiel Ballo-plane) Notes: Three-quarter left front view from below of the Keil Balloplane, an electric powered airship designed by W. M. Keil of Tuxedo Park, New York.

FLUTED SLED – JOHN BARKER

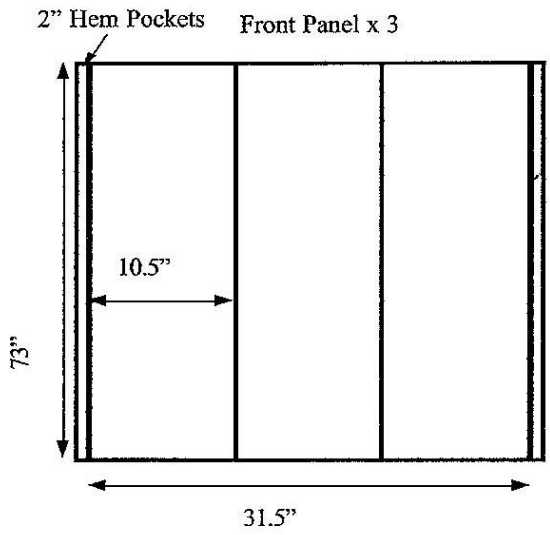
First published in 'The Kiteflier' – Newsletter of The Kite Society of Great Britain.

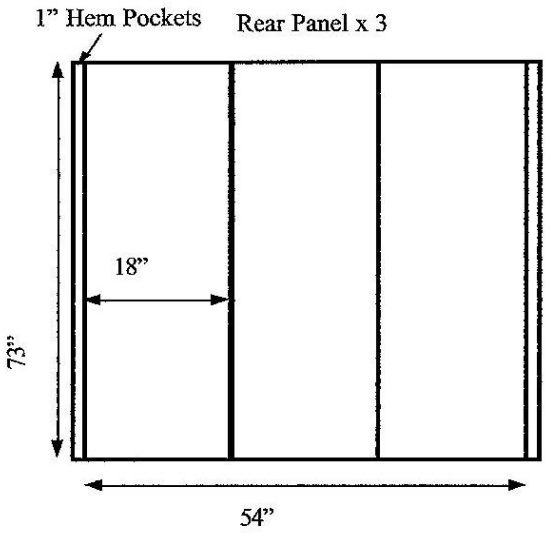
I was first put onto this Helen Bushell Sled by Vi Weeks who told me that the plan was in Margaret Gregers book "More Kites For Everyone". Margaret, by the way, turned the original kite into a double sled. Vi said that in the size given by Margaret 40" tall, the flute was quite a good Fauna lifter, and could probably be scaled up. By writing to Capt Dick Wightman of Rainbear fame I discovered that he had done just that, in a variety of ways, I.e. very narrow or wide flutes and the ability to add or subtract panels quite easily.

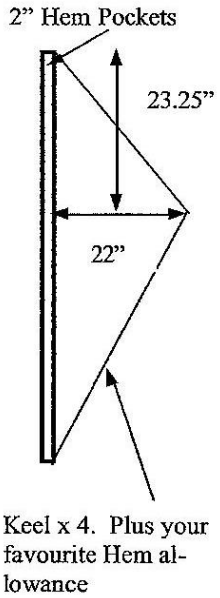




Hole Template
(Cardboard)







Keel x 4. Plus your favourite Hem allowance

The dimensions given are basically Capt Dicks, but I increased the width of the rear flutes to 18". The 2" hems on the front panels were used to create the longeron sleeves, the longerons themselves are via 1/2" or 12mm dowel tensioned with string. The outer bridles are a 30ft loop and the inners are 28.5ft approx. My bridle is 500lb line, but as my kite construction is of the 4lb hammer and brick bolster school this is OTT. This kite seems to like a fair George Raft as at Pompey '94, and it pulls like a train. Those of you who are eagle eyed will see that I've drawn the hole template upside down (Wally) the dimensions are correct though. My mod? When I did a 40" version, I noticed strain on the holes in line with the keel points, so on the biggy I deleted one row of holes so it now has only 54.

John Barker

MKFEXTRA
MIDLANDS KITE FLIERS NEWS
29 BRADBURY ROAD, SOLIHULL, WEST MIDLANDS, B92 8AE.

****
* DON'S DOUBLE SLED *
* KITE TRAIN *
****

Over the past few years I've tried flying sleds in all sorts of combinations: side by side, directly attached to each other, attached by 1 string /2 strings/4 strings and so on. This latest train seems to have overcome most, if not all, the problems encountered with the previous configurations.

The modifications are :

a) Central keel which is deeper than side keels, and

b) Tapering outer keels towards the bottom of the kite.

I had used both on double sleds at different times, and each had improved the kite's resistance to collapse, and its ability to reinflate itself if it did collapse. This time the two were used together to see what the net effect would be. The results were very encouraging.

Using the one metre size, I decided to try them out in the most turbulent conditions I could find. This turned out to be at the foot of Milford Hills (Cannock Chase) with trees on two sides and the wind varying between light and fresh with strong gusts. As the surroundings caused the wind to hit the kites suddenly from different directions, one or two kites would collapse but they reopened as soon as the side wind had gone.

DOUBLE SLED KITE TRAIN

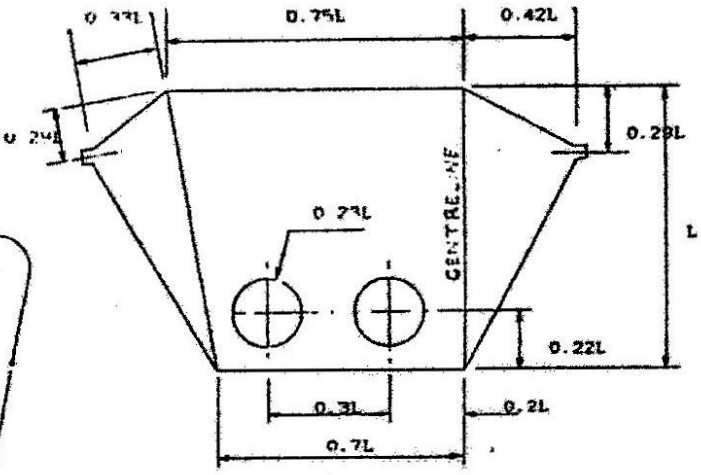
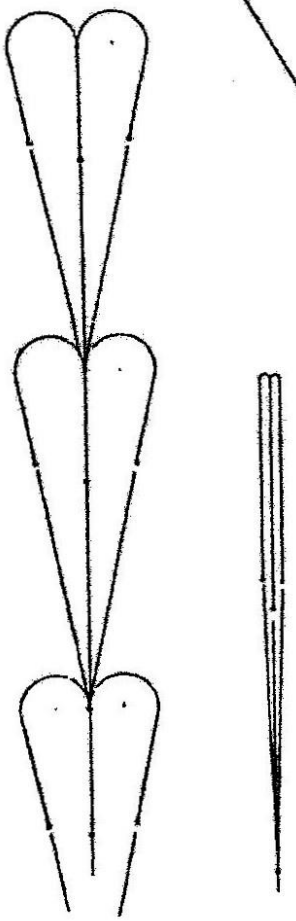


Fig.1



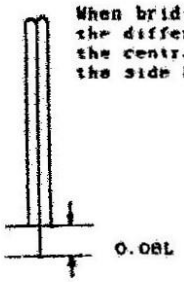


Fig.2

For a size of L = 30cm, the side bridles can be of button thread, and can be sewn on to the main line.

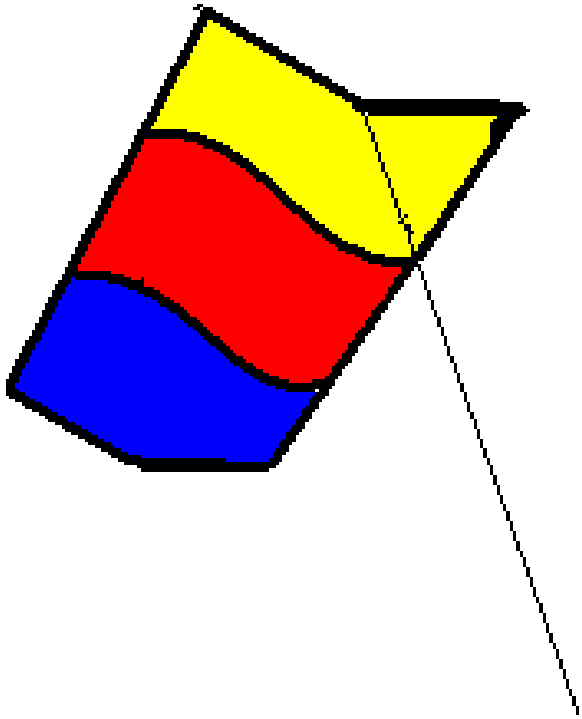
Fig.3

After flying this train in these conditions for just over an hour, the top kite ripped away from its bridle. Having wrestled with the pull of these things for what seemed an age, I wasn't sorry to have an excuse to wind them in.

This train flew so well in such demanding conditions, I feel I can recommend them to anyone.

Don Eccleston
Chairman, Midlands Kite Fliers

March 1988



Edo Without Bridles Text and drawings Nicola Lupoli Original project by Eiji Ohashi Presentation

Those who love kites cannot fail to be fascinated by the beauty of Japanese kites. Objects full of charm and history linked to a millenary culture. Among these, a particular mention deserves the Edo, rectangular-shaped kites, with a complex frame formed by numerous sticks, tensioned to give it that particular curved shape from which a bundle of very long bridles starts.

The writer is no exception. For a long time I had the idea of building an Edo, but the complexity of the project and, above all, of the bridle, have always made me give up.
Some time ago I came across an old issue of Kitelines (n.3, vol.12, 1997) in which an article was published that illustrated the construction technique of No Bridle Kites (kites without bridles) by Eiji Ohashi, a Japanese kite player famous all over the world for his kite trains
The article illustrated the technique for building the best known forms of Japanese kites (rokkaku, sode, suruga, tametome) and the possibility of making them fly without the bridle, attaching the restraint cable directly to the top of the kite.
The same article described in detail the construction of a 6 square meter No Bridle Edo (Edo without bridle). I built one of these kites. The kite flew during the last edition of the Vulandra festival arousing the curiosity of many kite flyers.
Therefore I decided to publish this project with my construction solutions which are slightly different from those published on Kitelines.

List of materials

6 m2 of 42 gr spinnaker
3 hollow carbon sticks 10 mm x 100 cm.
4 hollow fiberglass ribs 8 mm. x 120 cm.
2 hollow carbon sticks 6 mm x 100 cm.
3 brass joints inside diameter 10 mm.
2 brass joints 8 mm internal diameter.
1 brass joint 6 mm internal diameter.
Dacron for the reinforcements
Rubber tip cover for the splints Dacron
thread for tensioning the splints

The project

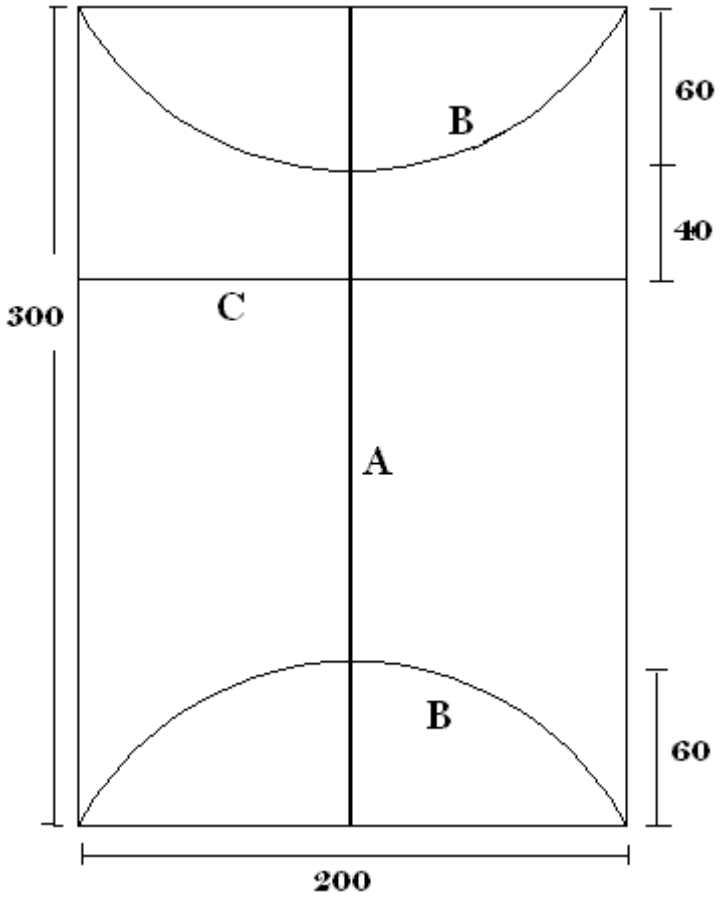


Fig. 1, measurements in centimeters

Figure 1 shows all the measurements for the Edo sail. For the construction I used a 42gr spinnaker. sqm. The letters indicate the splint which is illustrated by the table below. Since the main differences are precisely in the splinting, I also report the measurements of the Kitelines project.

Splint	Edo Volere Volare	Edo Kitelines
TO	10 mm hollow carbon. x 300 cm.	10 mm hollow carbon. x 300 cm
B.	Hollow glass fiber 8 mm. x 240 cm.	8 mm hollow carbon. x 270 cm.
C *	Hollow carbon 6 mm x 200 cm	Hollow carbon 8 mm x 200 cm

* C batten is not always necessary, it is only used in light wind conditions.
The mounted battens will be tensioned by tie rods, to give the kite a dihedral.

Notes on the splint

The splint A is divided into three pieces of 100 cm. joined with brass joints.
The slats B are the ones that have given the most problems during construction. Initially following the indication of the project I used 8 carbon using two 135 cm battens. jointed in the center with a brass tube. The cue was too stiff and virtually impossible to flex as required by the design. Furthermore, checking the CAD drawing it was impossible that a 270 cm splint. crossed the spar at 60 cm .; the curve was much deeper (about 80 cm.).
Doing some calculations, the right size was 240 cm., But even in this case the 8 carbon rod did not flex. For the first few flights I replaced the 8mm splint with a 6mm carbon splint. always 240 cm, divided into three pieces joined with brass tubes. In this case the 6mm carbon was not stiff enough to hold the sail taut.
Last solution to replace the 8 mm carbon. with a 8 mm fiberglass rib by 240 cm. and everything went smoothly. The batten is easily assembled (they are two 120cm pieces joined with the usual brass tube) and optimally holds the tension of the sail and ... it costs even less!

Building the kite

After making the sail with the design of your choice, it is necessary to hem the perimeter of the sail.
The pockets for the battens illustrated in fig. 2 and 3, respectively for battens B and for battens C.

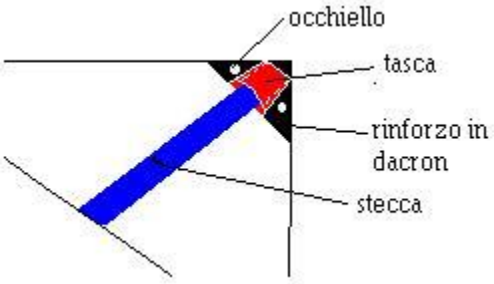


fig 2

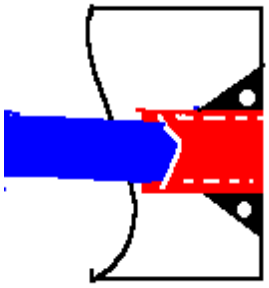


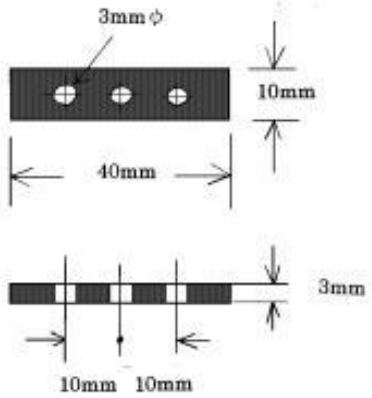
fig. 3

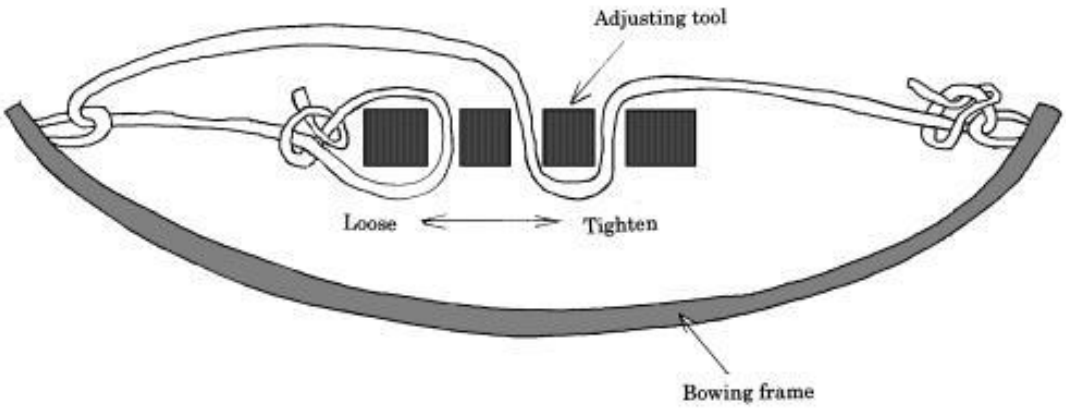
Proceed as follows: for each pocket cut two triangles of dacron that will be sewn on both sides of the sail, then take a piece of twine, fold it several times and sew it on the dacron reinforcement to form the pocket (in red in the figure). On the dacron reinforcement make two holes in the sides of the pocket and with an eyelet machine, put two metal eyelets. From the holes will pass the wires that put the slats in tension.
For batten A the pockets are constructed in the same way, but it is not necessary to make the eyelets. For the pocket at the top of the kite between the two dacron reinforcements it is necessary to sew a buttonhole in which a ring will be placed that will act as an attachment point for the retaining cable.
I think there may also be other systems for the realization of the pockets, if anyone has other ideas, please report them to me and I will gladly integrate the project.

Assembly and flight of the kite

To tension the battens

I used a system illustrated in a site dedicated to traditional Edo constructions. The very simple system is illustrated in the figure below:





In our Edo you have to pass the cable through the eyelets and mount it as shown in the figure. By moving the regulator to the right or left we can easily vary the curve of the slats.
At the crossing points of the battens with the side member A I have sewn a small reinforcement of dacron where strips of folded nylon have been sewn, in order to tie the two battens together. It is very important

that especially the B battens remain stationary when you put them in tension otherwise the sail will not be sufficiently taut.

The two photos show the detail of the tension breaker at the end of the assembly.
The kite flies great in different wind conditions. The particular attachment of the retaining cable allows the kite to always have the right angle with respect to the wind, thus tolerating even the conditions of gusty wind. Furthermore, this Edo, despite its size, has less traction than one of the same size but bridled in a traditional way.
With the right wind conditions the kite will launch easily as if floating on air. In weaker wind conditions it is necessary to make a long launch asking for the collaboration of a flight partner who will give you the possibility to unroll about 20m. of cable.
As you can see on Ohashi's website the kite can be easily assembled on the train and with the appropriate modifications it can be easily enlarged or reduced in size.

A photo of my Edo Senza Briglie taken in Ferrara by Roberto Monti
Good construction and good wind

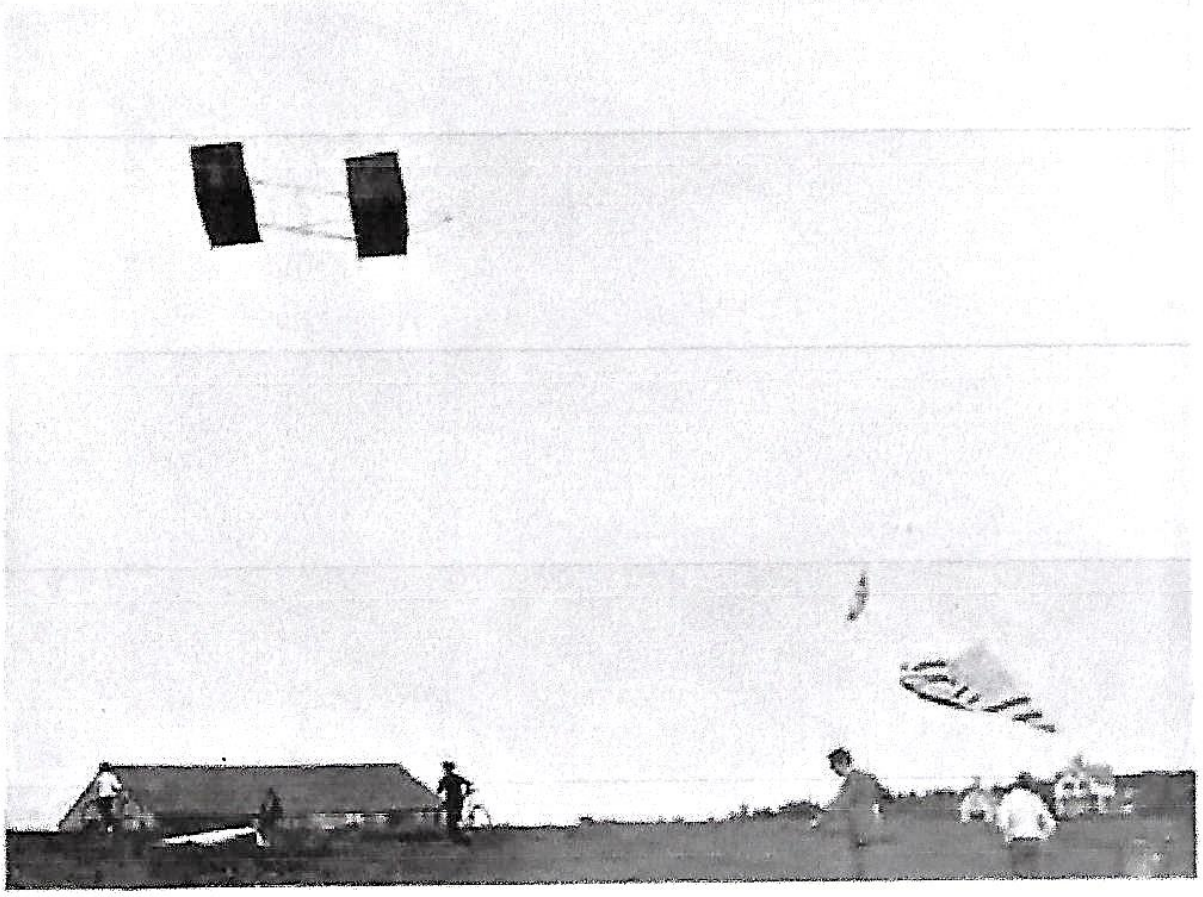
WORK ON THE GREAT DIAMOND.

By Charles H. Lamson.

Having an interest of long standing in aerial navigation and also incidentally in kites, when the 1895 April number of the "American Engineer and Railroad Journal" came to hand, describing Mr. Hargrave's latest box or cellular kites, I determined to make one. This kite, with some modifications of my own invention, has been about the most successful of any I have flown this year. The dimensions of my kite were as follows: Length of each cell, fore and aft, 25 inches, which was the full width of the black cambric cloth used for a covering. A narrow hem strengthened the selvage edge. Breadth of each cell, 6 feet, depth, 2 feet, distance between the cells, 4 feet 4 inches, making the full outside dimensions of the kite 6 feet wide and 8 feet 6 inches in length. Material of frame, straight-grained American spruce. The dimensions of the two strips constituting the backbone were $\frac{7}{8}$ by $\frac{1}{2}$ inch. The cross-braces for the cells were made elliptical in section, sharp edges exposed to the wind. Size of section, $\frac{7}{8}$ by $\frac{3}{8}$ inch. The outer corner pieces were tapered from the centre, one inch, to a quarter inch at the points. These were attached to the braces at the required angle by hinges of thin sheet brass. The other ends of the braces were simply notched to press against the corner of the backbone. This method was quite satisfactory. The two under pairs of braces were made four inches shorter than the ones that braced the upper corners, so as to give the cells a slight dihedral angle when placed in position for flight. This seems to me to be of some advantage in preserving the lateral stability of the kite. The cell frames were so made as to give the under sides of the covering a concave surface of $\frac{5}{8}$ of

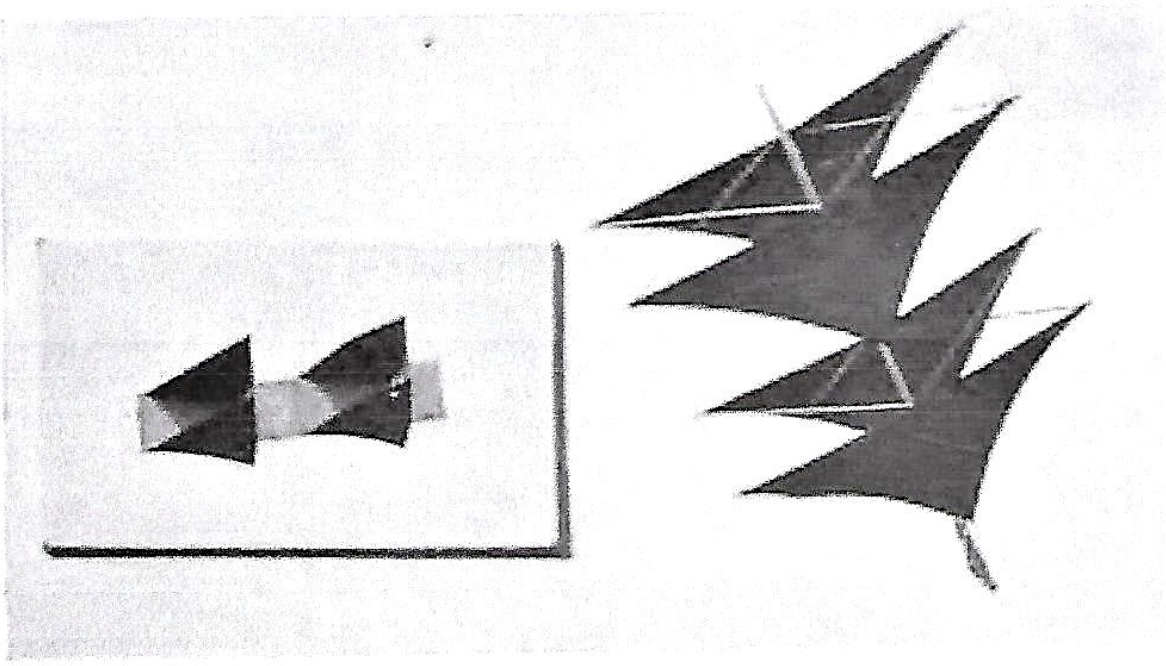
an inch in 25 inches. This kite having so much surface exposed to the wind, 50 square feet, was a very hard puller and uncomfortable to handle in a strong breeze. The writer therefore gave his attention to devising some arrangement whereby undue wind-pressure might be relieved and the kite flown with less danger of breaking away. To effect this purpose the two spars connecting the ends were cut near each cell and jointed so that the angle of the cells, in relation to each other and to the wind, could be changed at will. Two cords were used to limit and adjust this motion. The rear cell was weighted with a half pound of lead and the cells were rigidly fastened with both cells at an angle of about 10 degrees to the backbone. An extension or bowsprit, about 20 inches in length, was added to the lower side of the front cell, and the flying-string was then attached to the extreme point of same. This arrangement proved to be very successful, the pull immediately becoming so light that the cord could be held in the hand even in a high wind. Thus modified, the kite has never shown the slightest tendency to dive or to tip sidewise when flying, or when coming down after it has broken loose, always preserving an even keel and sailing away with a steady, majestic motion like a balloon, and landing softly on the ground without much injury to the kite. A neighbor and friend, Mr. Edward Rogers, becoming interested, was of material assistance in these experiments.

Our kite floating at a good angle with all our available string, we determined at a future trial to see if we could not let out a full mile. For this purpose I ordered from the Pawtucket Braided Line Company 6,000 ft. of No. 2 braided cotton fish-line, which was furnished me without a knot, on a spool. After one or two attempts with insufficient wind, we at last had a perfect day for the test, the wind blowing steadily about 15 miles an hour. The loose edges of the kite shaking badly in the wind, they were stiffened by tacking in 8 thin, light spruce strips which we had provided for the purpose. Then getting our reel into position and bracing the cells in line, everything being in readiness we allowed the kite to go up. It sailed away like a soaring bird, and rose as rapidly as we could let out the



LAMSON'S MODIFIED HARGRAVE KITE.

For working drawings, see Plate XV.



LAMSON'S MULTIPLANE FOLDING KITE.

The larger view shows the Kite being towed by a steamer. The smaller is a side view of the same Kite. Length, 12 feet; Width, 7 feet.

For working drawings, see Plate XVI.

string. The large black boxes of the kite were nearly out of sight when it reached its full limit. After the 6,000 ft. was all reeled off it flew at an angle of about 40 degrees, and probably would have carried up more line if we had possessed it. For added safety a short piece of strong, elastic cord was sandwiched in next the kite. This event was much enjoyed by a large number of spectators, who assisted in winding in the cord. At no time was the pull so strong that the cord could not be easily held in the hand. This experiment took place at Great Diamond Island in Portland harbor, and after drawing in the kite to within about 300 feet of the ground, in order to test its capacity for being towed, we took our apparatus aboard the steamer homeward bound, with the kite still flying in the air. Taking our position on the deck, abaft the smoke-stack, we succeeded in making the roundabout trip to the city without any trouble; the steamer meanwhile turning to all points of the compass in making stops at her landings. We were able to go ashore at the city before hauling down the kite and closing our day's sport.

THE MULTIPLANE FOLDING-KITE. — Finding most kites rather troublesome to pack for transportation, the writer has invented a kite with triangular sails, having the frame jointed so that the sails can be folded back against a central keel. The sails are also adjustable in angle. There are eight of these sails superposed in pairs, two at each end of the keel, or backbone. The arms present sharp edges to the wind. The keel is also jointed at the centre. By folding the sails back, disjointing the keel, and putting the two parts side by side, a large kite can be slipped into a paper or cloth bag, making an unobtrusive package, easily carried under the arm. It is only a minute's work to set the kite up again, and it rises readily from the ground in a fair breeze. Little or no running is necessary to get it up. One of these kites, made of different-colored materials in cloth or paper, presents a most striking appearance in the air.[1]

[1] This kite being so complicated, it is hardly to be expected that many amateurs will care to take the trouble to make one, and, believing that the cause of aviation would be

HINTS TO KITE-FLYERS.—To avoid disaster, kite-flyers should always select a large, level, clear space for their experiments, and away from any houses and trees, which create eddies and currents very dangerous to kites. The seashore with a sea-breeze is the ideal place. There are sometimes downward currents of air which may be avoided by a change of position, so, if there is any wind, do not be discouraged if you do not get the kite up the first time, but select a new spot and try again. Have good cord of ample strength. Beware of hard-twisted line. It winds up and kinks in damp weather. Sometimes the line may be doubled to advantage. It is well to lay out enough string so that the first start will bring the kite well above any elevations in the neighborhood, and into a steady current of air. Be careful to lay your string out exactly against the wind, not across it. If a kite shows a tendency to dive, let out quickly enough string to allow it to take a floating position, and then it may be raised again, or it will come down to the ground gently, when the cause of diving should be investigated. An elastic cord next the kite end of the string is often an advantage to prevent breakages in gusts. Court plaster is very convenient for making quick repairs to the kite fabric.

In the writer's experience, large kites are more satisfactory than small ones. Often a kite which would be very difficult to fly, of the toy size, gives no trouble when made above six or eight feet in diameter. It would seem that the larger surface bridges the small pulsations of the atmosphere, and the added weight tends also to stability. A toy boat tosses about on the least ripple of the water, while a larger vessel would ride steadily.

LILIENTHAL APPARATUS.—After a limited experience in trying one of his soaring-machines, Lilienthal's apparatus seems

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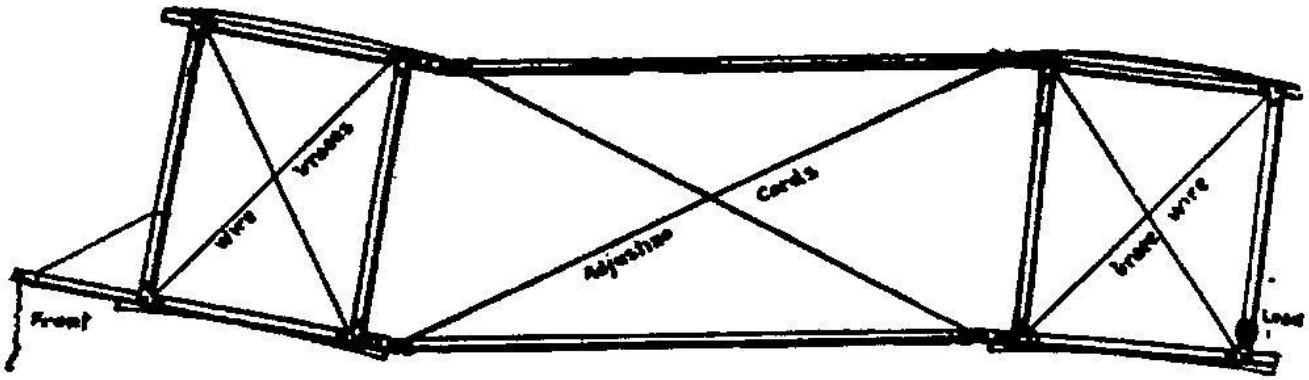
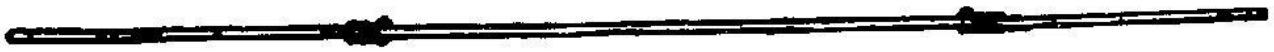
advanced by having them on sale, the writer has applied for a patent, and will have them made for the market for the summer of 1896. It will be called Lamson's Multiplane Kite. The writer has no objection to any experimenter making one of these kites for his own use, should he prefer to do so. Address C. H. Lamson, 203 Middle Street, Portland, Maine, U.S.A.

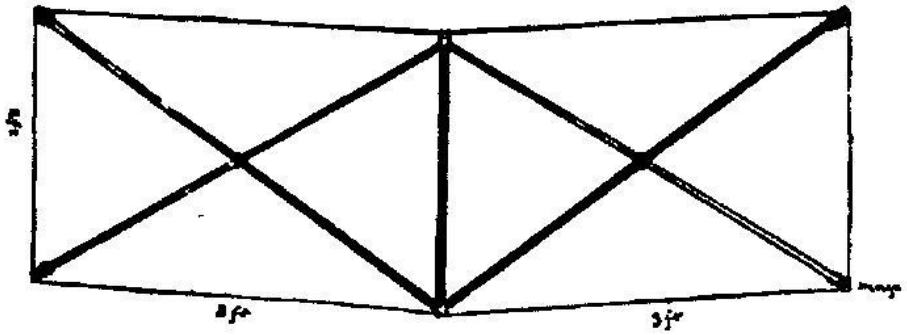


SIDE VIEW OF CENTRAL FRAME OR BACKBONE.

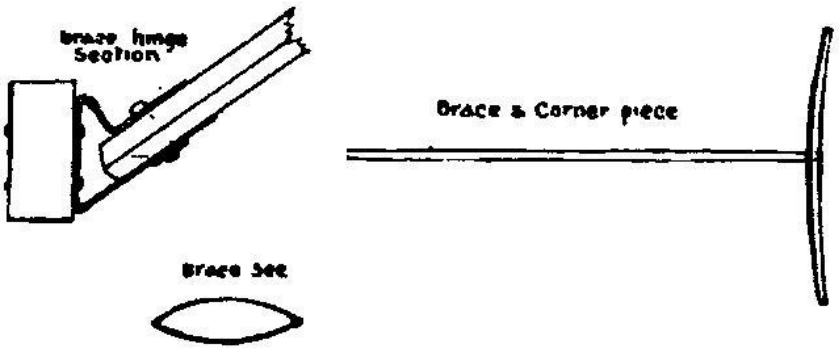


UNDER SIDE OF THE SAME.

CROSS SECTION

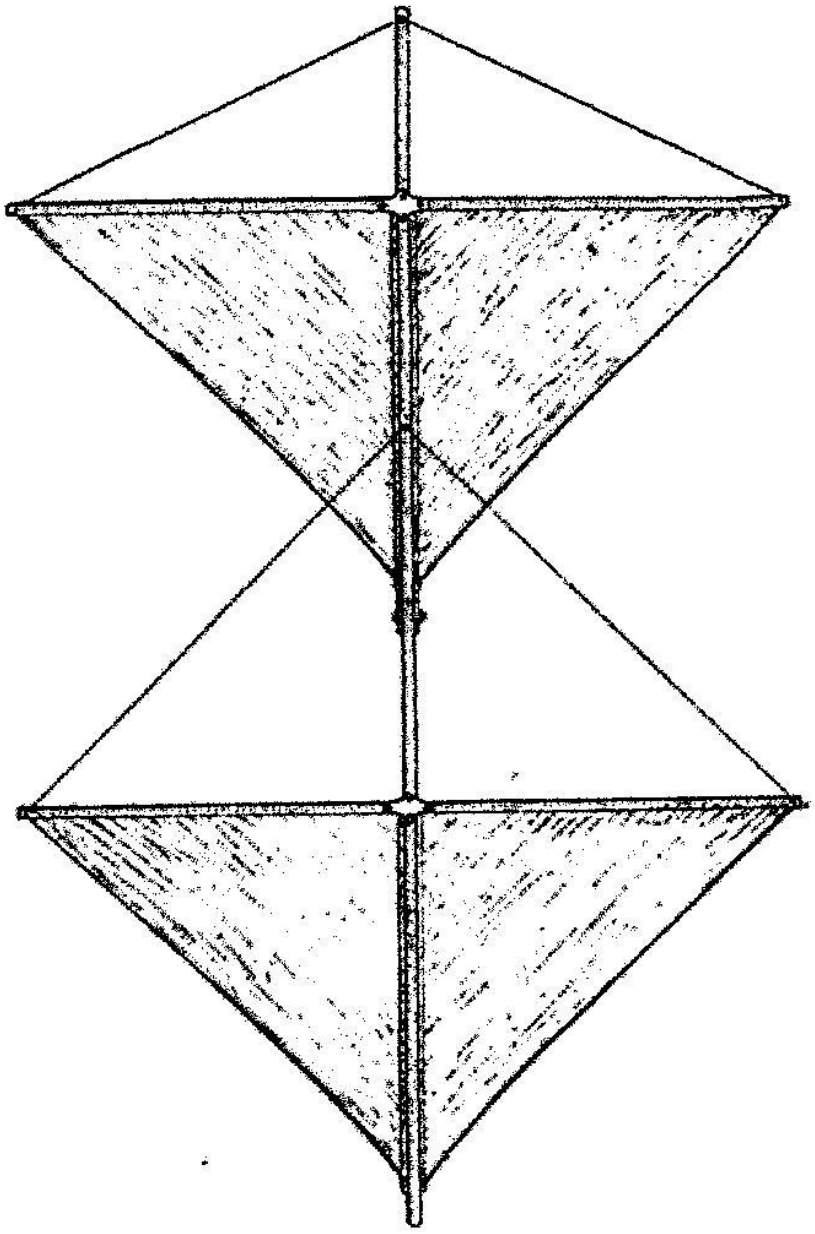


OF EACH CELL.

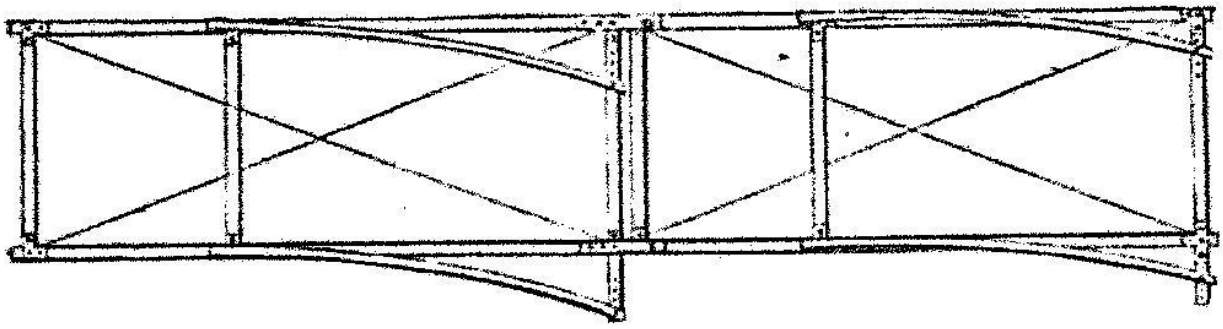


WORKING DRAWINGS OF LAMSON'S MODIFIED HARGRAVE KITE.

See perspective view in Plate XIV.



TOP OF KITE — OPENED.



BACKBONE — SIDE VIEW.

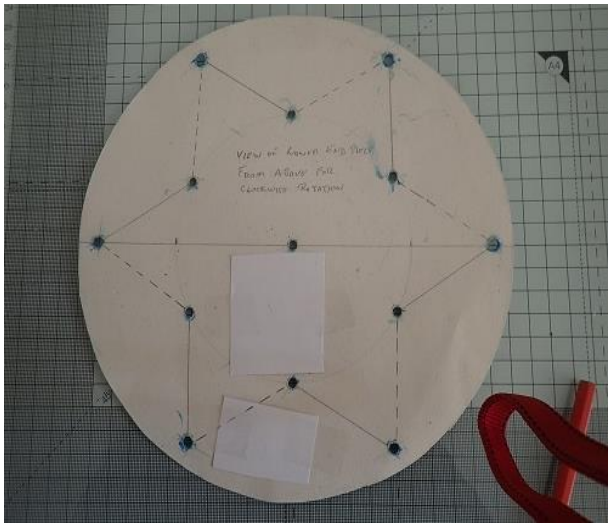
WORKING DRAWINGS OF LAMSON'S MULTIPLANE FOLDING KITE.

See perspective view in Plate XIV.

to the writer to have a number of serious defects.[1] First, it is too difficult of control for the average operator, when in the air. Second, it has no elastic rear edges to assist in forward propulsion. Third, the ribs and frame-work, as well as the body of the operator, present a too large and too rough surface to the air, impeding the necessary forward motion against the wind. (A bicycle rider soon learns by experience what a powerful effect even a moderate wind has in making his progress laborious.) In using the Lilienthal apparatus, the experimenter is soon assured of the ample supporting effect of the air, but the novice feels quite helpless to guide the machine. It is also very difficult to get a good send-off. As Lilienthal says, "Confidence and skill must be acquired by *much* practice."

[1] At the time of writing, perhaps Mr. Lamson had not seen Lilienthal's latest design. The next will probably be better, and so on. *Sic itur ad astra.* — *Ed.*

Vertical rotating lantern

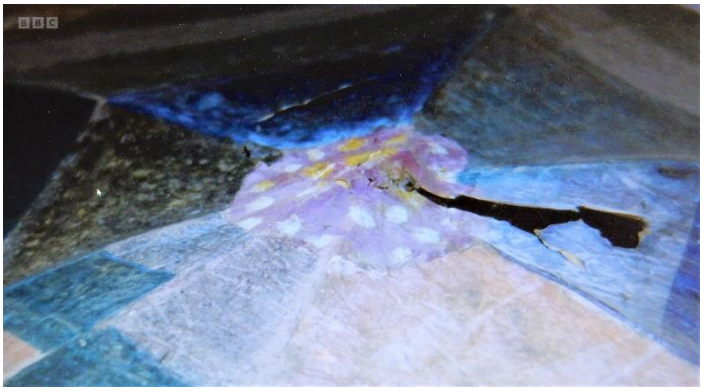


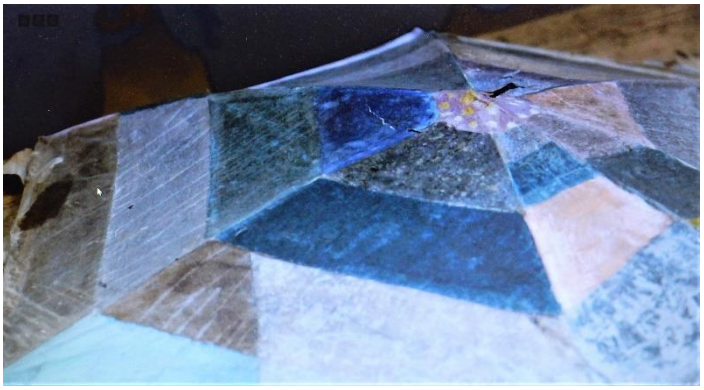
Template

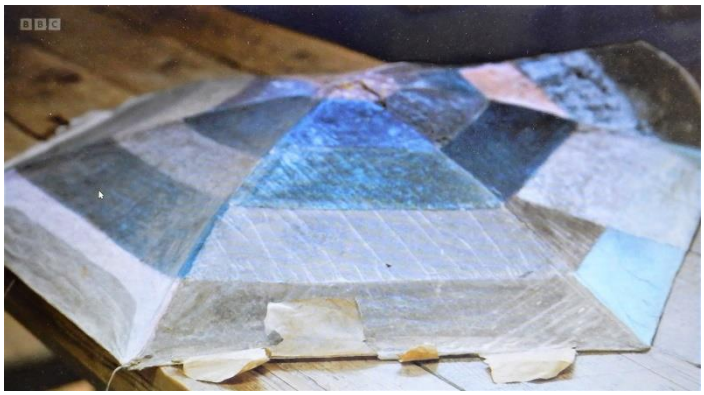
Vertical rotating lantern

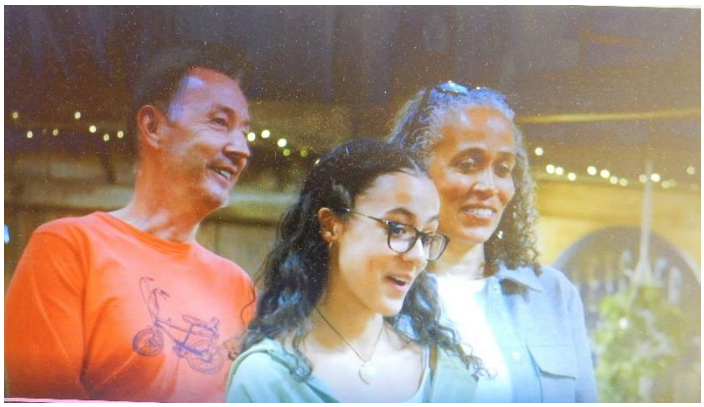
The lantern was seen a few years ago but have only recently been able to work on it to produce several which generated some interest and was asked to provide some information regarding the build.
The assembly comprises of top and bottom horizontal discs, connected by six vertical vanes orientated to catch the wind causing the lantern to spin, when suspended by a bridle and swivel. On the underside are some beads, attached using ribbon, to provide ballast to maintain a vertical attitude.
See pictures above of the lantern and the template, that was used to mark the positions of the vanes with the solid lines showing the positions looking down on the lower disc from the centre of the lantern, the dotted lines show the positions looking up to the top disc to give a clockwise rotation when looking from above. It may also be used to make lanterns with anticlockwise rotation, as in the pictures, by using the dotted lines for the lower disc. The lower disc also had a Velcro disc attached to the centre of the inner side of the lower disc to attach an LED light source. Two lengths of ribbon are sewn to the under-side to attach the ballast beads.
Our template is 220mm in diameter but the dimensions can be adjusted to suit your own preferences.
Main components:
Upper and lower discs – were cut from ripstop nylon using the template shown and bias binding used to form a sleeve at the circumference with an overlap to allow the fitting of a wire tensioner. Prior to attaching the bias binding the line of stitches was sewn a few millimetres from the edge of the disc to stabilise it when sewing the bias binding. To tension the discs we used an appropriate length of 0.9mm steel wire with circular eyes formed at the ends for H&S and to stop the raw ends from breaking through the ripstop. They also proved to be useful as they were sewn in to secure the position of the ends to maintain the tension.
Vanes – in our lantern the edges of the van were sewn using a rollover hem attachment for our sewing machine, a binding could also be used to protect the edge. The length of the vane was obtained by dividing the width of a roll of ripstop, 1500mm, into six section which also provided an allowance to anchor the vanes and also material for turning the raw edges underneath to give a better finish. Obviously, it is important to have a consistent distance between the upper and lower discs.
Ballast – the lantern we viewed had some large wooden beads used for ballast but for economy we used smaller 14mm wooden beads to do the same job with different sizes and colours providing decoration. The beads need to attached securely using the ribbon that was previously attached.
Bridle – a three-legged bridle was attached to a ball bearing swivel, at least size a number 5 as smaller ones did not prove to be suitable.
LED light source – the ones we used were submersible floral lights from ebay. Self-adhesive Velcro is used to attach the light source to the lantern.
The lantern is popular in Germany and can make an eye-catching display.
We would like to thank Mike P for showing us a lantern which has allowed us to create the one shown here.
Am aware of a couple vertical wind turbines used for electricity generation in locations that are not suitable for the fan type turbines.
Richard and Alison Stephens


THE
REPAIR
SHOP







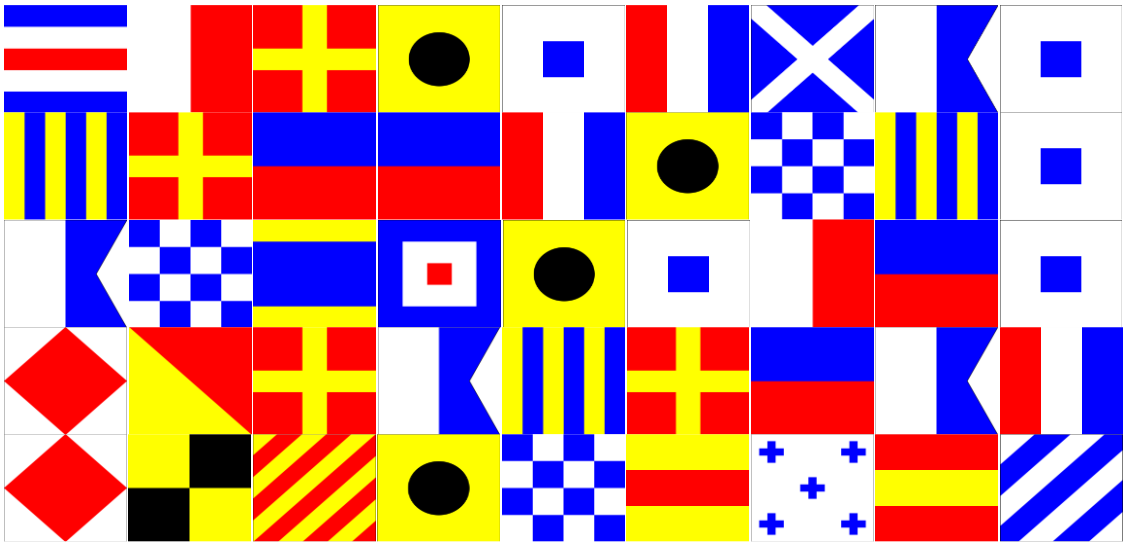


REPAIR SHOP

Series 10 Episode 14

Wednesday 5th October 2022

Jay Blades and the team restore a handmade paper kite with full Caribbean influences



CHRISTMAS GREETINGS AND WISHES FOR A GREAT FLY IN 2023