

NSM



Special Issue
Journal of the
National Soaring Museum

1980

Vol. 4, Number 2

From the Editor

1980 was a big year for the community in that they celebrated the 50th anniversary of the 1st National Gliding Contest held in Elmira, NY in 1930. A 50th Anniversary Committee was formed which included members from the Harris Hill Soaring Corporation, the National Soaring Museum, and leaders, in the community. The committee's goal was to involve the community in the year long celebration and in the process inspire a sense of pride in the local area's continued involvement in the history of soaring over the years.

Acknowledgement with deep appreciation is extended to the following for their many efforts on behalf of this commemorative period.

50th Anniversary Committee

General Chairman Charles R. Miller
Vice Chairman William D. English
Honorary Chairman Edward A. Mooers

Executive Committee

Charles R. Miller	James Manning
William D. English	Paul Schweizer
George Douglas	Shirley Sliwa
Lyman Gridley	James Short
Donald Loftus	Edward Wronkoski

Steering Committee

Banquet	Dona Hotopp
Contest	James Short
Contest Activities	Lee Robbins
Facilities	J. Arthur Kieffer
Finance	Phillip Kelliher
Hospitality	O. Lawrence Creighton
	Barbara Frutchy
Housing	John Barbato
Insurance	Theodore Sprague
Law	Louis Mustico
Merchandising	Simine Short
Publicity	James Manning
Sponsors	Thomas Tranter



50th Anniversary Logo by Franklin Hurtt, long time soaring pilot and artistic advisor to the National Soaring Museum.

Education Endowment

The National Soaring Museum has created an Education Endowment program for the receipt of Memorial contributions. The fund is to perpetuate the knowledge of the beauty, sport, and science of motorless flight. An education focus was deemed appropriate as it was determined that people who inspire memorial contributions have conscientiously shared their knowledge and love of motorless flight.

The income is being kept in a separate account and the museum's Memorial and Exhibits Committees are developing a plan for suitable acknowledgement and recognition.

At this time, we acknowledge the accumulative contributions to this Fund through the end of 1980 in the memory of the following soaring enthusiasts:

Joseph N. Bearden
James George
Simon Gilad
Joseph H. Giltner, Jr.
Franklin Iszard
Howard E. Latham

Joseph C. Lincoln
Ray Parker
Peter Pilling
Kurt Reupke
Donald C. Ryon
John Williams

ON THE COVER:

An example of community support. On July 1, 1980 the Elmira Rotary Club, after a three year planning effort to honor the 75th Anniversary of Rotary International, dedicated **The Sailplane** sculpture prominently placed in the Mark Twain Riverfront Park in downtown Elmira. The sculpture was designed and executed by Ernest Schweizer, with the help of many volunteers. The sculpture symbolizes the persistent spirit of the people of the area in making the community a better place in which to live and work.

The photo is by Dan Driscoll, Horseheads, NY. Mr. Schweizer wrote an article about the development of the sculpture; and it appears in the December, 1980 issue of SOARING magazine.

NSM is a publication of The National Soaring Museum, Harris Hill, RD3, Elmira, New York 14903. Anyone is invited to contribute material and pictures with identification about historical soaring activities, renovation of old sailplanes, soaring pioneers, unusual uses of sailplanes, etc. Manuscripts are subject to whatever revisions, additions or deletions are necessary to make the material conform to the space limitations and standards of NSM. Material that is to be returned must be accompanied by a stamped, self-addressed envelope. No compensation other than credit will be made.

Publisher — National Soaring Museum
Director/Editor — Shirley Sliwa

50th Anniversary of National Soaring Contests

1930-1980

Charles R. Miller / General Chairman
Edward A. Mooers / Honorary Chairman

CALENDAR

Date:	Event:	Location:
May 23, 1980	Evening Open House — Exhibit Opening	NSM
May 24	NSM Board of Trustees' Annual Meeting Evening — Old Timers' Reunion	NSM/Conference Room NSM/Community Room
May 24-25	Old Timers' Forum	NSM/Community Room
May 25	U.S. Soaring Hall of Fame Banquet	Corning Hilton
May 24-26	Vintage Sailplane Regatta	Harris Hill
June 1-7	National Soaring Week	United States
June 29	50th Anniversary Community Banquet	Elmira College
July 1-10	Standard Class National Soaring Championships	Harris Hill (sponsored by HHSC)
July 2	Commemorative Flight "An Official U.S. Glider Mail Flight"	Harris Hill
July 11	SSA Directors' Meeting	NSM/Community Room
Aug. 30-Sept. 1	SSA's Sailplane Homebuilding Conference	NSM/Youth Camp
October 4	Commemorative Flight of Wolf Hirth Elmira to Binghamton	Harris Hill
October 11 & 12	12th Annual Fall Foliage Festival	Harris Hill
November 8	Ralph S. Barnaby Annual Lecture and NSM Board of Trustees' Fall Meeting	Boston, MA
November 28-30	41st Annual Snowbird Contest	NSM/Harris Hill

National Soaring Museum Officers

President
Vice President
Vice President
Secretary
Treasurer

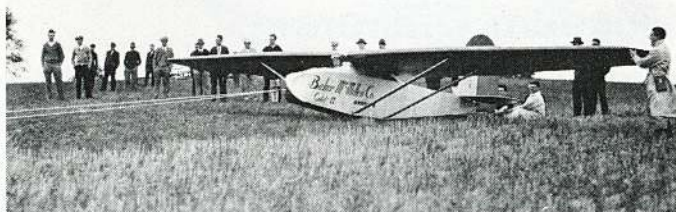
Floyd J. Sweet
Paul A. Schweizer
Ted E. Sharp
Bruce M. Hardy
Francis E. Widman

50

YEARS

AGO

On July 2, 1930, Jack O'Meara, a demonstration pilot from the Baker-McMillen Sailplane Company in Akron, Ohio, took off of South Mountain, the Walsh sisters' farm to investigate the Chemung Valley soaring conditions in his Cadet II glider. He remained aloft for 1 hour and 38 minutes wafting back and forth along the crest of the mountain and thus sealed the selection of a site to hold the first National Gliding Contest. After the completion of a successful training camp activity on Cape Cod in 1929, Captain Ralph S. Barnaby was asked to set the criteria for a site to hold the contest by the National Glider Association and a team headed by Wolfgang Klemperer determined that the Elmira area fit the specifications set forth and the support of the Elmira Association of Commerce and the local community cemented the agreement.



July 2, 1930 launch scene.



To commemorate O'Meara's flight 50 years ago the Elmira Stamp Club organized a mail-carrying glider flight on July 2, 1980. The flight was piloted by Stan Smith, National Champion of 1933 and 1957. Floyd Sweet, President of the National Soaring Museum and a former Elmiran was the co-pilot holding the mail. Dale Gustin, a long time sailplane instructor and member of the Harris Hill Soaring Corporation, was the tow-pilot. Four of the volunteers who helped launch the Jack O'Meara flight, via bungee cord 50 years ago, symbolically helped to launch this flight. They are Richard Griswold, Steve Judson, Bob Miller and Francis Parks.



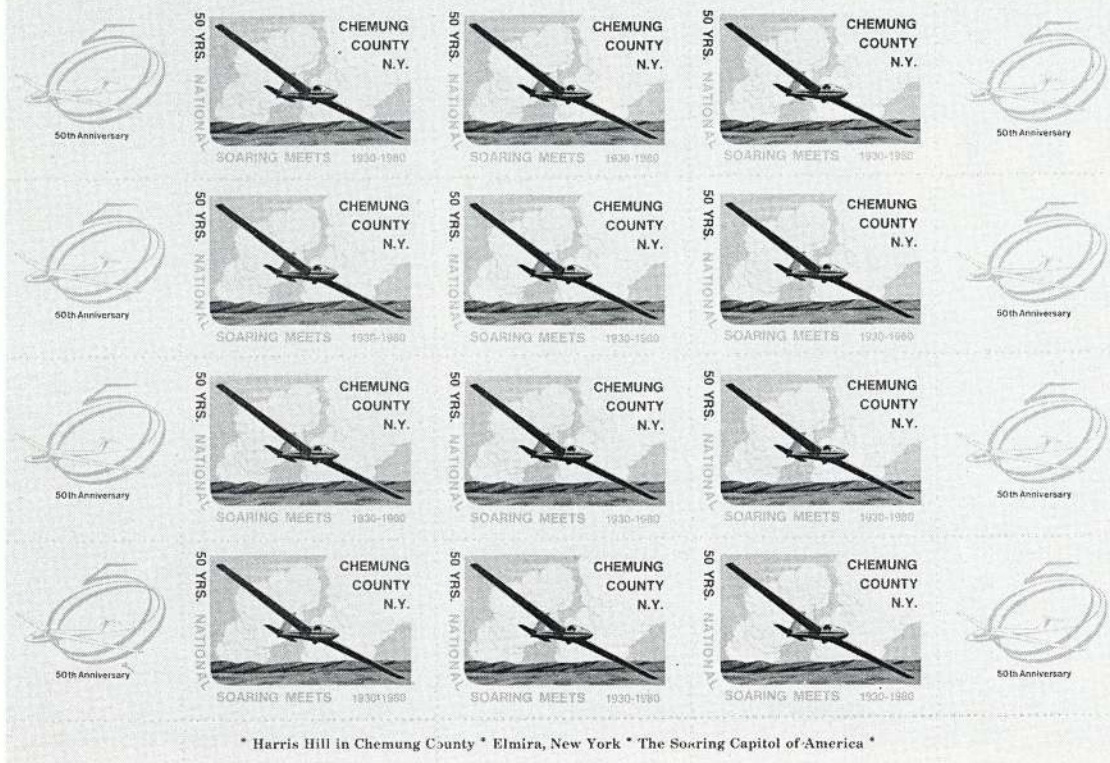
Left to Right: Floyd J. Sweet in cockpit, Stan Smith, Simine Short, President of the Elmira Stamp Club and Richard Dalton, Elmira Post Office Manager of Customer Services.



Special Harris Hill Postal Station.

FIFTY YEARS NATIONAL SOARING CONTEST 1930 - 1980

Prepared by the Elmira Stamp Club



* Harris Hill in Chemung County * Elmira, New York * The Soaring Capitol of America *

Also in commemoration of this flight the United States Postal Service approved a special pictorial cancellation which was applied to all mail posted on Harris Hill on July 2, 1980. In addition the Elmira Stamp Club developed a "Fifty Years National Soaring Contests, 1930-1980" souvenir sheet containing twelve four-color stamps and eight logo stamps. Although not an official U.S. stamp, they can be used on letters, covers, etc.

During the 1930 Contest there was a landing in the Susquehanna River, "dog-fights" with a curious hawk, formation flying for the benefit of photographers, and a mid-air exercise in feeding endurance pilots.

The "circuit around pylons washed-out due to the lack of officials to properly judge the task". There were spot-landings, distance and endurance tasks. The coveted Edward S. Evans Trophy was awarded to Al Hastings with his endurance flight of 7 hours, 43 minutes and 11 seconds. As-a-matter-of-fact, Hastings was forced down due to darkness as he did not have lights installed in his Franklin, as required by the Department of Commerce for night flying . . .

The contest was won by the world famous German soaring pilot, Wolf Hirth. But because contest rules allowed only American pilots to win the actual title, Albert Hastings of Los Angeles, CA was named overall champion.



First National Soaring Champion Al Hastings standing next to pilot Jack O'Meara seated in the Cadet-II.

During the contest, September 21 to October 5, there was a total of 118 hours, 6 minutes, and 57 seconds of soaring flight. With the 24 participants, there was a total of 14 ships, 4 sailplanes and 10 utilities. The list of entries is significant in the history of soaring.

- Warren E. Eaton, Norwich, NY Legion Glider Club
Cadet II
- Wallace T. Backus, New York City
Franklin Utility
- Albert E. Hastings, Los Angeles, CA
Franklin Utility
- Roy E. Nass, Ypsilanti, MI
Franklin Glider Team — flying a Franklin Utility
- A.P. Franklin, Ypsilanti, MI
Franklin Glider Team — flying a Franklin Utility
- R.E. Franklin, Ypsilanti, MI
Franklin Glider Team — flying a Franklin Utility
- Wallace Franklin, Ypsilanti, MI
Franklin Glider Team — flying a Franklin Utility
- J.K. (Jack) O'Meara, Akron, OH
Team of Baker-McMillan Co., flying an Akron-Condor and
Cadet II
- Dr. W. Klemperer, Akron, OH
Team of Baker-McMillan Co., flying an Akron-Condor and
Cadet II
- A.C. Haller, Pittsburgh, PA
Schloss Mainberg
- E.T. (Eddie) Allen, Boeing Airplane Company, Seattle, WA
- Wolf R. Hirth, (famous German glider pilot, U.S. address,
Syracuse, NY)
Musterle
- W. Hawley Bowlus, San Diego, CA. Official American Glider
Champion, flying 2 Bowlus sailplanes of his own con-
struction.

(Continued on Page 6)

50 YEARS AGO

(Continued from Page 5)

C.S. (Casey) Jones, Curtiss-Wright Corp., NYC
Major W.C. Purcell, National Glider Magazine, NYC
Lt. Ralph S. Barnaby, U.S.N., Washington, D.C.
Kenneth Doe, Elizabeth, NY

Cadet II

Goodrich Glider Club Team:

Cadet II

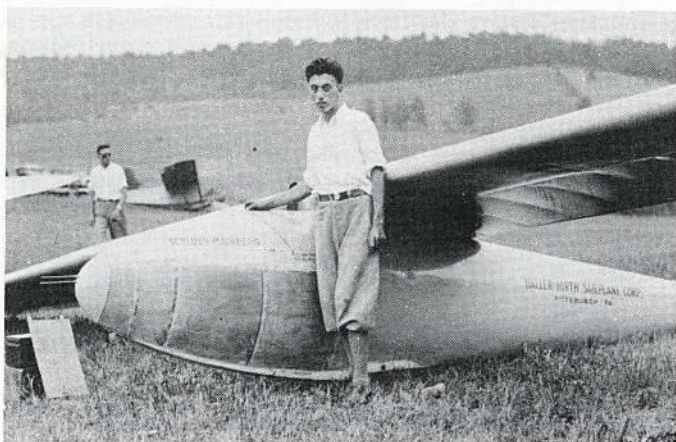
Frank S. Sternad, Lt. Ronald G. Mayer, Robert Wayne, E.B. Sutherland, J.S. Kastyov, L.A. Wiggins, G.B. Richards, and Frederic A. Pippig.

Capt. Frank Hawks, Texas Co., NYC. First pilot to tow a glider behind an airplane across the continent; flying "The Eaglet" of Franklin manufacture belonging to Texas Company and now placed in the Smithsonian.

Officials for the Contest were Mr. Louis F. Ross and Lt. Ronald G. Mayer. The pilots' final social function was the banquet of the Association of Commerce Minute Men at the Federation Building in Elmira. The speakers included Wolf Hirth, Frank E. Tripp, Alexander D. Falck, Robert T. Walker, W.S. McGrath, Edward S. Evans, Donald F. Walker, Louis F. Ross, Lt. R.S. Mayer, Capt. Frank Hawks, R.E. Franklin, Hawley Bowlus and Sherman P. Voorhees; again, each individual significant to the history of soaring and of the local area.



Sailplane designer R.E. Franklin with his son Charles.



Martin Schempp standing next to the Schloss-Mainberg.



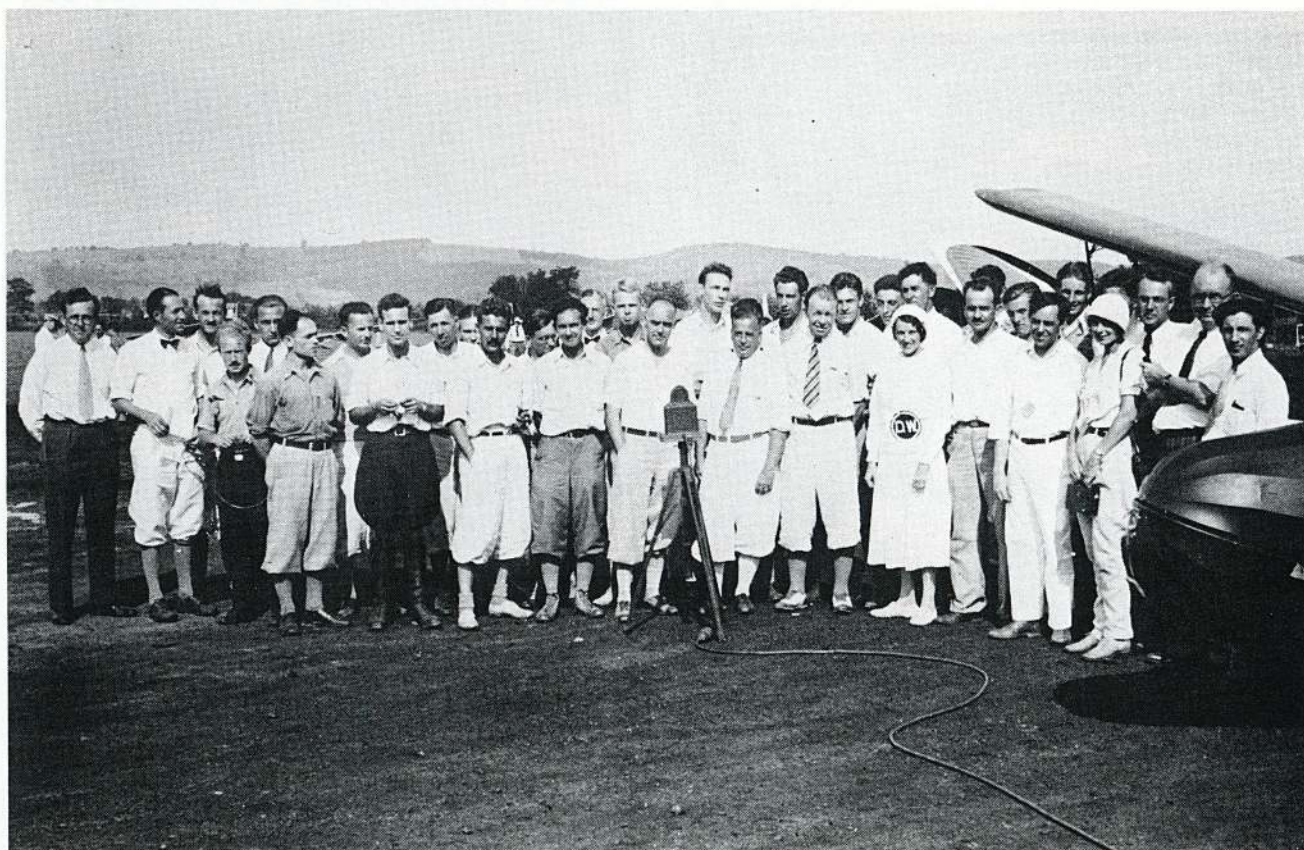
Captain Frank Hawks, Texas Company, NYC.



Jack O'Meara assembling the Cadet-II.



Some of the notables at the National Gliding Contest snapped at the South Mountain flight location, Thursday, October 2, 1930. Left to Right: Lt. A. Mayer, acting referee; Donald Walker, Manager of the Contest; Earl Hughes, Advertising Manager for the Curtiss-Wright Corporation; C.S. 'Casey Jones', former President of Curtiss-Wright Flying Service; Joseph Barston, of Air Investors, aviation's largest financing corporation; Major Reed M. Chambers, President of the United States Aviation Underwriters, Inc.; Frank M. Hawks, contestant, R.T. Walker, Assistant to W.B. Mayo, President of the National Glider Association and chief engineer of the aviation branch of the Ford Motor Company.



The 1930 Contest was such a success that there was no question about holding a contest in 1931, as shown above.

COMMUNITY BANQUET



One of the highlights of 1980's commemorative activities was the Community Banquet held at Elmira College on June 29, 1980, immediately before the National Standard Class Soaring Championship sponsored by the Harris Hill Soaring Corporation. Over 450 people attended the festivities. Among the guests were participating pilots and crews, museum Trustees, Directors from The SSA, members of HHSC, aviation enthusiasts, local community leaders and perhaps most of all, people who wanted to honor Edward A. Mooers. It was a two-fold testimonial; 1) for the community, and 2) for Edward A. Mooers.

You see, Edward A. Mooers has been involved with aviation since 1917. During World War I, he was commissioned in the U.S. Army Signal Corps and served as a flight instructor at Brooks Field in San Antonio, Texas. During World War II, he participated in organizing and administering the U.S. Army's glider program, first at Harris Hill and later at Mobile, Alabama.



Edward A. Mooers, U.S. Army Signal Corps, 1918.

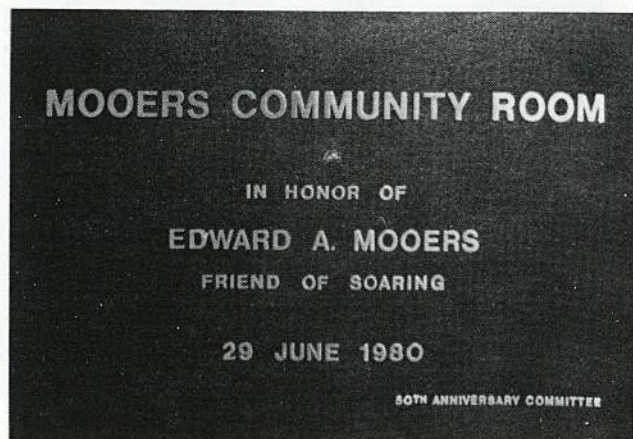
Mr. Mooers has been a leader in making Elmira a national soaring center since 1930. He helped to organize the first soaring contest in Elmira, and for many years was Director and Secretary of the Elmira Area Soaring Corporation, now known as the Harris Hill Soaring Corporation. He played a significant role in the development of the National Soaring Museum and has served as a Museum Trustee since 1972.

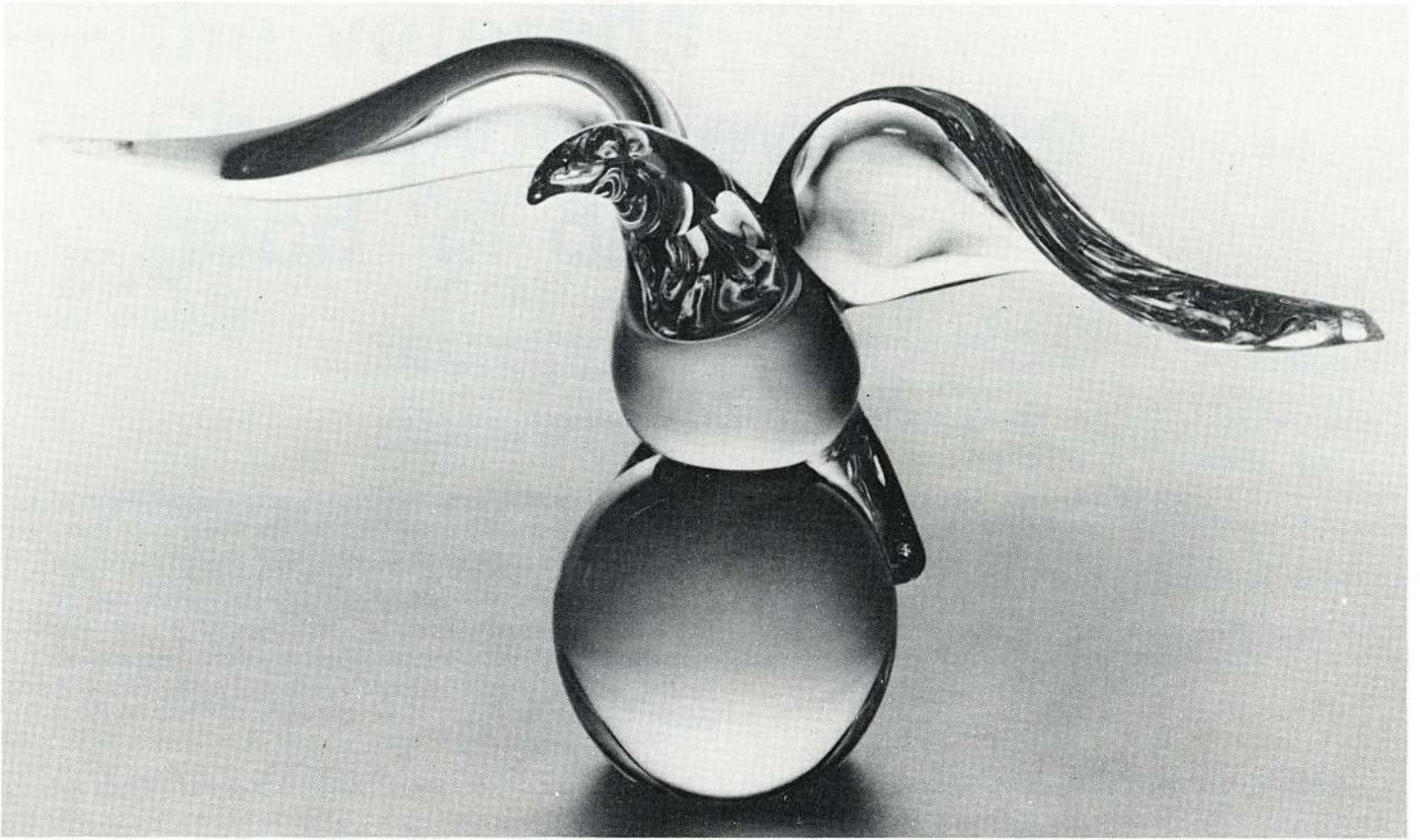
Mr. Mooers is past President and current Chairman of the Board of the Hilliard Corporation. He served as Mayor of Elmira for three terms, and as president of numerous community organizations, including the Chemung County Chamber of Commerce. He holds an honorary Doctorate from Keuka College and is a recipient of the coveted Excalibur Award of the Elmira Star-Gazette.

William D. English, Jr., former Director of the National Soaring Museum, gave the testimonial to Mr. Mooers and was honored to do so, as they became good friends working together through a crucial growth period for the museum.

Arthur Godfrey was the guest speaker for the evening and held everyone entranced in his inimitable fashion. Mr. Godfrey was presented a Steuben Eagle, donated by the Corning Glass Works; and, they also made available a Corning jet for Mr. Godfrey's transportation. Ernest Schweizer fashioned a base of exotic wood and pewter for the pure crystal sculpture.

Legislative Resolutions from the NY State Senate, NY State Assembly, and the Chemung County Legislature were presented. At the end of the evening it was announced that the community room in the National Soaring Museum, for which Chemung County had contributed capital funds, was being named the Mooers Community Room in honor of Mr. Edward A. Mooers, and that, a brass plaque was to be installed, compliments of the 50th Anniversary Committee.





Steuben Eagle designed by James Houston.



Scene at Community Celebration.

Photo: Steven Needham

STATE OF NEW YORK

The Legislature

ALBANY

LEGISLATIVE RESOLUTION

Senate No. 326

Assembly No. 339

IN SENATE

By Senator Smith:

IN ASSEMBLY

By Mr. Winner

Legislative resolution congratulating the Soaring Society of America, the National Soaring Museum, the Board of Directors of the Harris Hill Soaring Corporation, the Fiftieth Anniversary of Soaring Meets Committee and the County Legislature of Chemung county for their efforts, activities, funding and investment in constantly stimulating and fostering the development of Soaring, both as a sport and as a vital and expanding local industry.

Whereas, Harris Hill, in the town of Big Flats and county of Chemung, is the site of the only National Soaring Museum and for fifty years has been the site of Soaring Meets; and

Whereas, Internationally as well as nationally sanctioned Soaring Competitions have been held in the area; and

Whereas, The Soaring Society of America has, since its formation in nineteen hundred thirty-two, promoted, coordinated and organized this glorious sport and its participants, thus enabling its fifteen thousand members to effectively develop and improve the sport, foster safety, train pilots, conduct contests and increase soaring proficiency in an orderly manner; and

Whereas, The residents of the area have long been enamoured of this graceful and beautiful sport, which is enjoyed by all in this gorgeous natural setting; and

Whereas, The aforesaid National Soaring Museum is now housed in a new building on Harris Hill as a result of the foresight of the Chemung County Legislature in moving ahead with the project; and

Whereas, The prominence of the sport of Soaring in the area has resulted in the location of such soaring and aircraft industry around Harris Hill and its environs; and

Whereas, The National Soaring Museum is thus not only a boon and a spur to local industry, but attractive to tourists and a focal point for the community in a recreational as well as an economic sense; and

Whereas, For all these reasons, the Harris Hill area is still called the "Soaring Capital of America"; and

Whereas, This year Soaring events will be held from May through November to celebrate the Fiftieth Anniversary of Soaring; now, therefore, be it

Resolved, That this Legislative Body pauses in its deliberations to note and congratulate all those involved, residents, organizations and industries, in the larger community around Harris Hill in the town of Big Flats and county of Chemung on the upcoming Fiftieth Anniversary of Soaring, especially the Soaring Society of America, the National Soaring Museum, the Board of Directors of the Harris Hill Soaring Corporation, the Fiftieth Anniversary of Soaring Meets Committee and the County Legislature of Chemung county, on their efforts, activities, funding and investment of both time and money in bringing to fruition this wonderful community and national pastime, recreation and event, and be it further

Resolved, that copies of this resolution, suitably engrossed, be transmitted to the Soaring Society of America, the National Soaring Museum, the Board of Directors of the Harris Hill Soaring Corporation, the Fiftieth Anniversary of Soaring Meets Committee and to the Clerk of the Chemung County Legislature.

By order of the Senate,

Roger C. Thompson, Secretary

ADOPTED IN SENATE ON

March 26, 1980

By order of the Assembly,

Catherine A. Carey, Clerk

ADOPTED IN ASSEMBLY ON

March 20, 1980

— the veterans Champions loved the good 'ol days

Editor's Note: This article was written by Elmira Star-Gazette Reporter Peg Gallagher and appeared in a special tabloid prepared by the newspaper in honor of the anniversary. Peg is a member of the Harris Hill Soaring Corporation and holds a Commercial Glider rating.

The total freedom that allowed sailplane pilots to make their own decisions is what mainly separated early soaring contests from today's events, the oldtime pilots say.

Former championship pilots and recordbreakers of the 1930s and 1940s who still visit Harris Hill recognize the advances that have raised soaring to almost a science.

There are few who would rather fly one of the old Franklin primary gliders than one of the sleek new glass ships.

But, oh, for that free-wheeling, razzle-dazzle approach that allowed a contest pilot to scan the skies, check his ship, decide how he felt — then take off in any direction he chose to fly as long and as far as he wished.

There was more camaraderie in the less sophisticated era when it was so necessary for all of those involved in soaring to help one another.

And there was the camping out . . . and the dinners at Ma Rhodes farmhouse down the road . . . and the all-night retrieves with the pilot sleeping in the back seat of the car . . .

Older pilots who were at the Hill recently to attend the commemorative Soaring Society of America banquet recalled some of the early flying meets.

Chet Decker of Franklin Lakes, N.J., 1936 and 1939 champion, feels that his success as a pilot stems from the fact that the old contests suited his soaring style so well.

Decker, who in early Star-Gazette stories is described as "intrepid . . . happy-go-lucky . . . cheerful . . .," won his titles in two of the great early ships, the Albatross and the Minimoa.

The pilots, rather than the contest committees, would decide what tasks they would fly for the day, he said.

"The contests then were totally free of bureaucracy. They didn't tell us where to fly, how far, how fast, how high or how long.

"A pilot could get up there and totally use his own instincts. There wasn't the rigidity to it — and that suited me to a T," Decker said.

Decker, who still flies occasionally, but no longer competes, said he wouldn't have the enthusiasm for competition today.

Decker entered his first national contest in Elmira in 1932 when he was 17. But he barely arrived in time to fly.

Then in 1935, he returned with a Franklin glider to compete in the utility class. Richard duPont, the millionaire international champion, was competing in the sailplane class and Decker was "giving him a good run for his money."

That fall, Ted Bellack, duPont's sailplane manager, called to tell him that duPont wanted to sell his Albatross "and he wants someone to have it who can do it justice."

Decker, a \$22-a-week service station worker, told him he had only \$150 and could borrow \$100. "Owe us \$1,000 and it's yours," Bellack told him.

"Here I am 20 years old and I couldn't resist the deal," said Decker, who now heads two auto dealerships, a tank truck manufacturing company and a real estate firm.

He had no idea of how he would repay the \$1,000. But he taught himself how to fly the Albatross that fall, put it into

competition in 1936 — and won \$1,600.

"So I won — purely through the kindness of Richard duPont," Decker said.

Decker remembers duPont as a man "with such wealth, but with such humility."

Decker still enjoys attending contests but he would like to see "a slight reversal, with more pilot input."



Chet Decker at 1936 National Contest.

Two-time champion Stan Smith, 70, of Newark, Del., who is still competing and plans to participate in the upcoming national contest, agrees with Decker.

The element of control in today's contests eliminates a lot of the luck factor, Smith feels.

"Today, you're told where to go — and the object is speed, not distance," said Smith.

Smith, who once supervised the Elmira Aviation Ground School, started flying in 1930 and has no plans to quit. But he found it more exciting in the old days.

"Now it's gotten to be a matter of tension and intense effort. There are more people trying to do the same thing and in my case, they're always using better equipment than I can afford," he said.

Besides losing the opportunity to use your own judgement, Smith also regrets losing the opportunity to display flying skill in poor weather.

"Nowadays, if the weather is bad enough, they either call it off for the day, even though you can soar, or if the average performance is low on that day, they devalue the day. So if someone does an outstanding job in poor weather, the value of his doing it is reduced," he said.

(Continued on Page 12)

VETERANS

(Continued from Page 11)

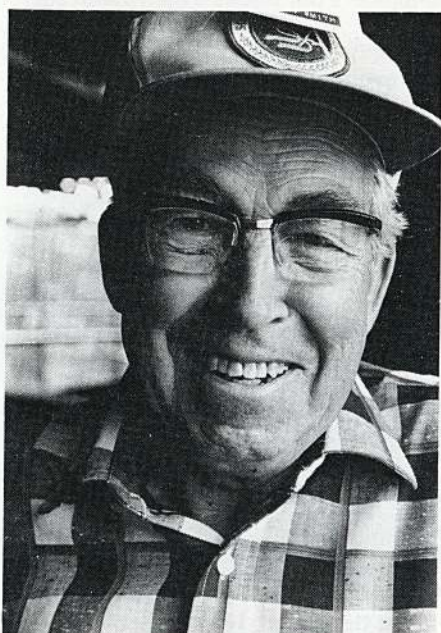
Now, most contest tasks bring the pilot right back to the takeoff point so there are fewer off-field landings. But Smith would just as soon forget one of his off-field landings in East Troy, Pa. in the late 1930s.

Smith had put his Phoebe C down in a hay field. Most pilots tell about friendly farmers who often wind up inviting them to dinner when they land. But this farmer was far from cordial.

The headline in The Star-Gazette the next day read: "Pilot Lands in Hay Field and Gets Haymaker."

Smith caused no damage to the field — having had his crew carefully carry the ship out — but the farmer demanded money. As Smith got out of the car to look the field over, the farmer swung giving him a bloody nose.

"I guess he figured anyone who flew one of those things had to have money and he wanted some," Smith said.



Stan Smith 1980 competitor.

Photo: Steven Needham

Floyd Sweet of McLean, Va., a native Elmiran who preceded Smith as supervisor of the Elmira Aviation Ground School, is another early sailplane pilot who still flies.

Sweet, 66, a retired Air Force colonel and NASA advisor, feels that the refinement of equipment is the major difference between soaring today and the early days.

"The aircraft are much safer, they fly better, go farther and the performance is generally way up from what it was," Sweet said.

And, Sweet added, the meteorology has improved tremendously.

"We know so much more about the element in which we're flying," he said.

But with the shockcord launchings, poor roads and communications, there also was greater camaraderie, he said.

"We all had to help each other so much. It's becoming more routine now. We don't have to depend on people to man the shockcords. We can get up here with a trailer without having the assistance of two cars," he said.

"In the old days, maybe we'd get in two or three flights and go relax some place with some beer and do the hangar flying and we had a lot of fun."

However, he said, the safety element has improved tremendously.



Floyd J. Sweet, Museum President.

Alcide Santilli of Albuquerque, N.M., who competed in the 1932 meet in Elmira and still flies, remembers the early contests as being a matter of "getting together to explore the countryside, rather than to show individual polish."

Now the meets are essentially races, which was almost inconceivable 50 years ago, he said.

He remembers one of the heads of the British Gliding Association being quoted as saying, "It is very likely that contests will become racing events in soaring because merely staying up is such a chore."

The horizons have continued to stretch through the years but there are still many areas to explore, Santilli feels.

An engineer who is still working on meteorological research in flying, he thinks soaring is just as exciting as ever.

While many pilots are involved in wave soaring — finding the waves of air that form high over the curves of the earth — Santilli is interested in a newer discovery involving rising currents of air closer to the ground.

"We're finding if you do certain magic things by meandering through these currents, and being lucky, and being in the right place at the right time, you can go an extra 20 or 30 miles," he said.



Alcide Santilli

The Wolf Hirth Memorial Flight

Elmira to Binghamton, New York



To commemorate Wolf Hirth's record setting flight during the first National Gliding Contest in 1930, the 50th Anniversary Committee organized a Memorial Flight Regatta for the first week in October, 1980. On October 4th, a party was held in Endicott, NY to reminisce and share anecdotes about Wolf Hirth. There were approximately 45-50 people in attendance; members of the Harris Hill Soaring Corporation, the Tri Cities Soaring Club and a special guest Mr. Gernot Muller from the **Wolf Hirth Soaring Club** in West Germany, who just happened to be visiting the area and spontaneously remained an extra day to participate in the festivities. He stated that, "he couldn't wait to return home and inform his fellow Club members about how they celebrate Wolf Hirth in the United States".



Wolf Hirth, 1930, with his Musterle.

Six pilots completed the Memorial Flight and were awarded certificates. Brian Beals, Rolf Beyer - Libelle, John Gill - ASW-20, Juergen Loenholdt - Libelle, Roy McMaster - ASW-20, and James Short - 1-35.

Paul Schweizer told of how Wolf Hirth was the only pilot at the first National Glider Meet to have a variometer and he carried it to his cockpit in a brown paper bag. "Everyone thought that Wolf was carrying his lunch". He also told of Wolf Hirth's trip to the U.S. in 1958 to pick up a Cessna without a radio and traveled cross-country, barn storming, and making friends along the way. However, he called Paul by telephone at his last stop to ask him to inform the tower at the Chemung County Airport that he was arriving. Tower officials were gracious to this gentleman, as his reputation, no doubt, preceded him. Wolf spent several days in the area and one evening on Harris Hill in the old Administration Building on whose foundation the National Soaring Museum now rests.



During this evening, with members of HHSC, Paul said, "that everyone just sat in a circle and listened to Wolf reminisce about his experiences". (Too bad we don't have a tape of this evening!)



Wolf Hirth, 1959.

Photo: Carl Bauer

Paul Schweizer also noted that Wolf Hirth was a free spirit and frequently looped immediately after a winch launch. (The film library has footage of Hirth doing a loop in a Dagling Primary). After one such loop, the glider dove into the ground and shattered his legs again, which caused the amputation of one leg that had originally been severely damaged in a motorcycle accident.

For the National Soaring Museum's part of the program, in addition to providing an exhibit of photos, clippings and memorabilia, I reported how on the day of Wolf Hirth's record setting flight, he was late returning to the dinner that was being held that evening. Hirth was such a spirited and likeable person that when he arrived at the dinner, everyone arose and sang, "Ach du Lieber Augustin". Two days earlier Hirth had made a flight over Elmira in his glider showering down red roses; as his way of paying tribute to the community for their hospitality and interest in hosting the first National Gliding Meet. He had stated that, "with his broken English, it could best be said, with flowers".

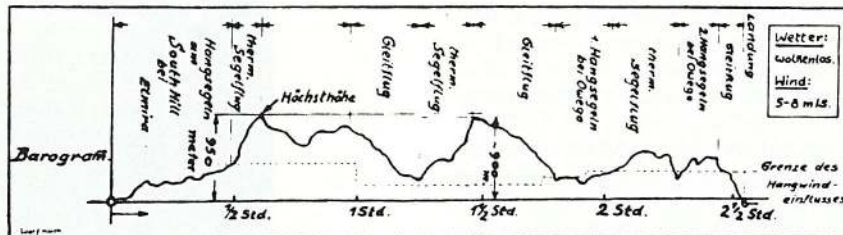
In the museum's collection of Warren E. Eaton's papers, communications show that Wolf Hirth was a close friend of The Soaring Society of America's first President and family; particularly the children. In a letter to Hirth from Mrs. Eaton, at the time of Eaton's death, she noted that "it was Warren, Junior who had reminded her several times, that, she should make contact with Wolf". And in a letter to Mrs. Eaton, Wolf Hirth thanked her for the memorial gift of Warren's alarm wrist watch.

The evening's festivities closed with the viewing of the film, "The 1930 National Glider Meet". Most attendees went home acknowledging that they had seen a demonstration of a 50 year legacy for modern sailplane pilots.

Shirley Sliwa

(Written in New York in the Autumn of 1930)

The map shows a section of the Colorado River flowing from left to right. Towns marked include Elmira, Flugplatz, Waverly, and Binghamton. Other locations shown are Endicott, Norwich, and Flugplatz. The Colorado River is depicted with a wavy line. Other features include Pipe Creek, Wind, and the Colorado River. A scale bar at the bottom indicates distances in miles (0 to 10) and kilometers (0 to 25). The text '53 Kilometer Strecken Flug + Segeln am Hang' is written on the right side of the map.



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showed me where I could find further lift. A small detour brought me above them and for a short while I too rose steadily. The birds did not pay the slightest attention to me; possibly they did not even see me, as they much prefer to look down rather than to strain their necks by looking up.

Far below lay Waverly. From now on the way lay up the Susquehanna Valley. Haller had flown Southwards down the valley with the wind behind him in order to make as long a flight as possible and was already out of sight. Once again I was losing height foot by foot. Were there no more upcurrents to be found? The ground was approaching rapidly and the only slope which appeared to hold out any hope of an upwind lay far ahead of me. Fortunately, down below there were not, as is often the case in this part of the country many miles of woodland, but several suitable-looking landing-grounds; and I had already chosen a lovely long field ahead of me in which to land when, in surroundings which, according to the rules of slope-winds, should have produced downcurrents, I suddenly felt myself being lifted up. Once more I gained height, though not for very long. Then I lost it again, only soon afterwards to find another and still stronger upcurrent. My altimeter showed me that I was climbing steadily and in a short while I was once more 3,000 ft. above starting level.

I can well remember, as though it only happened five minutes ago, how at this height I tried to take a deep breath because I felt so elated. I say "tried", because I was so tightly wedged in the cockpit of my machine that there was only room to take very small breaths at a time! However, to make up for that, I felt myself completely identified with my sailplane, and at that moment would not have exchanged it for the fastest and most expensive power-plane in the world. I was only saddened by the thought that its designer, who had himself been a keen sailplane pilot, had never had the chance of experiencing the joy of flying his own creation: for some time has already passed since Paul Laubenthal was taken from us for ever. While these memories were crowding in on me, I suddenly noticed, quite by chance, a chain of mountains to the South. The visibility was marvelous — at least 50 miles — and it struck me that there, in the direction in which the wind was blowing, was a perfect soaring-slope. It could easily have been 30 or 40 miles away, but its appearance promised hours of easy slope-soaring. Unfortunately, I had not been

able to get hold of a very good map of the country beyond the immediate vicinity of the Camp and only learned afterwards that these mountains were the Northern Range of the Alleghenies. I could not help feeling tempted to break my flight to Norwich on the chance of being able to reach them. However, I continued my flight in the same direction as before, until, after losing height all the way, I eventually found a good slope near Owego. There I soared for about 20 minutes and amused myself by watching people moving about on the golf-course down below. They remained quite oblivious of the huge man-bird above them and I had no wish to call to them, for the utter silence of a sailplane flight is one of its great beauties. So I soared to and fro, watching them quietly, until a thermal once more drew me up a thousand feet or so. While hill-soaring, I had come to the conclusion that it was too late in the day and too much a case of flying against the wind to continue in the direction of Norwich. This led me into making a mistake. For a short while I tried to fly South towards the wonderful looking mountains, but soon noticed that I had not time to do this either. Evening set in, and as it did so the thermals gradually weakened. Once more I headed Eastwards, but again too late! Had I continued my flight from Owego along the valley slopes, I would probably have reached Binghamton or anyway Endicott Aerodrome. As it was, I had to make a forced-landing just short of the valley slopes near Apalachin, and conveniently came to a standstill 50 yds. from a farm-house. At this tiny village I was able to telephone the organizers of the Competitions. My first motorless flight over country formerly inhabited by Red Indians was at an end. A quick glance at the barograph! O.K.! It had functioned perfectly.

Even though I had failed to make the difficult flight to Norwich, it had been a wonderful experience, and incidentally I had set up a new American height and distance record. At that time, it was generally believed that clouds were essential for distance flying; but my flight had clearly disproved this theory, while being, as far as I am aware, the first thermal flight carried out under an absolutely cloudless blue sky.

(Ed: Lewin Barringer was quoted as saying that "this flight, — started a systematic study of thermal currents and the development of thermal soaring technique".)



Wolf Hirth on left with Parker Leonard at the 1939 National Contest.

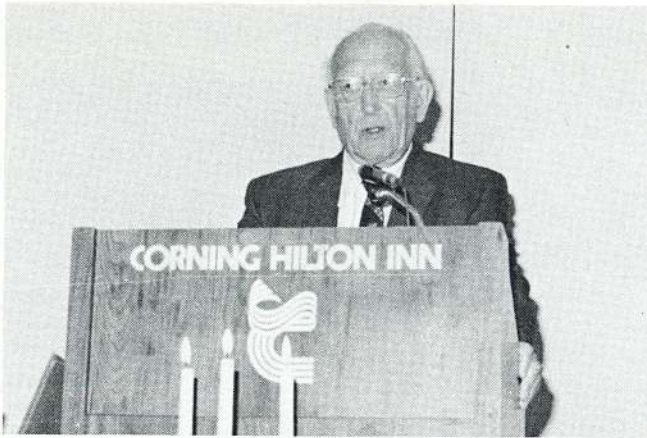
1980 Overview



Inductees into The Soaring Society of America's United States
Soaring Hall of Fame, Left: Alcide Santilli, and Sterling Starr.



Hall of Fame Members at the 1980 Induction Ceremony, Seated, left to right: Sterling Starr, Ralph S. Barnaby, and Alcide Santilli.
Standing, left to right: Stephen Bennis, Barnard L. Wiggin, Chet Decker, Stanley W. Smith, Virginia Schweizer, Paul A. Schweizer,
Floyd J. Sweet, and Gustav Scheurer.



Keynote speaker at the banquet "Barney" Wiggin tells of his experiences as the meteorologist on many U.S. International Teams.



SSA Awards Chairman Floyd J. Sweet presenting the 1978 Paul Tissandier Diploma of the Federation Aeronautique Internationale to Gustav Schuerer.



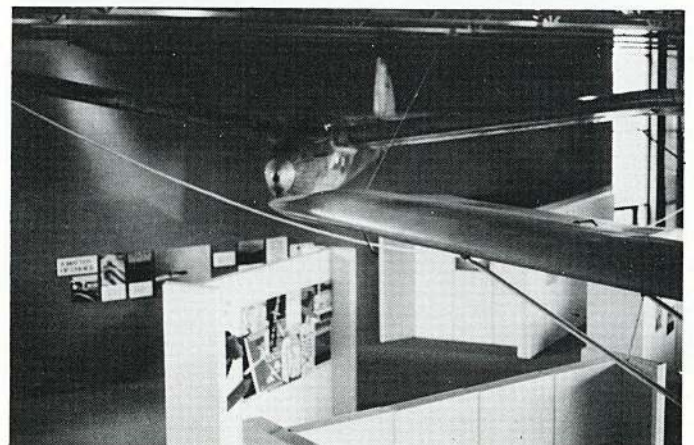
Robert Gray of Georgia thanks the Harris Hill Soaring Corporation for the Lincoln Award for the best popular writing of 1979. His article, "Down and Out" appeared in the January issue of SOARING.

THE NATIONAL SOARING MUSEUM GROWS!

At the end of 1979 the Board of Trustees of the Museum approved a Phase-II Capital Fund Raising Program, primarily for the expansion of exhibits. A standard had been set with our original program and I believe that the following photos will show how far the museum has progressed toward the Phase II goals with the help of many contributors.



Franklin glider donated by Robert Sparling, Prescott, Arizona. After the ship arrived it was determined through the Museum's archives that it was originally owned by SSA's first President Warren E. Eaton.



The Minimoa, a 1972 donation by Carl Groom, Tucson, Arizona, now fully restored and suspended in the main exhibit hall.



The new museum shop and entry off the lobby.

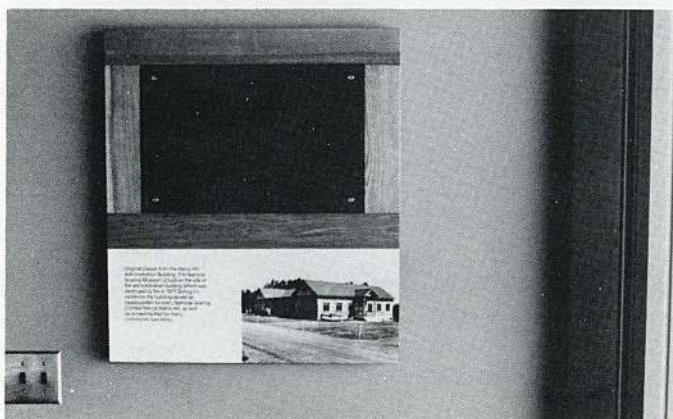
Photo: Steven Needham



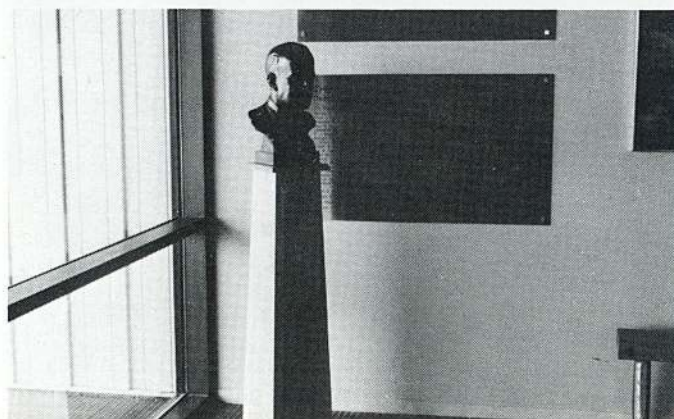
The new SSA Hall of Fame Gallery.



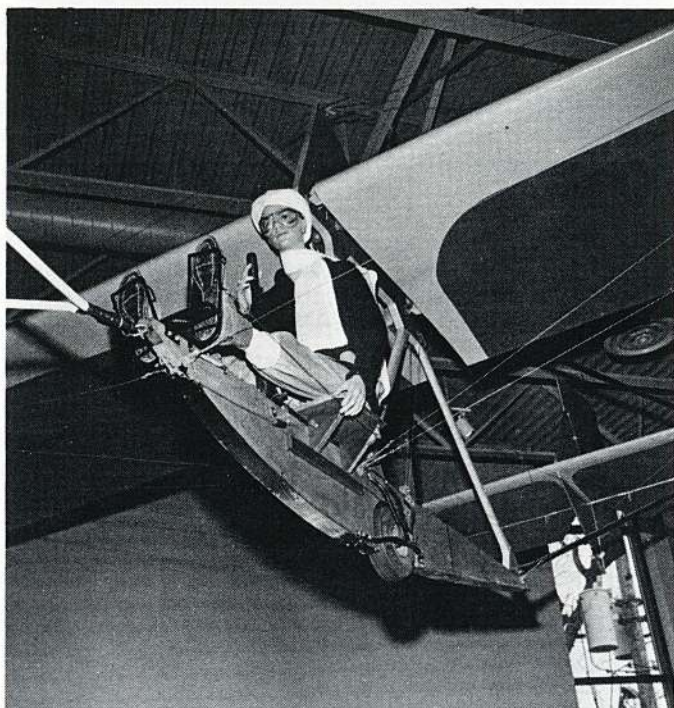
The PERSONALITIES gallery with illustrations by Gerald Pomeroy, Mercer Island, WA. The sketches were originally done for the book, "Proceedings of the 1980 SSA National Soaring Convention, Seattle, Washington," and were donated to the museum, with help from the Editor, Marion Barritt.



Lobby exhibit with the original brass plaque from the Harris Hill Administration Building which burned in 1977.



Bust of the first President of The Soaring Society of America Warren E. Eaton.



Mannequin added to the Dagling Primary glider built by Gustav Scheurer and donated to the museum in 1973. (I understand that the mannequin's left knuckles should be white.)



Scene of the duPont winch, restored by the local EAA Chapter; the new Sailplane Homebuilders' section, featuring the newly painted BG-12BD donated by Robert Kellner, OH in 1977, and Robert Stanley's NOMAD on loan from the Smithsonian's National Air & Space Museum and brought to Elmira with help from the Vintage Sailplane Association.

COMPLETED EXHIBIT EXPANSION, NOT SHOWN BY PHOTO:

- A sailplane launching equipment exhibit
- A variometer display
- A refurbishing of the Electric Map showing outstanding soaring flights
- Diorama of a 1930 shock cord launching scene by Tony Doherty
- Large Kodak mural showing soaring scene at Harris Hill
- Glenn H. Curtiss exhibit
- Structure of a TG 3A leading edge

- Joseph C. Lincoln memorial exhibit
- Topographic model of Harris Hill
- Geology exhibit showing the creation of Harris Hill
- International exhibit showing posters from various contests
- Oral soaring history slide presentation
- Philatelic Collection exhibit
- Additional photos and paintings from the museum's collection

WE THANK OUR CONTRIBUTORS WHO HAVE ENABLED THE NATIONAL SOARING MUSEUM TO BETTER DEPICT THE ART OF MOTORLESS FLIGHT!



At the completion of the Standard Class Nationals sponsored by the Harris Hill Soaring Corporation, SSA President Brian Utley, recessed the Directors from their meeting long enough for a photo session.

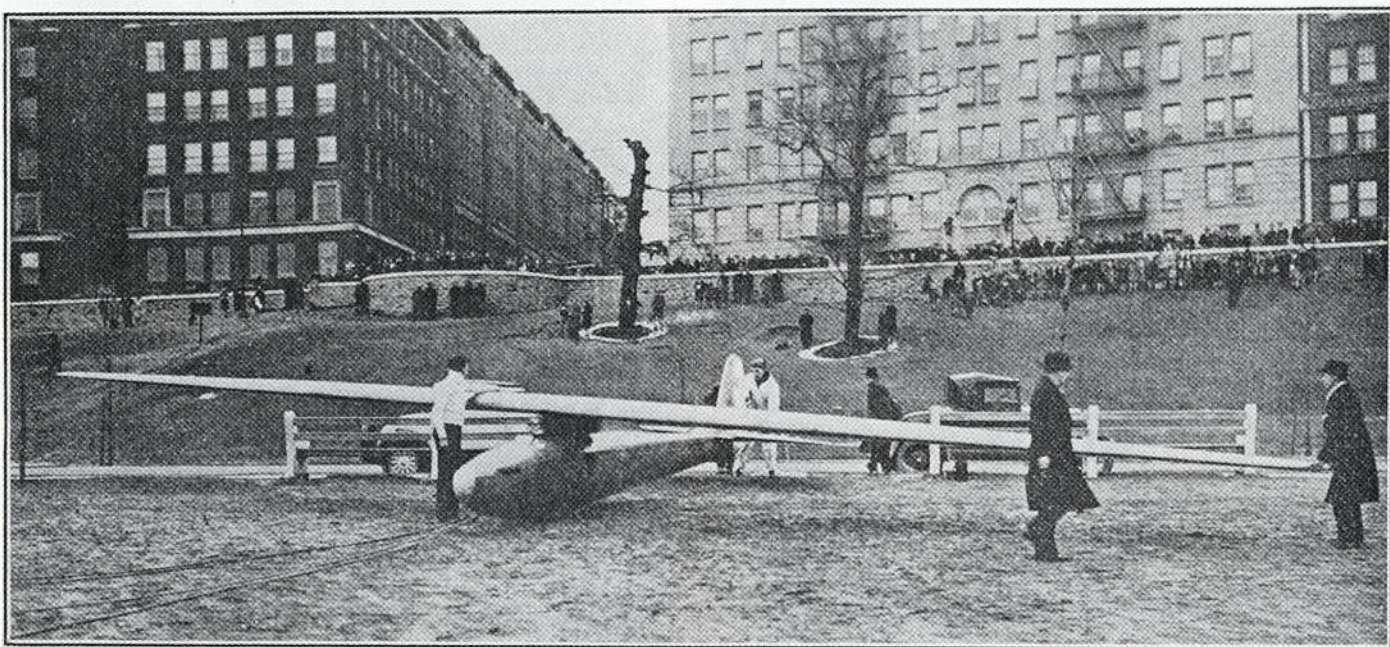


1980 Ralph S. Barnaby Lecture held in Boston, Mass. in conjunction with the Museum Trustees' Fall meeting. Left to Right: Museum President Floyd J. Sweet, speaker Dr. Richard P. Hallion, Assoc. Professor of the University of Maryland and internationally recognized aerospace historian, and Museum Director Shirley Sliwa.

WOLF HIRTH RELATES HOW IT FEELS TO FLY OVER NEW YORK WITH GLIDER

NOTED GERMAN SOARING PILOT WHO THRILLED ELMIRANS,
WRITES TO THIS CITY OF THRILLS EXPERIENCED OVER MANHATTAN.

Editor's Note: This article was edited from a New York City newspaper clipping dated April 5, 1931 and the May, 1931 publication of NATIONAL GLIDER AND AIRPLANE NEWS.



Wolf Hirth taking off at 161st Street and Riverside Drive, NYC.

—Wide World Photo

Wolf Hirth, famous German glider expert, who appeared at the glider meet in Elmira last Fall, is vividly remembered by Elmirans. During the meeting here he made a record non-stop flight in his glider of 39 miles from this city to Apalachin.

Later in New York City Mr. Hirth was tendered a banquet attended by aeronautical experts. This was given at the Piccadilly Hotel and 175 friends and admirers were present.

On the occasion Mr. Hirth, who made the most successful flight of his American invasion in Elmira, was presented a watch to replace the one lost in this city. The missing timepiece had been presented him by his bride of a few months before he came to the United States.

Herschel B. King of 374 Baty Street was Elmira's representative at the banquet. And now Mr. King has received a letter from H. Newman, Mr. Hirth's interpreter, in which the famous glider soaring king, gives his first description of the notable flight he made over New York City. The tale gives some idea of the trouble he experienced and the thrills that were his during the all too short 45 minutes he was in the air.

Mr. Hirth's vivid account of the experience follows:

Had Great Longing For Gotham Flight

Already years ago, long before I ever entered the United States, I was contemplating the possibilities of making a soaring flight right in the proper city district of New York. Studying the topographical conditions of this city on hand of maps I found such a flight quite feasible. Ever since my arrival about seven months ago I did not lose sight of my plans in regard to the undertaking.

But there were great difficulties to overcome, more than I had expected. After long and extensive scouting I finally found a suitable launching place right on Riverside Drive, the marvellous automobile road along the Hudson River. That there was no landing space below except water, the icy waves of the river, was one disadvantage I had to take into account.

However, the hardest task was to get the consent of the municipal authorities. For more than two months petitions were sent to the different departments in question: the Department of Commerce, the Department of Parks in New York, and the Police Department, without seeming to be very successful.

Personal calls at the offices of the different officials met with better results, and finally after several negotiations and patient waiting I received the last one of the three necessary permits at noontime on Mar. 12. One look through the window at the clouds, a phone call to the weather bureau and the answer that the wind was quite favorable, and I decided quickly. Why postpone something until tomorrow which can be accomplished today.

The next 15 minutes were crowded with the necessary arrangements. All four telephones at our office were busy conveying orders and messages — my soaring plane was already on its way — the Police Headquarters informed of my intention, and after a lunch we started out.

Had Trouble Finding Place To Start

Driving uptown along Riverside Drive we suddenly were stopped — detour. The street in front of us was closed, and policemen were directing traffic through the side streets. What had happened? Probably an accident. But when we saw a stone-loaded truck pass the line, we concluded they were repairing the street. As we were in a hurry to get to the starting place, this detour business was annoying. We tried in succession different side streets, but everywhere the traffic seemed to be blocked.

As usually the impatient drivers of the cars sounded their horns, and the streets were filled with such a noise that one could hardly hear his own words. Suddenly it dawned upon me — should I be the cause for all this disturbance and excitement? An inquiry to the next policeman did not leave any doubt. Back to Riverside Drive, and we had no difficulties to pass after identifying ourselves. Policemen everywhere.

We soon reached the little park, which I had chosen as starting place. My "Musterle" (name of the sailplane) was already assembled waiting for me. I was received by high police officials who did not want to miss the chance to see a real soaring flight, and they told me that 60 policemen were assigned to keep order. That there was also an ambulance with doctor and stretcher waiting in the background, I was told only after I had landed.

I had to assure again and again the officials in charge of the flight that I would not trespass the restricted flight area, and that I would not fly above the high buildings until I had reached at least 1,000 feet.

Everything Is Finally Set For Start

Now everything was set for the start — the tail of my plane anchored to a truck standing on the drive — 20 men had hold of the double launching shock cord, ready to pull. Their running space was quite limited, only about 90 to 100 feet separated them from the steep descent of 70 to 80 feet down to the river.

News-reel and newspaper photographers got busy — then a short command and the launching crew started to run. When they almost had reached the edge of the decline I released the tail anchoring, and like an arrow my plane was shot into the up-currents. The lifting force of these currents was quite stronger than I had anticipated, and already after the first 10 seconds I was about 100 feet high. Making the first turn. I passed almost 200 feet above the starting point, and it was only 30 seconds since I started. Steadily my plane gained altitude, and soon I could look down onto the 12 and 15-story buildings.

It was quite a unique view I had. Before me the Hudson River with its afternoon traffic, numerous steamers and ferries furrowing the surface of the stream. Looking in the other direction I saw streets jammed with cars, and the white patches of uplifted faces of thousands of onlookers, waving at the "bird."

Amazing was the number of children, especially boys, who came to see the glider. They probably knew a lot more about what was going on than many of the grownup people, the greatest part of which probably had no idea that the bird in the air was flying without any motor.

Hundreds of interesting things provided new impressions

during the entire time. When my altimeter showed 600 feet above the starting point, I went on short excursions. Down-river to 150th Street, and back again up to 172nd Street. This was the farthest I was allowed to fly, keeping my promise given to the police. Too bad, as it would not have been difficult at all to fly all the way down to the Battery. I was very much tempted to do so when I reached about 1000 feet, but in the last moment I remembered my promise. I contented myself in circling the New York head of the new Hudson River bridge.

Beheld Three Men Waving Flags

Looking down upon the headquarters after I had been flying for about 30 minutes I saw three men frantically waving red flags. What did they want? Did something happen? The roar of the wind was tremendous and drowned every other noise.

To find out what they wanted and to be able to hear their voices, I had to fly lower. Pointing the nose of my sailplane to the Palisades I left the up-current area. Mid-river I still had about 750 feet altitude, and it would have been easy to continue my flight to Jersey. Turning back, steadily losing height, I met quite bumpy currents, and my ship was thrown about a great deal. In the park they were still giving signals, and this time their meaning was obvious — order to land.

That's tough. My intention was to fly at least two hours, and now only 40 minutes had elapsed. It was almost 5 o'clock, the time the factories and offices close, and the police wanted to reopen the Drive for the evening rush. Not to disappoint the Police Department which so generously helped in the realization of my plans, I went in for the landing, but I admit it was not to my liking.

The landing was the most difficult part of the entire flight, if not to say the most difficult task of my whole flying career. Calling on all my experience gathered in hundreds of flights and with the help of Madame Luck I made it, and after a short slide my plane stopped almost near the end of the landing space.

What Now Followed Seemed Like Dream

What now followed seemed like a dream. Thousands of boys, enthusiastic followers of the gliding and soaring sport, congratulating friends, in front my dear Hawley Bowlus, America's master in the art of soaring; the members of the Police Department showing contented faces, for nothing had happened. This flight and everything connected with it, will always be one of my dearest memories.

I should like to mention a little episode which gives a good characterization of the quick-minded New York boy and future business man. As it usually happens on such occasions, somebody starts to ask for an autograph. This time I was approached by a boy, and I complied by writing my name on his note pad. He was beaming with pride, and hundreds of envious boys looked on. If they only had a piece of paper like the other had.

Finally one of them approached the happy owner of my autograph and asked him for a small piece of paper which was flatly refused. He begged and begged, but no results until he offered a penny. Short reflection on the part of the proud pad owner and the transaction was made. The other boys seeing this, started a run, and in a few minutes the entire pad was sold. I kept on giving autographs until I was called to more important things.

But I shall never forget the disappointment of two boys who kept shouting "Mister! Mister," with tears in their eyes, showing with outstretched hands their little piece of paper. To have paid one penny for a meaningless piece of paper was bad business, and besides not to have gotten the autograph. That was probably life's darkest moment for them.

The evening of the same day my autographs were sold and resold for five cents apiece, a dime being the price for a special clean one.

Today new events are taking people's interest, and the slips of paper with my autographs are probably slumbering unnoticed in some corner — that's New York.

TWELVE COMMANDS FOR SOARING PILOTS

By Wolf Hirth

1st Command

Whoever wants to become a soaring pilot must have a pure and strong desire to make the heavens his second home — as the seaman, the sea.

2nd Command

And as the seaman must know and love his element, the water, thus must the soaring pilot know and love his element, the air, with everything that is in him; its winds, clouds, storms, and dangers.

3rd Command

He must fly for flying's sake.

4th Command

But he must also have an eye and a heart for the beauty which flying opens up to him in the blue expanse of the sky with its radiant mountains of clouds and the new strangely changed earth; otherwise his heart remains empty and he would be blind with seeing eyes.

5th Command

And he must want to know his element, the air, better and better; he must also be an investigator eager for knowledge so that his flight leads to ever greater performances and opens up to him all possibilities of the air-sea.

6th Command

He must love the struggle with the forces of nature and there must be an obstinacy in him to be stronger than the storm and tempest.

7th Command

Never should he risk more than he can accomplish.

8th Command

He should offer a pure man to the pure element, air. When he climbs into his plane he should be in top form, bodily, mentally, and spiritually.

9th Command

The soaring pilot must know and control his plane exactly, as the seaman his ship, and the rider, his horse; he must know its flying characteristics and limits of performance, and its special inclinations and aversions.

10th Command

And as the seaman carefully cares for and maintains his ship, and the rider, his horse, the sail flyer must do the same for his plane. He must foster it, take care of it, and be fond of it as a living thing.

11th Command

He must gradually become one with his plane as if the wings were his own.

12th Command

One must be able to recognize soaring pilots not only by the white gull on a blue background, but also by the bright free glance, the ever helpful comradeship, and the complete lack of vanity and petty convictions. Then you can be found anywhere among the people and unite; you will form the beginning of a new nobility, and at the same time be the first citizens of a free, peaceful, and unified world.

Riding The Winds

By W. Hawley Bowlus

Editor's Note: This article first appeared in the April 1930 issue of AERONAUTICS.



W. Hawley Bowlus at the 1930 National Gliding Contest in Elmira, NY.

In the United States during 1930 thousands of young Americans will learn to use their wings in motorless airplanes. Their new thrill will come from riding the winds with no man-made engine to overcome the force of gravity.

It may not be too much to hope that some among the next year's crop of youthful glider pilots — and their number will soon be legion — will develop that "around the corner" idea to revolutionize aircraft design. The Wright brothers gained their first knowledge of aviation by experimenting with gliders. In turn they were rewarded with the first American glider record which, while unofficial, stood until 1929.

In those days a pilot enjoyed no comfortable cockpit. He lay prone on the wing and received nearly as much shock as the structure when the skids struck the ground.

Neither Orville nor Wilbur Wright used their gliders as toys. From early gliders they developed many principles of design incorporated today in the nation's best airplanes. The size and location of control surfaces necessary to handle a ship in the air then were uncertain. What load a given set of wings could lift was not known. Today, thanks to the Wrights and other pioneers, engineers can figure these things to a scientific nicety.

Although the Wright brothers' glider remained aloft at Kittyhawk nine minutes and 45 seconds, much of the time was spent in hovering over one spot, the glider motionless in the wind. It was a very remarkable flight. Since that time man has learned to use his wings to better geographical advantage and many glider pilots have sailed in their machines many hours and scores of miles.

Lt. R. S. Barnaby, member of the National Glider Association and a navy officer, a few weeks ago while a glider student at Cape Cod, flew 15 minutes, 6 seconds in a German

Prueffling, which corresponds to the American secondary glider for first-class flight.

Exclusive of Lieutenant Barnaby's record, the American duration record *officially* remained around only two minutes until October, 1929. The Wright brothers' flight, unfortunately, while accepted generally did not win an official recording by a glider association. Their flight is "authentic," not "official," as no officials of a national association were present.

Records are important only in that they indicate the possibilities of long flights. No matter what the National Glider Association nor the National Aeronautics Association nor the Federal Aeronautique Internationale declares to be the official record, the public always will hold in mind those achievements which surpass their predecessors and maintain against *official* later flights.

No American made flight compares with the world record of 14 hours and 45 minutes made recently by Lieutenant Dinort in Germany. Robert Kronfeldt at Gerfeld, Germany, recently flew 102 miles and reached an altitude of 9,780 feet. Kronfeldt literally "hopped clouds" to attain this enormous altitude. He utilized the up-wind under cumulus clouds. We in the United States must travel far!

Of course boys will want to try for records as soon as they learn to manipulate their gliders. The classes of glider records recognized by the N.A.A., to whose contest committee the N.G.A. officials are responsible, embrace duration with return to the point of departure, duration without returning, distance with return, air line distance, altitude and speed over a distance greater than one mile returning to the take-off point.

Recently the Department of Commerce listed in the Air Commerce Bulletin gliders among light airplanes. Certain regulatory rules were set down, including rules that involved strength and design requirements.

One thing should be borne in mind in regulating glider construction. Boys, anxious to fly, will build gliders in wood sheds throughout the nation. They cannot understand involved formulae, but they can understand a rule that says their gliders must be capable of supporting a load two and one-half times the expected load, that their glider must be approved and flown by some older, qualified pilot.

Involved regulations will cause one of two results, or both. Boys will follow the blueprint of an approved glider, or will adapt their own ideas and do "bootleg gliding" out of sight from curious eyes.

Today three classes of pilots' licenses may be won. The first certificate issued in the United States rests in Lieutenant Barnaby's pocket. By his long flight he qualified for a first-class license.

To win a third-class license, you have only to fly 30 seconds from an altitude, maintaining a straight course and making a satisfactory landing. This can be accomplished in a primary training glider.

(Continued on Page 24)

RIDING THE WINDS

(Continued from Page 23)

A flight in a glider of at least one minute from a height, including a full "S" turn and a satisfactory landing will win a second-class license.

But — for a first-class license, after having been launched by man power, you must soar at least five minutes above the horizon and land within 150 yards from the point of take-off. Not so easy.

There can be no comparison between the sensation of glider flying and that of riding in a motor-driven plane. After the first thrill of leaving the ground wears away pilots of power-propelled airplanes get no more thrill from flying than millions of Americans experience in driving their automobiles; less in fact, for automobile pilots face real and grave dangers on the nation's congested boulevards.

Always I have felt more secure in a glider than in an airplane. You become part of the machine. Its wings are your arms, outstretched that you may fly like a bird over meadows and across wooded hills. In an airplane, I must confess (and I have been a pilot for a decade) I always have the feeling I am hurrying somewhere, trying to keep pace with the world. Annihilating distance, demolishing time.

In a glider, however, I hover over the world with absolute control over my wings; subject to the whims of the winds, perhaps, but not caring whether I sail up or down, depending not on man-devised power to pull me through the air.



Colonel Charles Lindbergh seated in the cockpit of a Bowlus sailplane. Hawley Bowlus instructed Mr. & Mrs. Lindbergh in motorless flight.

We Americans are babes in the glider woods. German youths, whose glider flying technique surpasses that of any other nationality, have been sailplane flying since 1921. German boys have adopted glider flying with the enthusiasm that Americans play golf, applaud the successes of baseball teams, cheer a football victor and hiss the victim in a prize ring.

At one time during the year a group of Germans, members of the Rhoen-Rossitten association, meet on Wasserkaup mountain. There they have hangars, club houses and other facilities for handling large crowds and taking care of many

gliders. Throughout such a meeting, dozens of boys may be seen skilfully piloting their gliders over the hills. During one meet a youth flew — or sailplaned — from three to four hours daily for 24 days. Such practice as this produces the most skilled pilots in the world.

Whatever may be said of the German practice of teaching glider flying by having the student actually fly the machine from the beginning, their students certainly learn the "feel" of the ship in a hurry. Frequently German primary training gliders are constructed with all bracing omitted from the front of the pilot's seat. Therefore the pilot flies by his own sense of equilibrium, having no clue from a comparison of lines on the glider with a distant horizon as to his actual position in the air.

While the sailflying "movement" has boomed in Germany during the last nine years, as a point of historical accuracy it had its inception at Kitty Hawk in 1901, when the Wrights proved their ability to remain off the earth in a powerless heavier-than-air machine.

Air currents striking an obstruction, such as a hill, follow the paths of least resistance and move upward. This causes an ascending current, the source of energy for a sailing flight. By taking advantage of such conditions, a sailplane pilot can remain aloft a long while. We do not find such favorable conditions in the United States with the same ease German enthusiasts can locate them. This accounts in part for the fact that no American has remotely approached the world's gliding record.

I found recently on Point Loma, California, satisfactory conditions for sailplane flying. There rising currents sliding upward along the slopes of the point will carry a sailplane up 300 to 500 feet in a single ascent. My recent experiences there may hold a certain amount of interest further to elucidate the practical side of sky sailing.

When ready for the flight we transported the fuselage and wings of my sailplane on a trailer from Lindbergh field at San Diego to the tip of Point Loma, a precipitous tongue extending south to separate San Diego bay from the Pacific Ocean. When we reached a level space large enough to permit the crew to get a running start with the shock cords before sliding off down the brushy sides of the slope, we halted the caravan and assembled the ship.

The wind was not blowing as strongly as it had been during previous flights in the vicinity. Some among the crowd of officials and onlookers doubted the advisability of attempting to soar out over the Pacific, afraid the 9-mile wind would not support the long wings of the plane. We decided to chance it, however, and set up the plane facing into the breeze, which was blowing in over the ocean from the northwest.

Six students from a local flying school manned the shock cords. I took my place in the comfortable cockpit, my head under the leading edge of the wing. I felt the stick and waggled the controls. These resemble the conventional controls of any airplane — rudder flippers ailerons. The stick controls lateral and longitudinal stability, the rudder pedals steer the direction.

At my signal, the shock cord crew ran directly into the wind. As they reached the brow of the hill and disappeared down its side, the cords gradually tightened until they became stretched to their limit. The shock cord apparatus consists of 150 feet of heavy rubber cord, hooked at the apex of the V to the skid of the fuselage. Contrary to the usual way of launching, the plane was not held back by any device. It merely rested on the ground.

At the moment the cord reached its elastic limit the plane began to move forward. Within three feet it took to the air and by the time it reached the launching crew had risen 30 feet. As I had planned, the ship sailed into an upward moving current at the end of 100 feet and immediately I was lifted 300 feet above the crown of the point.

Due to the mild breeze I had expected to turn immediately after taking off and land on the cliffs. Instead, during the first circle I rose nearly 400 feet and decided conditions warranted an attempt to remain up at least an hour.

While I was occupied during the first few minutes seeking updrafts which would send me up high enough to glide into my take-off point in case the breeze failed me, I could hear the ground crew discussing the take-off. Communication between a glider pilot and persons on the ground can be carried on without any difficulty. voices reached me with the clarity one would expect in casual conversation.

I continued to circle around the ground crew, now sailing over the rock-strewn breakers of the Pacific, then rising up above the shore of the bay. It began to look as though I would have no difficulty in remaining aloft. The plane climbed better and maneuvered more easily than it had on any previous occasion.

During the first 45 minutes I sailed about in sweeping circles, free from any annoyances sometimes experienced in the air, easily maintaining an altitude of about 800 feet. Before another two minutes had passed, however, the air became very bumpy. Little wisps of fog blowing in from the ocean cast shadows on the surface of the water and on the hills. These cooled the air beneath. Where the shadows came in contact with sunny spots, rather sharp updraft-downdraft lines were formed, and soon I would find myself rising gently in the sunshine, only to be bumped sharply downward as I sailed into a shadow.

At this time the ship moved about 20 miles an hour with the wind. Its reaction to the bumps generally was a rather severe tilting of the wings and I was forced to regain equilibrium by rapid shifting of the controls. Spectators below told me as I passed overhead that they could hear the wings creak when I ran afoul the more severe bumps. The creakings worried me because the craft had been in minor crashes during practice hops and there naturally was uncertainty about the strength of the structure by this time.

Ten minutes later the air became even more bumpy and this condition, combined with my fatigue, caused me to lose altitude until I finally dipped below the crest of the point, possibly 50 feet below my take-off level. Whether I could get back up again depended more on good fortune than my own skill. After nearly an hour, during the latter part of which creaking spars and sudden bumps added not at all to my peace of mind, I felt under considerable strain. Every minute for a quarter-hour had seen me fighting for altitude, only to lose in a few seconds what altitude I had gained.

From my lower position it would have been impossible to land on the ocean side of the point. The cliffs reach out into the Pacific, dropping the last 30 feet straight into the water. Waves were breaking over the cliffs and a water landing would have destroyed the plane and made my rescue very difficult indeed. While I could have crashed the plane into the bay side of Point Loma, I had hoped to avoid this indignity.

In losing altitude, I fought even harder to remain in the air. My fatigue became almost overpowering. The nervous strain in combination with the physical exertion complicated the situation by making it impossible for me to exert such flying skill as I may have. Consequently I lost many precious feet merely because I could not take advantage of the occasional favorable rising currents through which the plane passed.

The fact that I have had long experience as a pilot of motored airplanes did not help me to meet these problems. A flier has only to open the throttle a little wider, nose the plane upward and climb on through a downdraft. With a sailplane there is no motor and consequently no possibility of lifting except to get into favorable wind or uprising currents.

Two minutes before the hour, members of the ground crew shouted down encouragement, but at the point of the hour a landing seemed imminent. I saw a little knoll ahead and as I knew I would find uprising currents just beyond I decided to try to glide over that hillock. I chose between destroying the plane by crashing into the hill or destroying it by submerging it beneath the blue bay waters.

Cautiously, as I approached the knoll, I pulled back on the stick. The nose of the plane rose slightly and as I reached the

near edge the bottom of the fuselage passed not more than four feet above the ground. My greatest stroke of good fortune lay in the fact that the knoll rose to a narrow crest. The landing skid almost touched a shrub as I dipped over the edge — but I had escaped for the moment. An upward current caught the wings and lifted me 300 feet up in one ascension to a level possibly 200 feet higher than the crown of Point Loma. From here I could have glided down into the wind to the starting point.

On reaching this new altitude I was able to relax again and study the cause of my near failure. I had been flying too far out from the most favorable lifting currents. When the wind died I had been left with only one maneuver, a glide down to the area where I might find these favorable conditions again.

After another 15 minutes the severe bumps and earlier flight induced a fatigue that becomes overpowering and despite the encouragement from the ground, I came in for a landing at the point where I had taken off. So narrow was the landing place, the glider came to rest with one wing hanging over a ledge. This made it impossible for me to exercise good lateral control. Fortunately the plane suffered no structural damage, but I was so fatigued I lay on the ground for some time.

Possibly an interchange of phrases has confused you. The terms "glider" and "sailplane," although applied to the same machines in many instances, are not synonymous. The sailplane is an advanced type of glider and can soar upward with the winds. It must be constructed with long, thin wings to give it birdlike propensities in the air.



Warren E. Eaton's Bowlus Albatross now on exhibit at the Paul E. Garber facility (formerly Silver Hill) of the Smithsonian's National Air and Space Museum.

Of necessity, gliders must be at once very strong and light. The best sailplanes weigh about 150 pounds, while gliders may be somewhat heavier. Compare these with the lightest airplanes, which weigh from 3,000 lbs. to several tons. A sailplane with its pilot will weigh less than a tenth as much as an airplane.

The cost? Very little. For less than a \$100 a group of boys may purchase plans and materials and build their own glider. "Professional" gliders from the nation's best workshops may be obtained for \$500. The cost element will permit many to fly gliders who cannot afford more expensive airplanes.

I did not achieve a sailplane with my first model. The first glider I built was a boyish product of 1910. With this I was unfortunate enough to win a school meet in Los Angeles. I say unfortunate, for I have never been the same since. To date

(Continued on Page 26)

RIDING THE WINDS

(Continued from Page 25)

I have constructed 15 gliders, not including that whose creaking beams sang to me through that bumpy afternoon. That was my first true sailplane, No. 16 on my glider list.

While this plane was produced by expert mechanics from an evolution of my plans developed over a period of 18 years, any boy with a few tools and some instruction can build gliders of sufficient merit to give him actual flying experience and many thrills. Having built his glider he can adopt the German glider training method by jumping with it off some convenient hill, or follow the American plan of studying the theory of glider flight and practicing with the controls before leaving the ground.

In learning to fly a glider as we in the United States have worked it out, the principal consideration is to find a hill facing the prevailing wind, with open fields below on which to land. Manifestly a hill with moderate slope should be selected. Then, with a wind of 10 to 15 miles an hour, the amateur can begin his training.

Glider pilots, taken from groups of boys too young to become pilots of motored planes, will become excellent fliers. They "get the feel of the ship" more accurately than when they depend on a power plant to pull them out of a difficulty. A "stall" in a glider near the ground inevitably results in a crash. Glider pilots become so expert they can sense the release of a glider from its shock cords even though they may not see the actual release.

The training glider is not the finished product one notes in a graceful sailplane, but consists largely in a broad wing fastened to a steel skeleton at the rear of which are located the tail control surfaces. When the inevitable occasional crash does come, there is no costly plane to rebuild. Yet the student experiences the same conditions he encounters later in the advanced type of plane.

Let me teach you some of the finer points of gliding. It's really very simple — and easy. After this lesson possibly you will understand why I predict the time will come when gliding will surpass golf in universal popularity.

Take your seat in the "cockpit." This is a rather frail seat out in front of the wing. Place your feet on the rudder bar. Take the "stick" in your right hand.

Ready? Remember, do not move the stick. This is the first lesson, and your only responsibility demands that you guide the glider straight down the field as the automobile to the rear of which you are attached by a 200-foot rope, gathers speed until it is sliding along 12 miles an hour.

Keep the stick in neutral. Don't pull back or you'll find yourself in the air. That's fine. Now you're sliding off to the right, so give it a little left rudder. It works just like an automobile steering wheel. When you run off the pavement to the right, you turn left again. Same principle, except that foot pedals take the place of a steering wheel. To turn to the left, shove out with your left foot.

Oh, you did give it left rudder? Too much? Well, I expected that to happen. Too much rudder and you swung clear away of the flight line. Give it a little right rudder, then. Now you're oscillating. Can't be helped first time out, I suppose. You're over-controlling, but we'll dampen that out on the next flight.

That's better. Now you're in line.

So we drive down to the starting line and repeat the process. If you can guide the glider in the rear of the automobile this time, you are ready for your first towed glide.

Use your elevators now, but don't forget to coordinate the movement of the elevator and rudder. No use rising from the ground if you don't glide the plane along the path you want it to go. You learned to guide it straight on the ground, now you must keep it level in the air.

Away you go. The plane gathers speed — and soon takes off without any help from you. It makes short hops the length of the field. As you pull back lightly on the stick, which pushes the nose of the glider into the air, you leave the ground, only to settle back again as you shove the stick forward. That's really all there is to flying.

An instructor sits on the back of the car, megaphone in hand, and directs the student while he learns to keep himself steady in the air. When a student first leaves the ground in a glider, even if for only three or four feet, he usually overcontrols and shoots the machine up into a stall or steers it suddenly away from its path. That is the reason why, in teaching students, I have them practice constantly on the elevator and rudder until they can keep the ship level about a foot above the ground along a straight line the full length of the course, or approximately a half mile.

Teaching gliding to enthusiastic boys and patient older men proves very interesting. I had a student a few months ago who was 55 years old. He had been interested in aviation for some years, but for the usual reasons never had learned to pilot a plane. Gliders appealed to him, however. On his 15th towed ride across the flying field, he was taken into the air to an altitude of 25 feet, where suddenly the towing rope was released. He landed without any help. The average student in a powered airplane seldom can make a landing unaided on his 15th flight.

As soon as a student gains enough knowledge to fly and can maintain even flight across a field at an altitude of 10 to 15 feet, he is ready to go up to 30 feet for a fast flight and quick release. It is at this point that he really begins to learn something about glider flying. By quick release instruction I mean that when the student attains a flying attitude at an adequate elevation, we release the rope quickly. The student must maintain his speed and climb a little before coming in to land. I devised the quick release method to prepare these boys for the shock cord launchings they will experience when ready to shoot from hill-tops over valleys a long distance below.

If a student does not have the "feel of the plane," does not know by instinct and feeling when the release comes, he is liable to stall the plane and crash to earth. Such an experience from the low altitude at which a towed glider holds no serious consequences.

After the quick release instruction has been mastered, the student is ready for his first flight in a sailplane. Prior to his sailing flight, unhampered by a towing line he has made no right or left turns. Not knowing the things an American boy learns on the ground, the German student generally will find himself in trouble with his controls unless a strong wind is blowing or ground conditions below permit a soft landing.

From Maine to Florida and from the Atlantic seaboard to California, boys are taking to gliders like the earlier generation took to bobsleds and skates in winter. Gliding, however, is an all-year-round sport. Boys approach it in various ways.

The one who builds his own machine, either from home made plans or those furnished by some qualified glider engineer, should take a course of instruction, from a recognized glider school or work out his plans carefully before permitting himself to be launched from a hill into the air. The ground appears very far away to the novice, and unsettled conditions of mind contribute not a little to glider accidents that sometimes befall amateurs.

If he proceeds sanely, no harm will come to him. Unless he can attend some recognized school, the next best method is to take his glider to the top of a hill and there, the glider firmly staked down in the wind, work all his controls and learn how much they have to be moved to nose the ship up and down or restore lateral stability.

Our glider progress, while yet far behind that of Germany, must be made through application of trial-and-error methods. To those who would trust themselves in these gravity-defying contraptions I would give one word of assurance: they are safe. I find record of only four glider fatalities in the world to date.

BAKER-McMILLEN

TRAINING GLIDER

By R. E. Dowd

Editor's Note: This article first appeared in the October 1930, publication of AERO DIGEST.

The well-known woodworking firm, Baker-McMillen Company of Akron, Ohio, first attracted attention as manufacturers of gliders when the "Akron Condor" or "American Darmstadt" made its appearance about a year ago. This highly developed soaring plane was the result of the designing ability and experience of Frank Gross, formerly of Darmstadt University, Germany. The machine, under the skilful handling of Dr. Wolfgang Klemperer, gave a splendid account of itself. The builders, however, felt that its high cost, and its unusual refinement of design, which required experienced piloting, were not in keeping with present American demands for a commercial glider. Consequently, the design was not placed in production.

The builders were equally certain that the three-stage system of training so firmly rooted in Germany, — namely, the Zoegling or primary, the Pruefling or secondary, and the Professor or soaring, — would not be adopted generally in America. They reasoned that the only real excuse for a primary type's existence was its low initial cost and maintenance. From a performance standpoint the secondary seemed even better suited for training, giving the student pilot an added feeling of security because of its covered fuselage. Similarly, the soaring planes, unless made ultra-sensitive and responsive to control, could be handled by student pilots. In short, it was concluded that an all-purpose, or general utility, glider could be produced which would be suitable for training the student right through into the soaring stages of his training without change. When finally additional refinement was desired, a simple change to special large span wings could be made and the student would be able to cover his entire course by the use of a single machine of moderate price, with perhaps the added cost of a pair of soaring wings in the extreme case.

Such a large order all in one machine was a new experience for Frank Gross, designer, but the Cadet II now stands as evidence of how well he has met requirements. It is not a primary. It is not a secondary. Neither is it a soarer, but it is all these at once — a masterful compromise — an all-purpose training glider.

Recently at Elmira, N.Y., Pilot John O'Meara soared in a Cadet II for an hour and thirty-eight minutes. Three flights were made, each more than an hour, and each terminating only when the wind fell below six miles per hour velocity. At Akron, a group of students have been trained through a series of more than 500 flights without mishap. A glider club of girls, employees of the Goodrich company, have been flying a Cadet II regularly.

The Cadet II has many interesting features of construction. It is of the high wing, enclosed fuselage, monoplane type. The

wings are braced to the fuselage by streamlined steel tube struts, permitting easy assembly without rigging. For reasons of simplicity the various component parts will be described separately.

Fuselage and Landing Gear

The entire structure is of 1025 specification welded steel tube construction. Four longerons are used, and the mounting for the plane is carried up from the two main stations in triangular form, thereby minimizing interference between fuselage and wings. The side frames of the fuselage are designed around the familiar Warren type of truss. The pilot's cockpit is large and roomy. A canvas seat is laced to structural members, giving both comfort and strength with low weight. At the front the longerons meet at a common point which is covered by a plate welded in position. This plate supports the nose hook, which is designed for automatic or manual release. A monowheel landing gear with peripheel brake is provided. Loads taken by the wheel are transmitted through the fuselage and struts to the wings. Steel tube wing tip skids and a rubber sprung tail skid complete the landing gear.

The Wings and Tail Surfaces

The wings are built up entirely of wood and fabric. Double spars of spruce are used, braced together with cross braces of T-section spruce for torsional rigidity. These braces are securely gusseted to the spars at panel points. The ribs are of a special profile developed by Dr. Lachmann of Germany. Originally the Gottingen 535, the airfoil was modified by Dr. Lachmann to a two spar section. Further changes have been made by the designer, Dr. Gross. The nose is covered with plywood. The wing fittings are chrome-molybdenum steel, and wing connection fittings have been designed to a factor of safety of 20. Nickel steel bolts to specification 2330 are used. The wing structure has a safety factor of nine, although the Department of Commerce requires only six over the high grade of attack conditions.

The tail unit is entirely of welded steel tubing covered with fabric. The controls are generous in size and are effective at low speeds.

The cotton covering of both wings and tail is coated with five coats of dope. Regular coloring consists of silver fuselage and tail with orange wings, although special colors may be had at added cost.

The aileron control is through push and pull tubes, preventing the reversing of controls by improper hooking up. Elevator and rudder control is effected by the usual type of flexible cables.

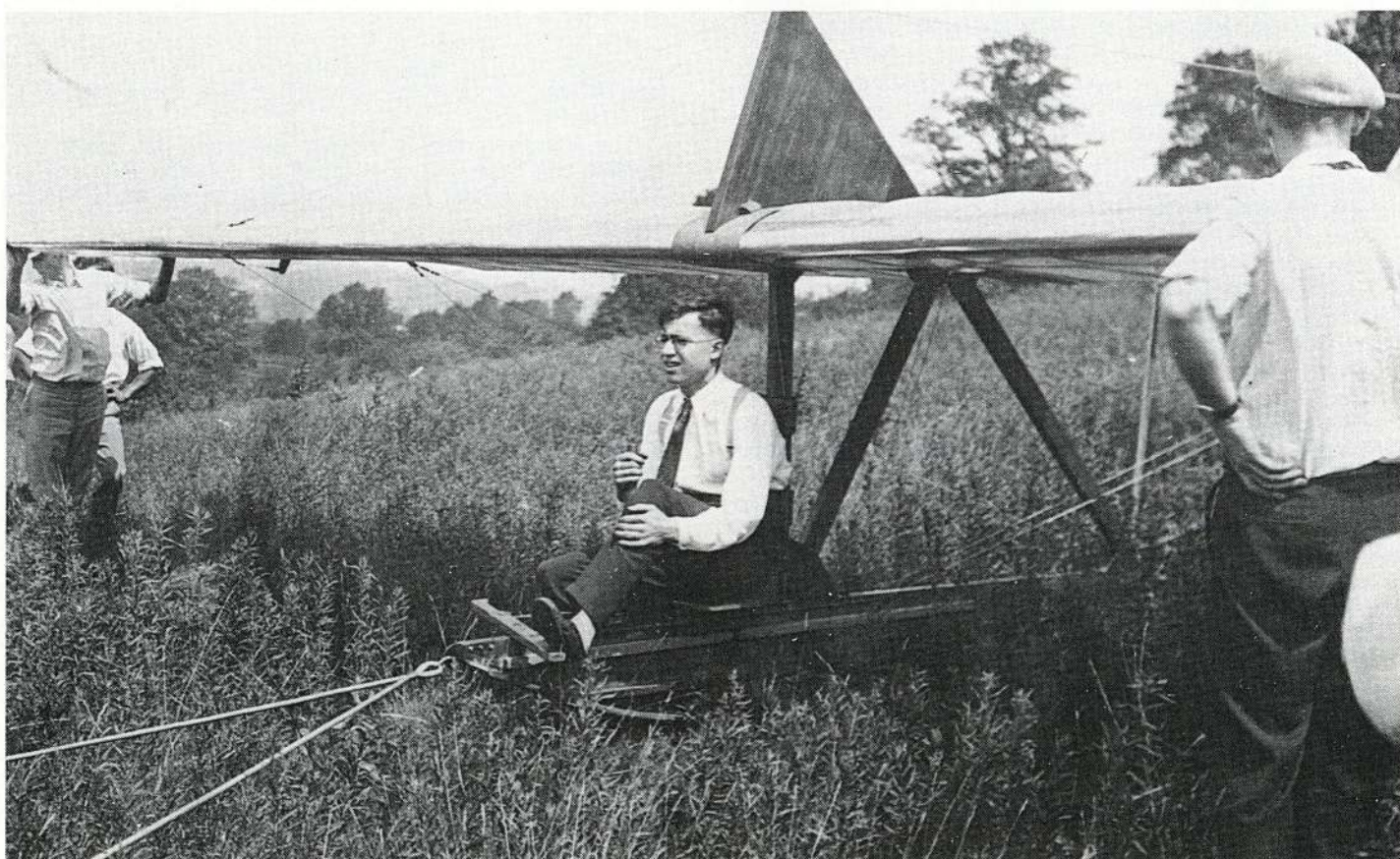
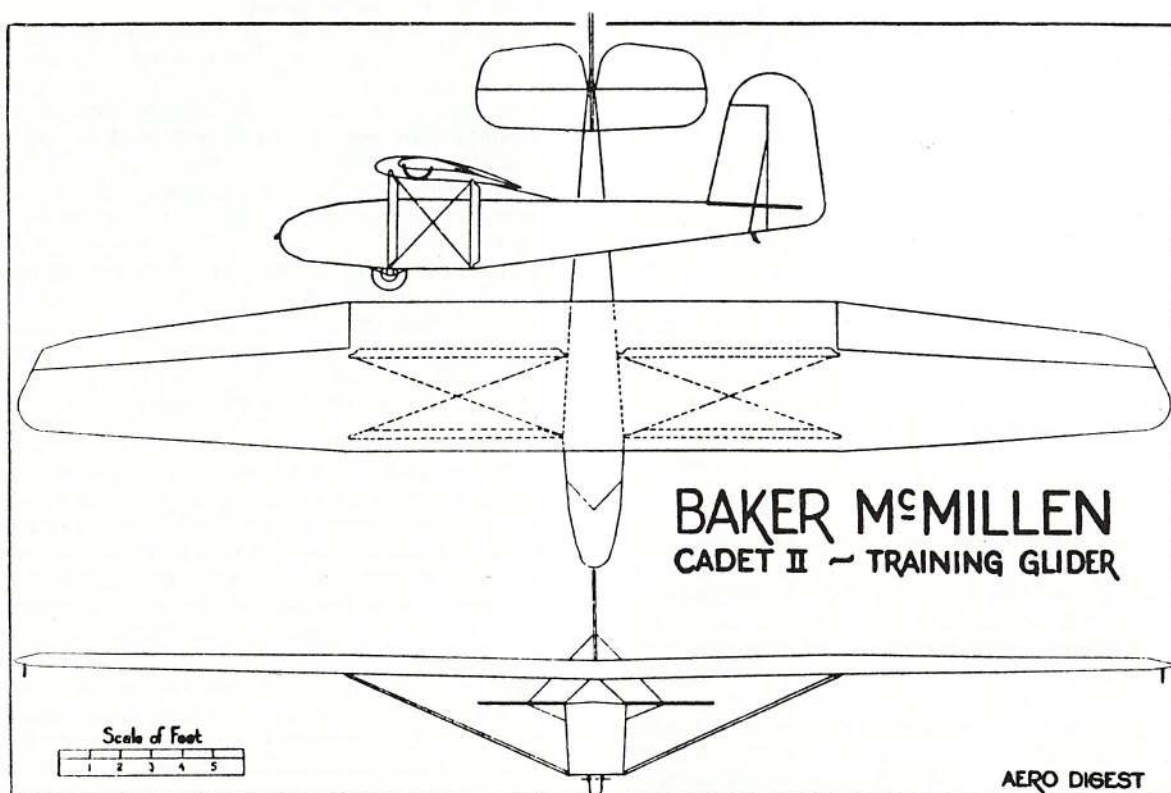
The angle of incidence of the root wing sections is plus five degrees with the angle of flight under best gliding angle conditions and 15 degrees when the glider rests on the ground on wheel and tail skid.

Span	37 feet 6 inches
Length	18 feet 9 inches
Height	4 feet 6 inches
Weight empty	237 pounds
Weight loaded	407 pounds
Wing area (incl. ailerons)	162 square feet
Wing loading	2.51 pounds per square foot
Stabilizer area	9 square feet
Elevator area	8 square feet
Fin area	5 square feet
Rudder area	9 square feet
Sinking speed	3¼ feet per second
Gliding angle (actual)	1 to 15
Shock cord launching level	
ground	1,200 to 1,500 ft.
Altitude	100 feet
Duration	20 to 35 seconds
Soaring record to date	1 hour 38 minutes

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BAKER-McMILLEN CADET

(Continued from Page 27)



Dr. Frank Gross seated in the Akron Glider Club's 1929 Baker-McMillen Primary Glider.

Alleghany Soaring Flight Expedition — September, 1929

By Wolfgang Klemperer

Editor's Note: A letter taken from the files of the National Glider Association in the Museum's archives.

The National Glider Association of America has expressed its desire of organizing in 1930, National Soaring Flight Contests. Although it is expected and hoped that the development of soaring flight will concentrate in many localities in the United States and that contests will eventually be held in several such places, immediate need is felt for an expedition of the suitability of the Alleghany Mountain Range because of its accessibility and central location. An expedition is therefore being prepared through cooperation of several agencies. This expedition consists of a permanent staff of eight members, vix:

Mr. Donald F. Walker, Mgr. National Glider Ass'n,
Detroit, MI
Dr. Wolfgang Klemperer, Goodyear-Zeppelin Corp.,
Akron, OH
Mr. Frank Gross, Baker-McMillen Co., Akron, OH
Mr. Wallace, Baker-McMillen Co., Akron, OH
Mr. Walter Mosebach, Goodyear-Zeppelin Corp.,
Akron, OH
Mr. Wm. Bodenlos, Goodyear-Zeppelin Corp.,
Akron, OH
Mr. Robert Moran, Akron, OH

This number will be temporarily increased by other glider enthusiasts joining the expedition in various stages.

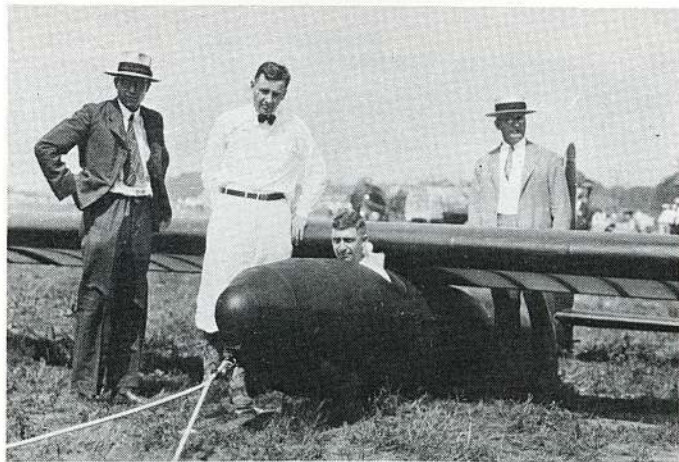
The expedition will take along the Soarer "Condor", a high performing glider built by the Baker-McMillen Co., headed by J. A. Sperry, former U. S. Army flyer, to the design of Mr. Frank Gross and recently test flown by towing it from a Goodyear blimp.

Transportation will be provided by four automobiles and a trailer for the glider. It is possible that other soaring machines may accompany the expedition and any groups that may be desirous of joining with a high performance machine will be highly welcome and invited to share in the experiences of the expedition.

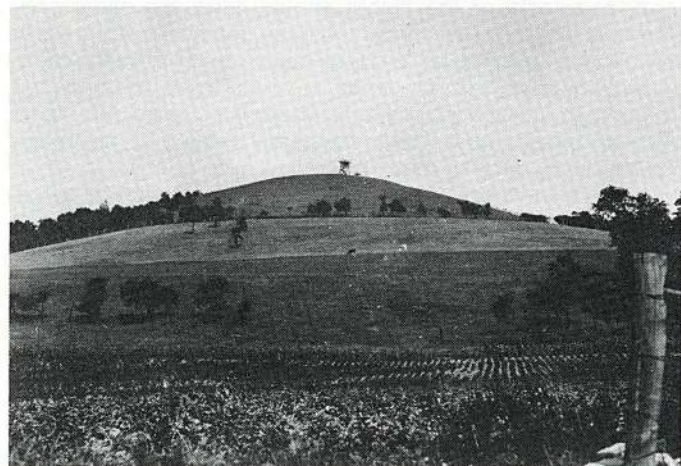
The body of the expedition will leave Akron on the morning of September 21 and proceed via Steubenville to Uniontown, Pa. They will establish a camp base at what is known as Dunbar's Camp on Chestnut Ridge about three miles north east of the Summit Hotel on the 2,500 ft. base of the National Pike, Uniontown-Washington, about 6 miles from Uniontown. Telephone at the camp is 5208 Ring 11 Uniontown. The camp is made available thru the courtesy of its owner, Mr. Harry Whyel. Immediately adjacent to this camp is a bald knob with an observation tower. This bald knob will serve as a starting point for the shock-cord launching of the glider.



Chestnut Ridge near Uniontown, PA.



Left to Right: Standing, Dr. Frank Gross, Jack Sperry and H.B. Sperry. Wolfgang Klemperer in the cockpit of the Akron Condor.



Bald Knob with the tower.

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ALLEGANY EXPEDITION

(Continued from Page 29)

Although this place is thought to be quite suitable for this purpose it appears quite hazardous for landing in the present condition, so that it is anticipated that most of the flights will involve considerable transportation for the return to the base. The road from Summit Hotel to the Camp is in driveable condition although rough.



Summit Hotel at 2,400 feet on the National Pike.

Flying will depend entirely on the weather and especially on the wind. The best condition is expected with west or northwest winds. The starting point being on "2nd Ridge", it will be necessary to fly across the first ridge several miles in front or to sneak through a gap to the northwest. Landing facilities for other than high performance ships must also be considered as hazardous, the surrounding valleys being wooded.

No facility for landing of powered airplanes are at present available in the immediate vicinity; the nearest airport being that a few miles south of Uniontown.

At the camp the expedition will be equipped with facilities for minor repairs, electric light, photography, motion picture apparatus and a portable radio set as well as a weather report receiving set of the Radio Corporation of America.

The post address of the expedition and its members will be Summit Hotel Uniontown, Pa. Tel. 5278. Freight and express shipments addressed to the expedition will be handled through the Union Auto Supply Co. in Uniontown, Pa. Tel 104.

In case some of the flights should carry the glider considerable distance away from the base, members of the party will follow in automobiles and they may be away from the camp for several days. In such cases or when flights are resumed from other starting points than Dunbar's Camp, the hotel office and the camp will be immediately notified by telephone or wire. They will also notify the Union Auto Supply Co. Thus there will always be three places where information as to the whereabouts of the ship and party can be quickly obtained. The same agencies will be used as relay center in case communication between the glider pilot and the automobile party gets lost.

The expedition is hoped to be extended for approximately two weeks.

Visitors interested in soaring flights will be welcome. Although no prediction or promise can be made about the activities. Those desiring of roughing it may secure temporary quarters at the camp provided they inquire ahead of time. However, more convenient accommodations may be had at the Summit Hotel. A good hotel is also available in Uniontown.

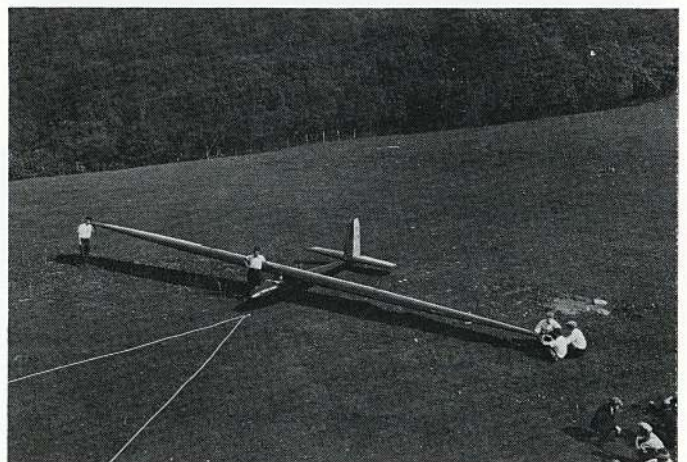
(SIGNED) KLEMPERER



Wind observation tower and radio car on Bald Knob.



Testing the wind directions by smoke bomb on Bald Knob.



Ready to bungee cord launch the Akron Condor at Bald Knob.

PLANE SAILING

By B. G. Reed, Engineering Dept.

Editor's Note: This edited article first appeared in the October 20, 1935 publication of the Northrop Corporation, Hawthorne, California. Mr. Reed is retired and now living in Fort Worth, Texas.

Having been more or less in on the ground floor in the revival of the gliding sport in the U. S. A., the chief ink spreader of Plane Talk asked that I write a brief review of my experiences in the highly exciting sport. I'm not sure whether the following recitation of events will be of interest, as I am writing entirely from memory, and may be wrong in certain dates. However, I will strive to keep the sequence of same in their proper order. Further, I hope that I am not too tiresome in the use of the pronoun I and we, but both fit into the picture.

So, feeling that I may be able to add some incidents of interest to the story of this great sport, let's take off.

In my opinion, we must give E. S. Evans of Detroit our thanks for inaugurating the gliding sport in this country. While in Germany in 1927 Mr. Evans and his sons with their cameras obtained many pictures of the soaring contests taking place at that time. Returning to the U. S. A., these pictures were shown to an engineering group at the University of Michigan, and almost immediately a Glider Club was formed with Prof. Franklin in charge. In the winter of 1928 two training type gliders were built, having the conventional wooden A frame, and hard wire external bracing.

There was but one hill, an elevation of some seventy-five feet, in our vicinity from which to make a take off. The prospective pilot would get a few shots on the level, and then, having mastered the rudiments of control, would attempt to take off from the hill. Usually these first flights would end with some broken wires and perhaps a rudder bar. The university was kind enough to give us a work shop, and we needed it. The repair work got monotonous, and the snow made the hill gliding more work than pleasure. We then went to Barton Lake, near Ann Arbor, and tried towing the glider with a car, the ice making an ideal place for our activities; 300 feet of $\frac{3}{8}$ " rope was used as a tow rope. When the student could keep lateral and rudder control we let him fly and soon the whole group could do 360's and make good landings. We found that many of the boys who were slowest to fly, became the best pilots, while on the other hand, one or two who were most proficient at first never improved. We used the ice for a tarmac till spring, even ran the tow car onto the ice over planks, using a tractor to get it back to shore. Next we started to fly from airports and our group of approximately thirty members was the first to use the tow car as a method of training. Mr. E. S. Evans was instrumental in forming the American Glider Society, with an office in Detroit.

A group started a glider plant at Orion, Mich., building training gliders. Meanwhile other gliders were being built on the Pacific Coast. These were all training gliders and the Evans I believe, had a metal A frame.

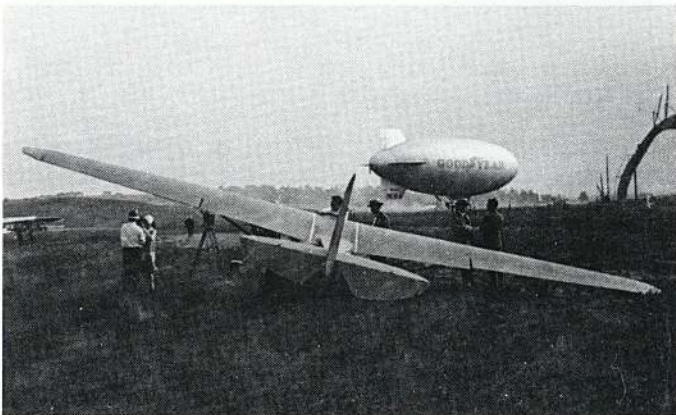
Soon a race was on, to see who would be first to get the first glider pilot's license, requiring a 30 second flight from a hill with a shock cord launching, which all seems very easy now. It was not so easy then, as we had no hills of any height. Out here on the Coast, and elsewhere in the country it should have been simple. These gliders had a gliding angle of at the best 6 to 1, and a sinking velocity of 5 feet a second or more.

I think a young lady in California obtained the first license, while our group got the next in order, my own being number ten and several had me beaten in time. I do not recollect any flight of over 40 seconds' duration, so you can see that the thirty seconds' time required was not so easily obtained. With a tow car this was simple, but with "ant hills" to launch from it was an entirely different story.

During the early part of 1929 the Franklin brothers and a

few of the club members built a taper wing job, wood wing, fabric covered and a tubular fuselage, the first one of its kind built in this country. We left the fuselage uncovered so that we could detect tubing which might be bent in handling.

Next we built a trailer and spent the summer flying at the air meets in New York and Massachusetts. The Department of Commerce gave us a license, number 9491, and that remained the name by which our ship was known. I believe our ship, 9491, had more flying hours than any other glider built with the possible exception of a glider built by a group in Detroit. We finished up in Albany, N. Y., and I got a chance for a free ride back to Detroit in a Stinson. At this time "Wally" Franklin made a tow flight, behind a plane, the first attempt in this country and perhaps the first attempt anywhere. Since then airplane towing has become quite common. We next attempted towing behind one of the Goodyear "Blimps," but that proved to be far more work than pleasure. We had orders for six gliders, and started building the Franklin P. S. 2, of which some 40 or more have been built to date.



Getting ready to tow the Franklin glider behind the blimp.

Glider clubs were started throughout the country, a great number located here on the Pacific Coast.

Gliding contests were held at the National Air Races, and at many other places throughout the country. We had a number of famous pilots fly our ships, Frank Hawks, Miss Amelia Earhart, Lady Heath and others. Frank Hawks interested the Texaco Company in the sport and we sold him the "Eaglet" in place of 9491, which was smashed up on the day of delivery by a pilot who decided to show Mr. Hawks what a fine soaring ship 9491 really was. Our demonstrating pilot soared it into a pine tree and we said goodbye to 1,000 iron men. Frank Hawks made a tow from Los Angeles to New York but I doubt if he would like to have another such ride.

In 1930 we lost a boy in the first training glider we built, and resolved then to discontinue building gliders with wooden fuselages. We lost another in a Franklin, due to heart failure. The Glider Club at Ann Arbor has 50 to 100 members every year, with no fatalities since the first, and fly nearly every day, having quite an abundance of sport.

The group in Detroit at Detroit Aircraft built a secondary and flew it for a year or two. Two of the group brought the ship out here but it was cracked up a few months ago, and I doubt if it has been repaired and flown since it was the only ship having as much flying time as the demolished 9491, our original ship. This Detroit ship holds a unique record. B. Wilson flew it off a Detroit airport on 800 feet of cable, hit a thermal and reached an altitude of 2,000 feet, staying aloft for an hour or more. It was a freak flight, but it has not been equaled.

Dr. W. K. Klemperer, an early bird from Germany, was instrumental in having the Akron "Condor" built. He flew it and created a great deal of interest in soaring flight.

(Continued on Page 32)

PLANE SAILING (Continued from Page 31)

In 1930 Elmira, N. Y., was investigated and chosen as a site for the National Glider Meets. Elmira is ideal, two ridges there 700 feet high are Big Flats and South Mountains, with landings possible almost anywhere. East Ridge is very rough with few good landing places. Nineteen thirty two saw the first two place job, built by Dr. Frank Gross for the Sperry Co., Akron, Ohio, and I understand Gross has a four place job there this year.

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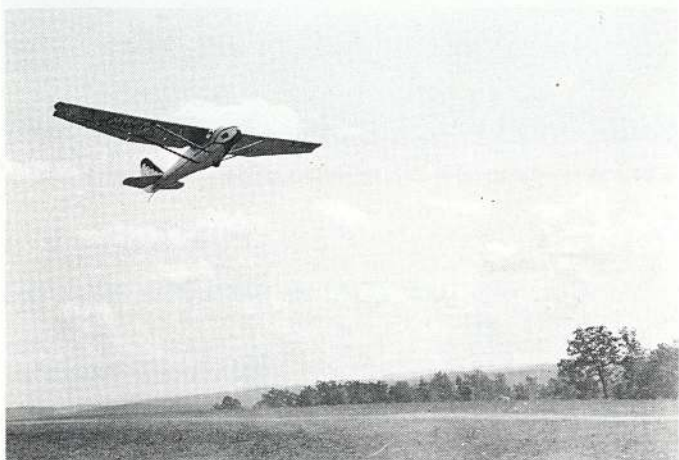
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Big Flats, N.Y.



The Gross four place glider at the 1935 National Gliding Contest.



The Gross two place glider SKY GHOST at the 1932 National Gliding Contest.

We had two structural failures on the Franklin. Wally pulled a wing off at 2,000 feet, and jumped with his chute. Strange as it seems, that was the first time Wally had worn a chute while airplane towing. The fuselage from that ship was one of the three gliders which were recently towed from Florida to Cuba.

I tried to recall the names of the members of the first group with whom I had so much fun out of the sport, and find that most of them are in the aviation game.

(Ed: Mr. Reed listed R.E. and Wally Franklin, Hawley Bowlus, the Stoughton brothers, B. W. Wilson, Don Palmer, John Roda, and Joe Hanincheek).

As more good sites for soaring are found we shall probably see more interest in the sport. It is rather expensive for an individual but a group can have a great deal of fun, if they weed out the fellows who insist on smashing a ship every time they get a chance. Out here we have some pretty fine locations for thermal soaring, and so will have to see what can be done with them.

National Soaring Museum
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Elmira, N. Y. 14903