

The Frequent Flyer

The Monthly Newsletter of Caesar Creek Soaring Club

November 2003

Uncommon History: A Wright Brothers Primer, Part 2

By Thomas Turner

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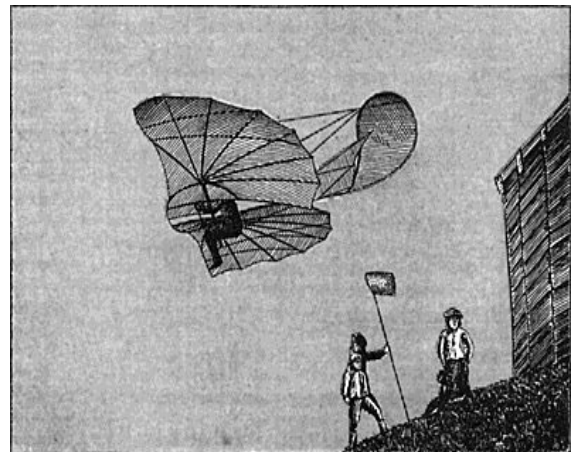
Editor's note: This is the second of a three-part article reprinted from ipilot.com

We all know the story of how two bicycle-shop brothers from Ohio built and flew the first successful heavier-than-air aircraft from the dunes of North Carolina on December 17, 1903. From our vantage point of a century later, though, many of us fail to appreciate the meticulous work that led to the dawn of aviation ... much of it done not by the Wrights themselves, but those who had come before. Last month we learned just a bit about Sir George Caley, William Sanford Henson, Felix Du Temple and more. This week it's on to more familiar names...

GLIDING 101: OTTO LILIENTHAL

Aware that the weight-to-power ratio of existing engines was prohibiting heavier-than-air flight but still wanting to further development of airplanes, several scientific experimenters turned their attention to gliding flight.

The glider pilots took aeronautical theory and turned it into practical flying experience, most notably developing the engineering of light, sturdy airframes, and the rudiments of aircraft control that were vital to future powered flight.



Between 1866 and 1889 German Otto Lilienthal tested numerous cambered surfaces with a Caley-like (see last month's article) rotating-arm testing device that measured up to 23 feet long. His studies of wing camber and the resulting lift were flawed, however, leading him to believe that powered flight would be forever impossible.

Yet Lilienthal went on to study ornithopter (human-powered, birdlike flapping wing) design, and published one of the classics on early aerodynamics, *Bird Flight as the Basis of Aviation*, in 1889. He

followed with a highly successful series of gliding flights, becoming in 1891 the first person to successfully launch, fly and land safely a heavier-than air aircraft.

Lilienthal made over 2000 gliding flights between 1891 and 1896, observed by many and well documented by the emerging photography of the day. His foot-launched gliders were lightweight, strong and very stable. Control was obtained through fixed rudder surfaces, and "weight shift" technique, similar to today's hang gliders.

Lilienthal was able to make glides for up to 1150 feet from his starting point. Aerodynamics, however, were still far from completely understood. Otto Lilienthal stalled his glider on August 9, 1896, suffering a broken spine in the resulting crash. He died the next day, uttering his famous last words: "Sacrifices must be made." You are the beneficiary of those sacrifices.

Upcoming Events!!

Invention of the Towplane Party!

Wednesday, December 17, 2003

Time: After flying

Annual Dinner

January 17, 2004

Kings Island Resort

Caesar Creek Soaring Club

P.O. Box 918

Waynesville, Ohio 45068

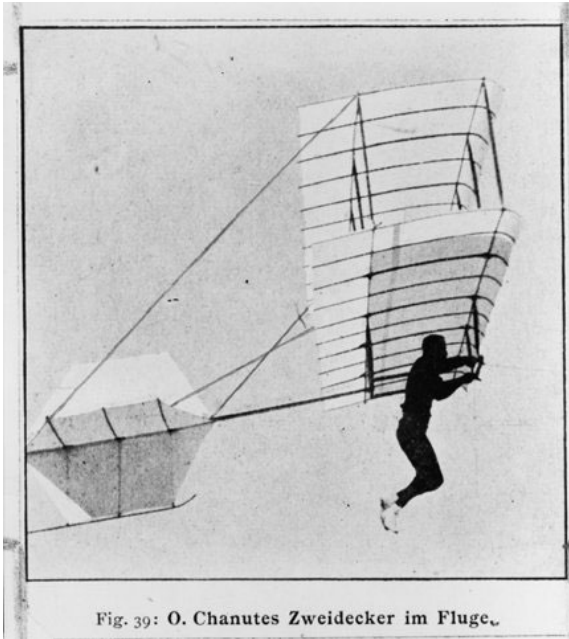
(513)932-7627

See our website at:

<http://www.wrightdesigns.com/ccsc>

AVIATION'S MENTOR -- OCTAVE CHANUTE

Naturalized American Octave Chanute had already earned engineering fame by designing the first railroad bridge across the Missouri River, at Kansas City, Missouri, before turning his attention to the dream of flight.



During an 1875 tour of Europe he discovered the great progress in model airplane flight being made there, writing about it in American engineering journals and in 1894 his classic *Progress in Flying Machines*, the first single volume to document aeronautical research. Using analytic methods he learned as an engineer, he then set out to advance the art himself. At age 54 he retired from engineering and began flying experiments full-time.

Flying Lilienthal-style gliders in the 1890s, he determined that weight-shift was not the answer to aircraft control. Instead, he sought what he called "automatic stability." Chanute's 1897 glider *Katydid* employed numerous wings that could be moved and adjusted to facilitate experimentation with stability. In *Katydid* Chanute completed more than 200 successful flights from the dunes of Lake Michigan.

Teaming with an engineer by the name of Herring and harking back to his bridge-building past, Chanute then built and flew trussed biplane designs, cross-braced with wires to relieve stress loads. His biplane gliders were the direct precursors to the Wright Brothers' first aircraft. Although Chanute sought "automatic stability" for aircraft control, he never found it. All his gliders were controlled by Lilienthal-style weight-shift techniques.

Perhaps more importantly, Chanute mentored others trying to enter the world of flight. He helped expatriate Russian William Paul Butusov design the *Albatros*, which reportedly glided at Butusov's home in Kentucky around 1898. Chanute's co-designer Herring meanwhile affixed a small engine driving a tractor and pusher propellers to his glider, reportedly making short, powered flights, with little control, in 1897.

More successful was Chanute disciple William Avery's 80 gliding demonstrations at the St. Louis Exposition in 1904. For these flights, a winch attached to a rolling dolly would haul Avery and his glider until they were high enough to release and glide -- similar to later sailplane launching techniques and flat land hang-glider launches.

Most notably, however, Chanute corresponded with two new faces on the gliding scene, brothers Wilbur and Orville Wright of Dayton, Ohio.

Rightly so, this year we celebrate the centennial of the Wright Brothers' crowning achievement, heavier-than-air flight. As the Wrights themselves wrote, though, they were not working in an information vacuum. Instead, they (like us) were the recipients of knowledge that came from the minds, and lives, of those who had come before.

Next month: More powered experiments; and the Wrights learn to fly

By the time the Wrights had concluded their 1902 gliding experiments at Kittyhawk, they had demonstrated effective solutions to most of the problems encountered in their earlier gliders and by Lilienthal. Only one critical problem remained to be solved. How would they ever be able to gain enough altitude to initiate a cross-country soaring flight? This was an especially difficult problem for the Wrights, as the terrain surrounding Dayton offered little opportunity to utilize ridge lift such as Lilienthal had employed, and winds similar to the sustained sea breezes against Kill Devil Hill were also out of the question.

After much discussion and debate, in their typical manner, the solution they developed was to modify their elegant machine by equipping it with a noisy, smoky, whirly thing and thereby use it as an air going locomotive to haul the glider to sufficient altitude to begin soaring. (There is no evidence that the Wrights ever considered the possibility of employing an engine driven winch to launch their glider. They apparently knew that winch launching is an impractical solution to employ in Ohio. Although HOW they knew this is unclear. Perhaps it is just natural law.)

Unfortunately for the Wrights, the installation of noisy, smoky whirly things in flying machines led to so many other technical problems that it required many more years of development before the air going locomotive was shown to be useful for launching gliders. (In fairness, in the intervening years, many beneficial uses, particularly in commerce and war, were found for the air going locomotive, but they are of little consequence to us. Although it is rumored that some members of our club will undertake to drive them for pay.)

Consequently, Wilbur and Orville Wright, famous and accomplished glider pilots, do deserve recognition as the inventors of the modern towplane, through the design, construction and successful demonstration of their air going locomotive device, on 17 December, 1903.

We honor them for their service to mankind.

WHERE WOULD WE BE WITHOUT WILBUR AND ORVILLE?

Please Join Us to Celebrate
The 100th Anniversary of the Invention of the Towplane

Caesar Creek Gliderport
Wednesday 17 December 2003

Flying as Late in the Day as We Can

Dinner in the Evening
(Gliderport Attire)

Please Bring a Dish to Share
The Club Will Provide Meats and Beverages

MINUTES OF SSD BOARD MEETING
October 18, 2003

The meeting was called to order by president Lubon at 10:01 AM.
Those present: John Lubon, Dieter Schmidt, Bob Root, Jim Hurst and Bob Gaerttner
Absent: Pat DeNaples, Bill Maxwell, Norb Maurer and Aaron Sorrell

Minutes of the previous meeting were reviewed and approved. The Financial report was also reviewed and approved.

The board agreed to redeem 10 shares of SSD stock at the request of John Antrim. The board also agreed to redeem 12 shares of stock owned by Mark Hosterman who is leaving the club.

No 1-26E has been discovered for sale.

Bob Root reported that Bill Vickland, one our 1-26 meet contestants, was interested in our damaged 2-33 wings. We inventoried our damaged parts and found four wings and two fuselages and a front half of a fuselage. We will offer these for sale for \$50 each piece.

The board agreed that we should invest \$30,000 of our excess cash. We will look into a one-year Treasury Bill or something similar.

The Piedmont Soaring Club indicated an interest in our obsolete flail mower, which is no longer in use. We will tell them to make us an offer.

The next meeting is scheduled for November 15, 2003.

Jim Hurst
Secretary, SSD



CCSC NEEDS YOU!

The elections for the Board of Directors will be held in November. We need everyone to return his or her ballot by Tuesday, November 11, 2003.

CCSC Board Meeting Minutes / 6 September 2003

This meeting was called to order at 9:30 AM. Board members in attendance were Mike Karraker (President), Joe Jackson (VP), Greg Crook (Secretary), Jim Lowe (Treasurer), Dave Menchen (Operations), Bill Parr (Facilities), Dick Holzwarth (Social), Rolf Hegele (Maintenance) and Bob Root (SSD Liaison). Jim Price (PR) was absent. The minutes of the previous meeting and the treasurer's report were approved as read.

Old Business: Dick Holzwarth provided a report on the recent social activities. It was motioned and passed to schedule the Region 6 South contest in 2004 as a 7-day contest at a similar time period (late July, early June) as the 2005 national contest bid that we submitted. Rolf Hegele reported that 15H needs inspection and repair and 33Z has a new fuel tank installed. Sara Palmer expressed concern about accepting responsibility for accounts payable duties and it was agreed to review all of our accounting procedures this winter. Bob Root reported that Bill Maxwell is making repairs to the bush hog. Dave Menchen reported that he was not successful in his efforts to contact Airborne staff to discuss our operation safety issues or Rob Cluxton to discuss our tow pilot check out procedures and will continue those efforts next month. Bill Parr gave a report on our flight operation insurance issues and will look into increased coverage options. A clean-up day is scheduled for 18 October and it was decided that there should be no flying operations on that date. Bill Parr will prioritize the clean-up tasks and arrange for the supplies that may be necessary. The annual Oktoberfest party is scheduled for that evening. Mike Karaker reported that we do not have a purchase contract with Coke and that the Coke machine was recently restocked.

New Business: CCSC Board Member elections are scheduled for November and anyone interested in serving should contact one of the current board members to get their name on the ballot. Greg Crook will prepare and mail the ballots after the next board meeting. Nominations should be listed in the October newsletter with the annual meeting scheduled for 11 November. Several of the towropes that we received recently were found to be inferior and will be returned to Ridge Soaring for replacement. Buck Town recommended that we host FAA Safety Seminars for their benefit to the membership and as a recruiting tool. A decision to accept this recommendation was not made clear. New member packets are needed and it was not made clear who would produce those items. Several new member applications were reviewed and all of those applicants were accepted. The termination of Jeff Mesamar or Lauder was discussed and it was agreed that he should be refunded the amount due on his account. It was then motioned and passed to adjourn this meeting. Our next meeting will be held on October 4 at 9:30 AM.

Submitted by Greg Crook, CCSC Secretary, with assistance from Rolf Hegele.

Welcome new members!

Joe Webb
Liberty Township, OH

Mark Day
Springboro, OH

Joseph Collins
Cincinnati, OH



CCSC Board Meeting Minutes / 3 October 2003

This meeting was called to order at 9:30 AM. Board members in attendance were Mike Karraker (President), Joe Jackson (VP), Greg Crook (Secretary), Jim Lowe (Treasurer), Dave Menchen (Operations), Bill Parr (Facilities), Dick Holzwarth (Social), Rolf Hegele (Maintenance) and Bob Root (SSD Liaison). Jim Price (PR) was absent. The minutes of the previous meeting and the treasurer's report were approved as read.

Old Business: Greg Crook and Pat DeNaples agreed to prepare, print and mail the election ballots for the upcoming board member election. The deadline for nominations is 25 October. This date was selected so that the ballots can be prepared, sent and received by 11 November. There are 5 positions open and the current nominations are Jim Lowe, Rolf Hegele and Brian Stoops. Several insurance issues were discussed. The board agreed to not submit a claim for the damaged Grob canopy and instead pay for the repair with CCSC funds. It was also noted that contests and air shows are not covered under our current policy and therefore special coverage must be added for these events. CCSC currently pays about 18K annually for our aircraft insurance. Dave Menchon will contact Rob Cluxton to get the names of the individuals that have been approved as new CCSC tow pilots and will forward that information to Bill Parr so that they may be added to our insurance policy. The 18 October clean-up day activities were discussed and it was agreed that club-flying operations should be suspended on that date.

New Business: It was motioned and passed to give two guest ride certificates to the Adventures for Wish Kids in memory of Ed Lopez. It was motioned and passed to credit one half of the tow charge that was provided to Kirkbride and Schmidt on their return flight from Indianapolis. Rolf Hegele provided the aircraft maintenance report and reminded the board that all three Pawnee are due for major overhaul inspections next year at 8K each. Our safety review committee procedures and the previously approved requirement of liability insurance for private aircraft were discussed. And in that regard, Joe Jackson will create proposed UOP revisions that will attempt to clarify those issues and will provide those revisions for approval by this board. And if approved, those requirements and procedures will be presented to the general membership for approval. It was then motioned and passed to adjourn this meeting. Our next meeting will be held on October 4 at 9:30 AM.

Submitted by Greg Crook, CCSC Secretary

PLAN A PARTY AT CCSC

It's party season at CCSC and everyone can participate. There's no such thing as a bad party, although some are certainly better than others. So if you have an idea for party that might be a little different, or if you would just like to take charge and show off your party animal qualities contact Dick or Sandy Holzwarth at: (937) 885 4156.

Submissions for *The Frequent Flyer* should be sent to:

aaronsorrell@ameritech.net

- or -

Aaron Sorrell
128 McDaniel St.
Dayton, Ohio 45405
(937) 220-9026

Classifieds

For Sale:

1977 MacGregor 22' Venture sailboat with 5hp Evinrude. Sleeps 4. \$3250 Complete and ready to sail. Remember that glider pilots make natural sailors. Gene Wade 937-667-5619

For Sale:

One-fifth share of Big Wings, ASH-25E, including Cobra trailer, competition instruments, new winglets and 55-1 L/D. Contact Greg Crook at 513-494-1350 or email gregcrook@att.net.

For Sale:

Dutchman Travel Trailer, **Price Reduced to \$6500**, 1991, 30', \$8000 OBO. Currently on site at the CCSC campgrounds. Contact Greg at 513-494-1350 or greg.crook@att.net.

For Sale:

Security 150 parachute, chair-type. Also Raine Winter barograph, 10 km.
Contact Kent Sorrell 937-855-7135

For Sale:

1996 Innsbruck 30' travel trailer by Gulfstream Asking \$7,500. Located on site at CCSC campgrounds. Contact Joe or Kathy at 614 864-9852 or e-mail jmuth@infinet.com.

For Sale:

One-fifth share for one-eighth the price in a Russia AC-4.
Contact Pat De Naples 937-291-1466 or pat126@go-concepts.com

For Sale:

One share of Redwings SGS 1-26. Contact Stewart Trefzger at 513-561-5579 or e-mail at strefzger@worldnet.att.net

For Sale:

1/2 share in 6V, N178K, 1972 ASW-15. \$7500, contact Gil Stengel 513-233-2103 or gstengel@fuse.net

For Rent:

Sailplane trailer garage at CCSC. Contact Paul Siegel 513-561-6872 or psiegel@fuse.net

For Sale:

26' Kencraft 1966 Travel Trailer. Located at the glider port. \$1500.
Call Gloria Dalton at 704 394-0401 or e-mail gbdalton@juno.com.

Crew Schedule

Date	Crew Chief	Tow Pilots	Instructors	Ground Crew
1st Sat & 3/29	G. Daugherty	J. Armor T. Hudson	R. Hennig W. Miley	J. Beaupre, J. Chiles, A. Colvin, P. Nord, Dave Edwards, J. Lowe, A. Sorrell
1st Sun & 3/30	M. Karraker R. Carraway	M. Maurer N. Maurer D. Schmidt	A. Swanson	W. Van Breukelen, M. Jett, W. Schmid M. Munz, B.& B Towne, J. Miles, D. Rawson J. Sorrell, S. Tagariello, T..Lynch
2nd Sat & 5/31	R. Root D. Staarmann	R Anderson	J. Price J. Hurst M. Williams	J. Antrim, J. Biernacki, B. Connolly, D. Colvin, W. Detert, S. Trefzger, J. Benner, J. Inman
2nd Sun & 6/29	D. Menchen T. McDonald	L. Kirkbride F. Hawk T. Holloran	G. Wade T. Rudolf	R. Anderson, Ed Dorosz, M. & L. McKosky, K. Menchen, J. Muth, P. Pedersen, R.Sexton, M. Debeque, J. Smissaert, T. & G. McDonald, H Goebel, E. Tete
3rd Sat & 8/30	R. Hegele R. Griffiths	D. Green A. Widner	B. Gaerttner C. De Berry	B. Boesel, R. Weaver, D. Klenbanow E. Lopez, T. Bresser, P. Vintrup, D. Rivers
3rd Sun & 8/31	J. Morari B. Paar	B. Oagley	R. Eckels * B. Gabbard	S. Estell, K. Sorrell, J. Koons, M. Keller K. Robertson, S. Shields, T. Bonser R. Reinhart, J. Macnicol
4th Sat & 11/29	J. Miceli J. Murray	T. Bales G. Byars S. Day	J. Jackson ** T. Bales	T. Spillane, C. Lohre, H. Meyerrose, E. Saladin, B. Stoops, A. Dignan, D. Corni
4th Sun & 11/30	R. Holzwarth M. Statt	F. Paynter R. Scheper	J. Lubon	C. Burns, R. Cedar, G. Crook, B. Kish, J. Jordan, P. Lubon, G. Stengel, G. Berneir

* Designated Examiner

** Chief Instructor

**If you are not assigned to a crew and would like to be, contact Dave Menchen at
513-779-0821.**

**Former Floating Crew members should contact Dave Menchen
for crew credit information.**