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Cecil M. Craig's

Adventurous

Mountain

Wilderness

Outlanding

in the Snow



Above - The LK-10 is moved into launching position by Craig's crew and family members. Mt. Rainier in the background. Below center - The LK-10's instrument panel. Notice the Houdini doll hanging from the release knob at right. Right - Prior to take-off, tow pilot Linn Emrich, (l) and Craig's son Robert (r) help the suited-up Craig adjust his oxygen mask for high-altitude flying. (Jim Larson photos)

There are specific instructions on preparations for sailplane outlandings. It's part of the glider pilot's training syllabus. But Cecil M. Craig's December 13, 1967 preparations for his proposed record distance flight were a tad more extensive. The 44-year-old Seattle, WA, sailplaner had a heavy flight suit, electric socks and gloves, a freshly charged battery, two barographs (in case one failed), a sleeping bag, and emergency kit containing food, flares, yellow smoke bombs, road maps of Washington, Oregon, California, and Idaho, animal snares, and a compass, besides the usual good luck charms most sailplane pilots secretly carry. If you're going to soar the Cascade Mountain Range, with 6,000-foot average crests, and with higher peaks like California's Mt. Shasta at 14,167 feet, preparations are everything.

Craig planned to explore the possibility of climbing in a standing wave over Washington State's 14,410 foot Mt. Rainier. Then, he would transition into the jet stream, and skim south along and over the Cascades, all with similarly high peaks that divide Washington, Oregon, and California.

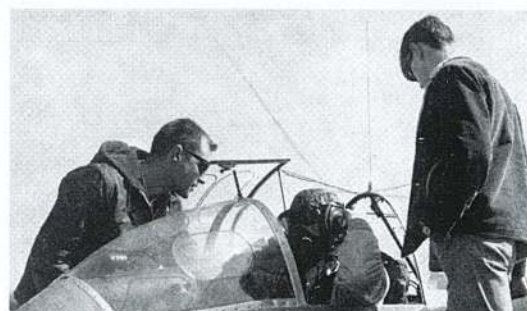
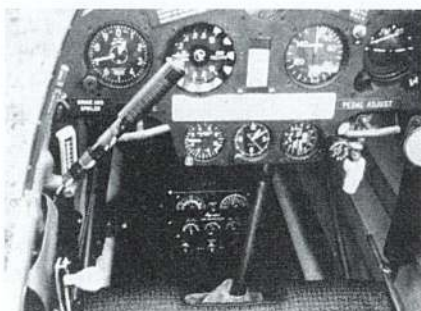
If that weren't enough of a challenge, Craig planned to do it in his vintage WW II trainer, a 27-year-old Laister Kauffmann 10A (military designation, TG-4).

This 30-year-old story is based on a much more detailed report, "Down the Cascade Range on a Wild Winter Wind," by Craig, and Marion Barritt, Renton, WA, that appeared in the

April 1969 issue of *Soaring*. (Photocopies of original article available from the NSM, \$5, including U.S. postage.) The necessary weather pattern was shaping up by Wednesday, Dec. 13. Winds aloft were generally from 5 degrees, and ranged in velocity from 13 knots at 3,000 feet to 90 knots at 30,000 feet. The north wind from Canada was producing a very dry air mass, canceling out the possibility of fog.

Craig was up at 5 the next day. Mt. Rainier was generating a classic mountain wave and with the wind at such high velocities, the jet stream was passing directly overhead. With paperwork completed, it was a "Go." Linn Emrich, Seattle Skyports operator, towed the LK off Enumclaw Airport at 8:30 a.m. Craig released at 11,000 feet at 9:22 in smooth lift, and in less than two minutes he was at 15,000 feet. "By the time I was at 30,000 feet, the barograph needle hit the stop. I was flying at 55-miles-per-hour indicated, (true air speed about 90) and pointing north into the 90 mile-per-hour wind to maintain position. "Outside air temperature, -40 degrees F but I don't think it dropped below 0 inside. I was tolerably comfortable," he wrote. At 10:30 and at 38,000 feet he turned the nose downwind and dove at a speed that he figured would put him below the then 24,000 foot (now 18,000) floor of the FAA-approved 50 radius, 45,000-foot window he was leaving. By 10:50 the LK was at Washington's 12,307-foot Mt. Adams, where Craig worked hard, climbing to the 24,000 positive control base. Then a 134 mph (ground speed) dash to Oregon's Mt.

On the cover:
A Bowlus Baby Albatross gets a
two-horsepower launch.
Unknown location and date.
11"by 14" Desert Soaring, Inc.
Color photo.



Hood. Leaving Mt. Hood at 12:10 at 22,500 feet, he arrived at Mt. Jefferson 25 minutes later, dropping to 17,000 feet in very weak lift. At 1:15, he soared past The Three Sisters peaks with a scant 9,900 feet, where he encountered heavy sink.

He wrote: "My leftover rabbit's foot, willed to me by the previous LK owner, Richardson, and my bushy-haired Houdini doll, whom I always look to for decisions as he swings from the release knob, must have been emanating good luck. I ran right into the elusive lift. I immediately chandelled sharply and, with the variometer pegged at 1,000 feet per minute, I gleefully climbed again to positive control base and scurried over the southernmost Sister." He started his 87-mile glide to Mt. Scott on the east rim of Crater Lake, which he had expected to be frozen at this time of year. He radioed his position and asked Klamath Falls, OR to notify his ground crew, with whom he had been out of contact since departure from Mt. Rainier.

At 2:40, when he arrived at Mt. Scott, his situation started to deteriorate. On the mountain's lee side, Houdini dropped down to the LK's floorboards and Craig started falling out of the sky at over 2,000 feet per minute. Crater Lake wasn't frozen, nor had it ever been in recorded history, he later found out. A landing there was out of the question.

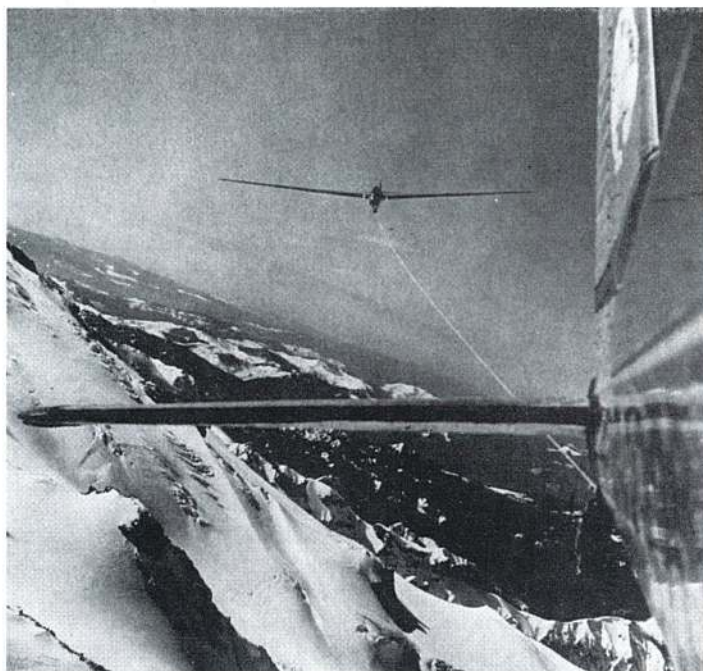
Struggling to make his way out, he knew he would have to land. And somehow he would have to clear the unfrozen lake. That was his primary concern at the moment, however, he had no idea of the hazardous survival and retrieval sequence that would follow. It would perhaps be one of the most bizarre pilot and sailplane recoveries up to that time.



Craig said, "I was about 1 1/2 miles inside the east rim of the white-capped, foaming lake. The west rim was obscured with wicked looking sprays of snow billowing straight up 1,000 feet or more. I knew there was lift over there, but I also knew there was no humanity, either. Klamath Falls radio would probably be unable to pick up my position, (low-altitude communications in the mountains were difficult) I would really be in trouble if forced down on the west side."

The LK battered its way slowly toward the east rim, though sometimes even with a true air speed of 115mph, the old warbird was standing still in the brutal headwinds. Finally he made the east rim and the snowy wilderness between Mt. Scott and Crater Lake.

Aiming for a clearing in the trees, Craig set up his approach. After a very short landing roll the LK settled in until the trailing edges were grazing the top of the powder snow. He was down on a snow-covered meadow, amid a swirling maelstrom at 7,900 feet ASL (above sea level). He was 268 miles and five hours and twenty-five minutes away from his release point. He wrote, "Despite the blizzard raging around me, I stopped for a



"Larson hung his body halfway out of the towplane for this shot, *Soaring*, April, 1969.

moment to hang my bushy-haired Houdini back on his usual spot on the ship's release knob before I climbed out of the ship."

Wading about 100 yards in snow up to his hips, he discovered a fallen tree about four feet above the snow line. Using it as a ridge pole he tried unsuccessfully to drape the canopy of his chute over it. "The wind was so fierce that it filled the chute and kept pulling it out of my hands," he said. He cut the shroud lines loose from the pack and dragged the canopy over a log and tied the lines to nearby trees and bushes.

His last radioed position message was only understood when FAA controllers repeatedly played a recording of the transmission. The LK was spotted by civilian pilot Marion Owens, accompanied by Rex Morehouse near Mt. Scott about a quarter mile east of the rim. The rescue plane dropped a sleeping bag and a food package. The latter broke open. Cans and packets were splattered through the forest, and the impact buried them in the snow.

Craig was relieved that he had been located, and thought that he would be helicoptered out the following morning. But if the weather turned bad, he would be marooned on the mountain for who knew how long? With that bleak thought in mind, he began plowing through the deepening snow for whatever he could find of the supplies. After pushing 200 yards through the chilling white expanse and not finding a single can of the buried food, he was exhausted. "Returning to my shelter, I finished tying it down and then packed snow all around the outer perimeter of the canopy, sealing it from the wind and snow, and crawled inside," the downed pilot said.

"After discarding building a fire in the heavy wind, I emptied all of my emergency equipment into my sleeping bag. I was afraid of losing it in the powder snow. I put the extra bag inside my own and, complete with flight suit and boots, I burrowed down into the

comforting warmth." It was minus 10 degrees F. With ice crystals forming on his face from condensation, he pulled his wool cap over his head to keep his face from freezing.

Although Craig didn't know it, help was already on the way. FAA officials had contacted Park Ranger Larry Hakel and four Klamath Falls residents, Bud Story, Walt Haring, Les Poterfield, and Tom Ive. They left Park headquarters at 7:30 pm on four Ski-dos. Two hours later they were at the Mt. Scott area where the glider was sighted. There, the ski-mobilers split up; one pair located a protected area and built a fire, while the other searched the open meadows between Cloudcap and Mt. Scott. They were joined at about 10:30 by a second party, Buck Evans, John Day, and Bill Pruitt, who brought additional supplies and survival equipment from Medford, OR.

Ive, one of the two searchers returning to the fire, spotted the glider. By following the snow tracks, he came across Craig's shelter.

"I was so tired," the glider pilot said, "I guess I dozed off from time to time. But around 10:30 I was jogged awake by the surprising sound of an engine outside my shelter and a light shining on the orange and white canopy of my parachute. Then complete silence." The glider man thought that his rescuer was afraid to ask if he was all right for fear that he wouldn't get an answer. Finally Craig yelled, "How are you?" From the outside came the reply, "I'm fine, but how are you? Cold? . . . Hurt?" Craig responded, "No, I'm not hurt; I'm very warm. "How about you?" Ive said, "We're pretty cold." Craig: "Well, you'd better come in to my shelter and get warmed up."

After all the rescuers assembled at Craig's shelter, they ski-mobiled the 12-mile return to Park headquarters. Craig said that the path was nearly impossible to traverse, with places where the snow was so high that they couldn't find the road. At times drivers had to notch out a path from a 45-degree



Craig starts on his great soaring and survival adventure. (Jim Larson photo).

solid bank of snow in order to form a step for the Ski-dos to run on.

The rescue party arrived at Park headquarters at 2:30 a.m. Then Craig was driven to Klamath Falls by Dick Suber, Deputy Director for Civil Defense, and Sheriff Lou Bogart. There, at 4:30, he greeted his wife Bettyjean, and sandwiched in an hour's nap before addressing the next problem: getting the glider off the mountain. Dick Foy, owner and operator of a turbo-charged Bell helicopter based at Medford, agreed to lift the glider out in three parts—fuselage and wings.

The weather had undergone a welcomed reversal. The sky was blue, the sun was shining and there was no wind. Ranger Superintendent Paul Larson accompanied Craig and the same rescue group, formed by Walt Haring, the Klamath Falls Ski-doo dealer, in an uneventful trip back to the landing site. They planned to disassemble the downed bird. No chance. "After pulling one wing spar pin, we broke off the puller bolt in the second spar pin. . . . We even cut away a portion of the fuselage so we could swing a hammer at it. But it still wouldn't come out," he wrote.



Mountain Rescue Team member John Day beside the survival shelter Craig fashioned from his chute. (Bill Pruitt photo)



**Where Craig landed, pictured the following morning.
M.R.T. member John Day on the snowmobile.
(Bill Pruitt photo).**

A one-piece airlift was the only answer.

The helicopter pilot was reluctant to attempt taking the ship out in one piece because it would be too dangerous. The glider would be too unwieldy in a flying configuration.

From material that they brought with them, Craig rigged a 50-foot polypropylene sling that he attached to the LK's wing spars. A 150-foot towline was cut in three pieces; two were secured to the tail and one to the nose hook. The tail and nose lines were slackened so that as the helicopter pilot began the lift-off, these fore and aft lines could be adjusted allowing the ship to be in a nearly level configuration.

"If there was a negative attitude the ship would tend to pull the helicopter down," Craig said in the *Soaring* magazine article. "If there was a positive attitude, it would tend to climb up, endangering the helicopter," he added.

When Dick Foy in the Bell helicopter arrived, Craig radioed him that they were unable to de-rig the sailplane, and would he attempt a lift with the sling arrangement? Despite the 8,000 foot altitude and the glider's weight, Foy agreed. However Craig gave Foy permission to release the glider if the helicopter or life were endangered in any way.

The first try was disappointing. Foy managed to get the glider about five feet in the air. Then the glider slowly settled back into the snow. Foy explained why in the *Soaring* magazine story: "Lifting the weight of the LK was well within the capacity of the helicopter, but the downwash from the whirling blades against the (gliders') wings was creating an additional 200 pounds of weight." Craig said, "During the next 15 minutes we worked feverishly stripping the glider of oxygen bottles, battery, ballast, all the equipment we could, about 60 pounds." Meantime the chopper circled overhead, burning off two or three gallons of fuel (at \$2.50 a minute, in 1967 dollars) reducing the load another 12-18 pounds.

When the ground crew hooked up the glider again a 10 mph wind started curling over the ridge causing a slight down draft on the glider and helicopter. Even lightened, Foy was having difficulty coaxing the combination off the ground and into the wind. He planned to fly slowly to prevent the glider from swinging around. But to make any headway in the 15mph headwind he encountered at altitude, he had to increase his speed to at least 30 knots. He opened the copter door to keep a constant watch on the ship. Craig said that there were times when the sling was completely slack and the LK was flying free under the helicopter. To further complicate the problem, the glider would

turn to the right and left so that Foy would have to jockey his helicopter to get over the glider, and slow it down so it would quit flying and settle into the sling.

Originally Foy thought that he could set the glider down at the Park entrance parking lot. However, he might have to release his charge if he got into trouble descending through the trees. Instead, he headed 20 miles into the valley near the park's south entrance, and carefully lowered the bird into several feet of snow in an open field.

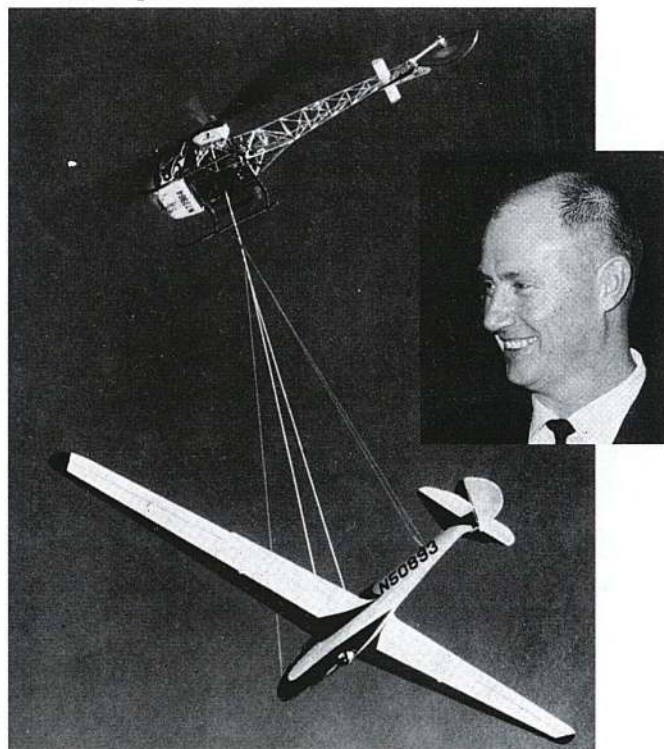
"Bettyjean, Robert and I found the ship about 7pm that night, and digging some holes, tied it down, fortunately as it turned out. Rancher Bill Brewer, told us the following day that during the night the wind was blowing so hard that it shook his house."

Next morning Bill and Gladys Brewer, owners of the field, bulldozed a road out to the glider so that they could pull the ship on the trailer and go to work de-rigging it. With borrowed tools, bucking bar, hammer, and a portable generator, the ship was finally disassembled, trailered, and pulled out of the field with a D-4 Cat.

"We headed back to Klamath Falls in a blinding snowstorm," Craig said. "There we joined my wife at the Franklin residence (my wife's sister's home) which was used as crew headquarters."

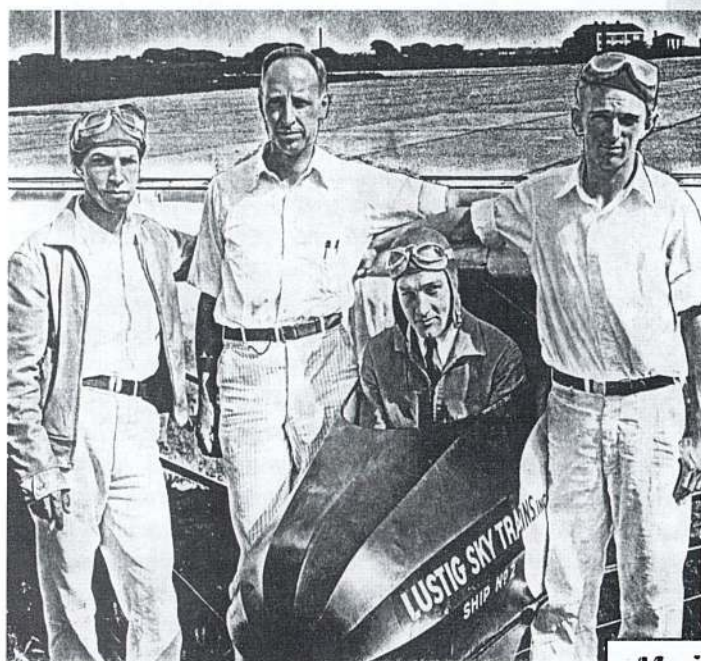
The 13-hour trip back to Seattle in blizzard conditions culminated a 1,300-mile, four-day retrieve. Craig ended by saying, "It necessitated chains on the car and trailer. It had been slow and easy. After all we had been through, it would really have been incongruous to have an accident on the way home!"

Soaring magazine editorialized, "It was a fantastic flight, one that took a lot of planning and a lot of courage. Someone, someday, will complete this epic adventure that Cec started, and when they do, it will be partly because of the wonderful example he has set for all of us."



**The LK-10 gets a lift out. (Cecil Craig photo)
Inset - 1969 photo of Cecil Craig.**

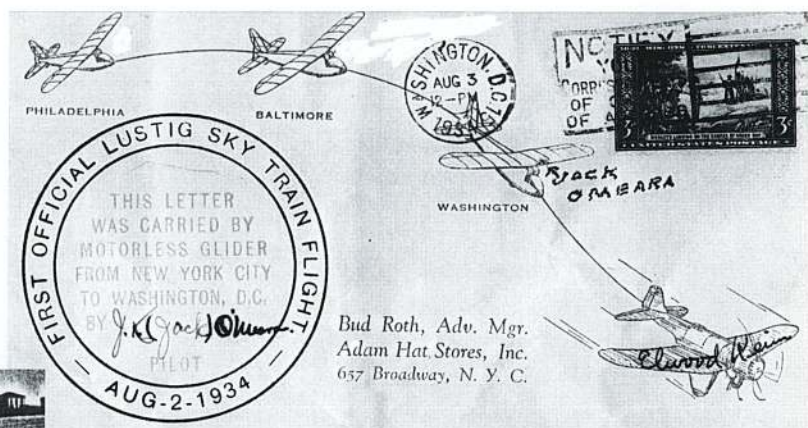
The Lustig Sky Train Flying The U.S. Mail: New York, Philadelphia, Baltimore, and Washington, by Glider.



Lustig Sky Train pilots: left to right, Stanley Smith, Ship No. 3, Roswell (R.E.) Franklin, Ship No. 4, Jack O'Meara, Ship No. 2, and Elwood Keim, tug-ship No. 1, a Wright J-5 powered Eaglerock biplane. (NSM Multimedia Archives).

The field of aviation in the 1930s was marked by an exuberance and limitless optimism that belied the economic depression of the times. Oceans and the axial Poles were overflowed. If it flew, someone, somewhere, would come up with a new application and the resources to try it. One of the most innovative experiments during that era was the use of gliders as cargo and mail carriers, and the development of so-called "glider trains."

In 1934, Lev Pavlovich Malinovskii of the Russian Scientific Technical Administration conceived the idea of using low-powered, freight glider-planes to solve some of Russia's long-distance, fast-freight requirements.(1) A fully laden glider would carry about a ton of cargo and be powered by a single 100-horsepower engine to assist the towplane on take-off. At altitude, the glider would release from the towplane and cruise on toward its destination under its own power. After several trials, the idea was abandoned because the gliders were underpowered.



Lustig Sky Train cover flown New York to Washington, D.C., by Jack O'Meara. (George Carpenter File, NSM Multimedia Archives).

During the same period, also in Russia, a bomber was refueled while in flight, using a rubber hose from an experimental two-place Groshev G-14 fuel glider that the bomber was towing.

By the summer of 1934, several crowd-pleasing dual and quadruple glider tows had been successfully completed at the Elmira Nationals. It was the fertile mind of glider champion Jack K. O'Meara that hatched the idea of a glider train delivery system to a succession of cities. Further, he convinced Elias Lustig, owner of the Adam Hat Store chain, of the commercial possibilities of such an enterprise (2). Much of the preliminary work had been done at the National Glider Meet that year in Elmira.

Several years ago, one of the three Sky Train pilots, the late Stanley Smith, gave the National Soaring Museum's philatelic advisor, Simine Short, a detailed account of the operation.(3)

Stan Smith's account mentions the weeks of detailed preparations that preceded the flights. They included routes, landing and take-off airports, three gliders, an airplane capable of a triple tow, as well as the selection of suitable pilots.

Arrangements were made to use Franklin PS-2 Utility gliders. They were designed and built by the University of Michigan's Professor Roswell E. Franklin, who would also be one of the train's pilots. By the end of July a few modifications, minor adjustments, decorations, and test flights had been made, and all was ready - almost.

Being a businessman, Lustig was not satisfied with merely putting on a sky train flight. He envisioned the

airborne train carrying cargo, like express packages. It was explained that the three PS-2 gliders were designed to carry only the pilots, not freight. If payloads in excess of the design limitations were carried, the ship could be subjected to structural failure.

It was finally agreed that each glider would carry a small parcel of private mail to be delivered by the pilot to the Post Office in the city to which he was assigned. Of course this was not the first unique mode of American air mail delivery. On Aug. 17, 1859, after one false start, John Wise took off in his 20,000

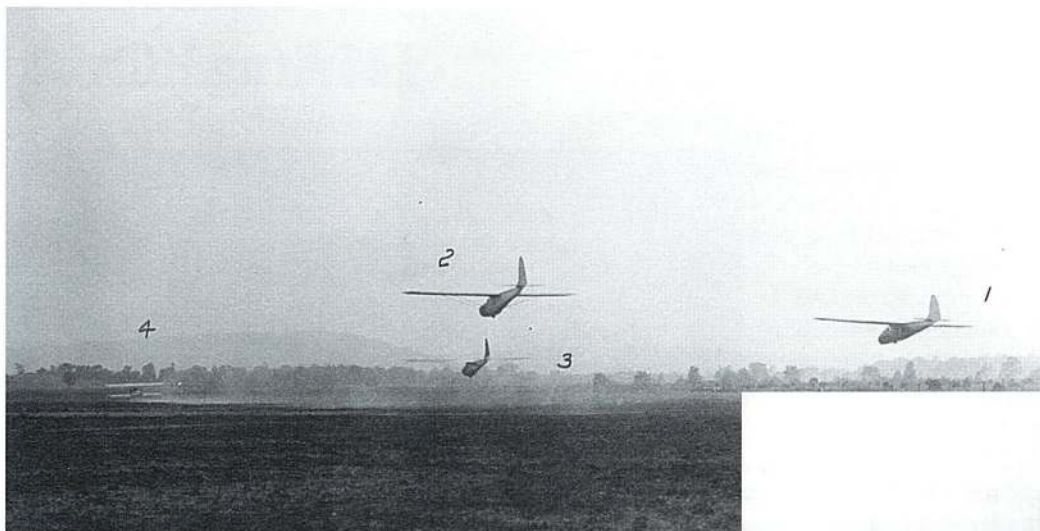
Mail Sky Train To Loose 'Cars' At Three Cities

New York—(AP)—The first aerial "mail train" is scheduled to fly from New York to Washington Monday, dropping off "cars" at Philadelphia, Baltimore and the White House.

A biplane and three gliders will compose the aerial train, under the arrangements being completed by Jack O'Meara, 1933 glider champion. O'Meara is said to have received Postmaster General Farley's promise of full co-operation.

Stanley Smith is to cut loose his glider over Philadelphia and Dr. B. E. Franklin of Michigan University will do the same above Baltimore. O'Meara hopes to land the third on the White House lawn while John Riggs, pilot of the plane, continues to Bolling Field.

August 1, 1934, N.Y. Times.



Left-first triple tow, Elmira, 1934. 1. Heath McDowell, 2. Warren Eaton, 3. Jack O'Meara, 4. Harold Bown. Below: First quadruple tow - Elmira, 1934, towplane pilot Harold Brown, Warren Eaton, Jack O'Meara, Richard duPont, Russ Holderman. (Loomis File, NSM Multimedia Archives)



cubic foot balloon "Jupiter" from the outskirts of Lafayette, Indiana (4). Aboard were 123 letters and 23 circulars, post-marked "Via Balloon to the Seaboard." Ballast problems forced the intrepid aeronaut down 4-1/2 hours later, and 30 miles from take-off, to outside Crawford, Indiana. Still, it was claimed as the world's first officially flown mail.

Meantime, an altogether different situation had become apparent. Smith said, "Somehow or other this information leaked out and it was the signal for every collector in the vicinity of New York and more distant points to try and enrich their collections with a few covers that were to be carried on the first Sky Train. We accepted our capacity loads, then called a halt to the small army of disappointed philately addicts."

On the morning of August 2, 1934, amid a battery of cameramen, the ships were wheeled out of Hanger # 4 at Floyd Bennett Field. The aircraft were positioned on the runway for the official start of the first Lustig Sky Train. The flights were scheduled from New York via Philadelphia and Baltimore to terminate in Washington, DC. Mail bags were tucked in their respective compartments, and "everything set in readiness for take-off," Smith wrote.

The following day, the *New York Times* carried a picture of the official send-off with the Mayor, the "Little Flower" himself, Fiorello LaGuardia handing a sack of mail to Jack O'Meara in his Lustig Sky Train Ship No. 2, for delivery in Washington. Mrs. Floyd Bennett looked on. A light drizzle had set in but forecasters called for clearing conditions to the south.

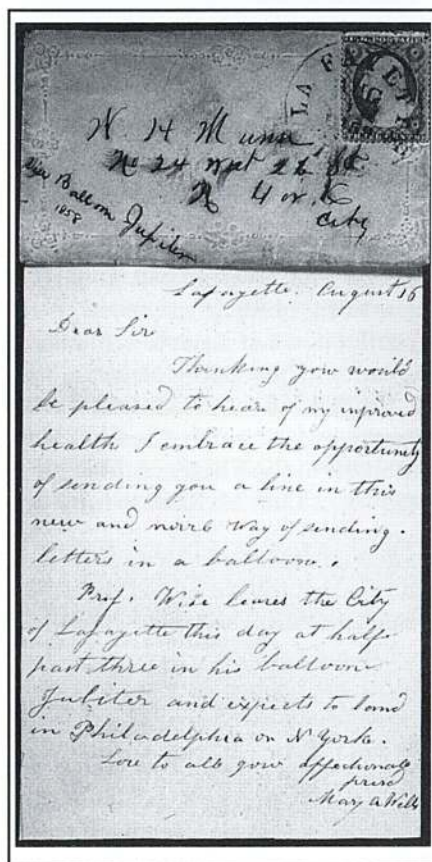
Up front was the train's locomotive, an Eaglerock, piloted by Elwood Keim, tugging the three loaded gliders airward. O'Meara was in the first glider behind the tow plane on 450 feet of thin stranded steel cable. He was followed 200 feet back by Stan Smith. Professor Franklin, in his namesake PS-2 was in last position, 200 feet behind Smith.

Keim had a difficult task. He was flying "nose-up" so slowly that he was continually near the Eaglerock's stalling speed. Smith explained that Keim's slow speed, 65 miles per hour, was required because their gliders flew in a free glide at about 20 miles per hour, and they were much more difficult to control at a comparatively higher velocity.

"We bobbed like chips in the surf in a veritable maelstrom of turbulence and confusion. A half an hour later we were at 5,000 feet. O'Meara arm-signaled Keim over cumulus clouds and thunderheads in the making. Rain seared our faces with a thousand needles," Smith said.

Bucking a 30-mile-an-hour headwind, they reached

(Continued on Page 11)



Left: "Via Balloon Jupiter," only known first piece of officially flown U.S. Mail, flown by "Professor" John Wise from Lafayette, IN., 30 miles (4 hours and 30 minutes), to Crawfordville, IN. The letter eventually reached the N.Y. City addressee by train, August 20, 1859. Above: 1959 U.S. Airmail stamp

marking centennial of Wise's flight. (From *Air Mail an Illustrated History* by Donald Holmes.)

National Soaring Museum's Heritage Campaign Groundbreaking

Fall's pagentry of dazzling reds, luminous yellows, vibrant purples, and soft green foliage blanketed historic Harris Hill and the Chemung Valley, setting a perfect stage for the October 8 announcement of the National Soaring Museum's \$3,150,000 Heritage Campaign groundbreaking ceremonies. More than 100 attendees from all over the United States gathered under a huge canopy marking the site.

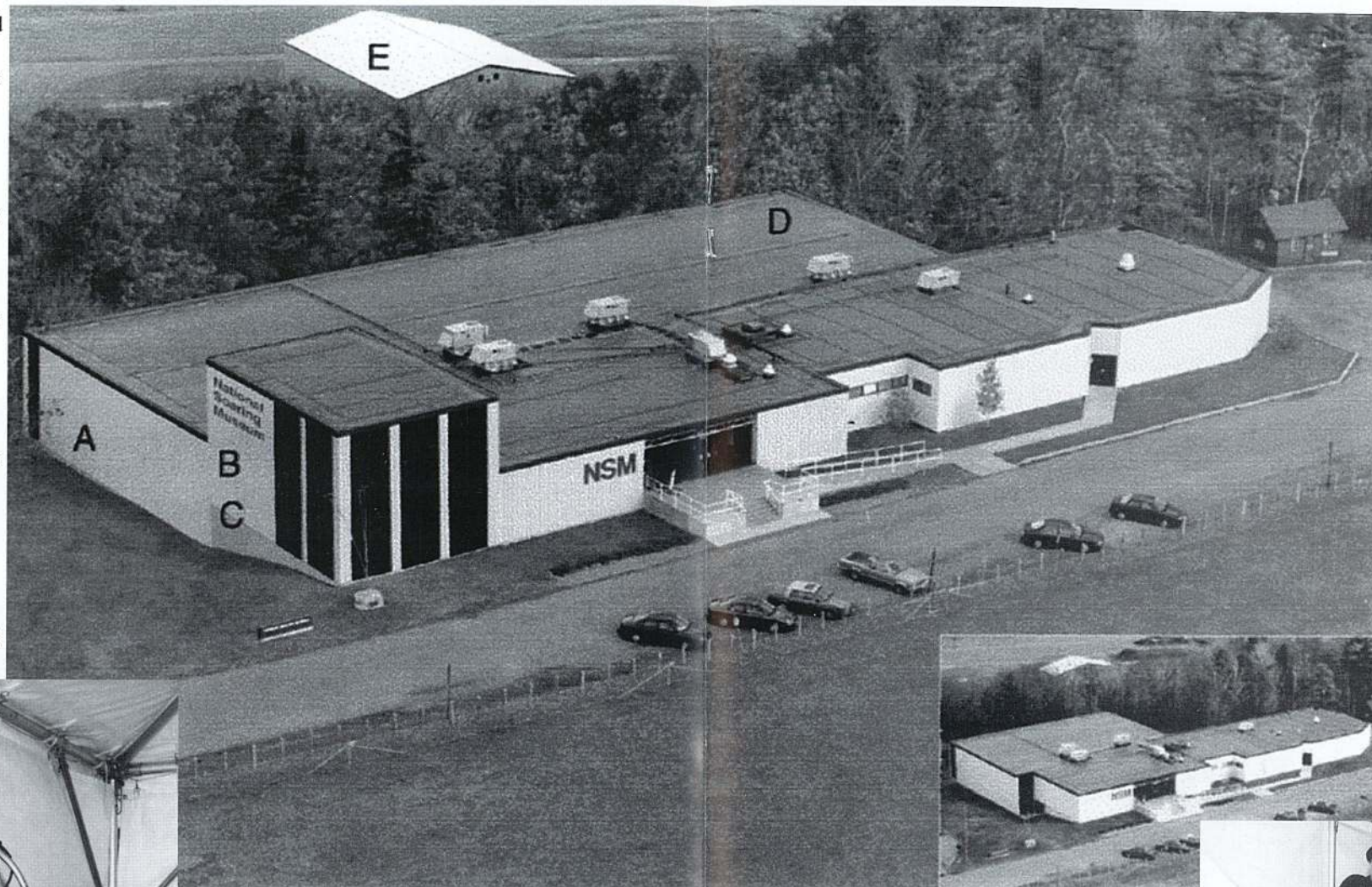
NSM President Linn Buell, Daytona Beach, FL, opened the ceremonies by saying: "These are exciting times for the Museum; we're undertaking a new campaign. . . . As we look forward to the next century, we want to continue to educate people and preserve our history and accomplishments over the past years and to promote aviation activities that soaring inspires for the future. If flying is the language of man, soaring is its poetry."

Buell introduced the Campaign's co-chairman and Vice President of the NSM Board, Paul Hardy Schweizer, Elmira, NY. Schweizer provided the background leading to the Heritage Campaign and said that the Museum had been in existence 30 years. "Today we're taking another major step forward, the culmination of a couple of years' worth of work." He reviewed the efforts of community leaders to provide the incentives for the 1930s development of soaring on Harris Hill. He spoke of the community's 1939 invitation for his father Bill and Bill's two brothers (Ernie, and Paul A.) to move their budding sailplane company to Elmira. "And this year the Schweizer Aircraft Corporation will have built close to 6,000 aircraft."

In 1969 the Museum was formed. "Elmira was selected by the SSA, again principally because of community support," he said. That support led to the initial museum building, then in the early 1970s a move to the old Merrill home on Harris Hill. The mid-'70s saw the first capital campaign creating the present, unique sailplane facility. In the mid-'80s a successful second expansion campaign added restoration, office, and collection storage areas that were deemed adequate for the times.

"In the past few years there have been some significant changes occurring. What we are doing today really plays into that. With the National Warplane Museum moving to Elmira and the wonderful job that's been done with the Curtiss Museum in Hammondsport, and our upgraded National Soaring Museum, we have an opportunity to make this section of New York State a center for aviation history," Paul H. Schweizer projected.

He explained that two years ago, the trustees decided that a \$3.15 million dollar capital campaign was needed to expand facilities, create new exhibits, and increase endowments. Working with co-chairman Bernald Smith, NSM Director of Development Jaye Fish, and NSM Director Jim Swinnich, Paul H. Schweizer said, "We went into a silent mode over a year ago, and today we're going public with that campaign. I'm very pleased to say



The proposed expansion (A, B, and D) will add approximately 10,000 square feet, more than doubling exhibit space. An expanded library (C) will house the National Soaring Museum's growing collections of archives, books, and visual media. It will allow for a new Gift Shop and Orientation Theater for Museum visitors. Safe storage of sailplanes that are not on exhibit will be expanded by adding 4,800 square feet to the Heritage Hangar (E).
Left: Heritage Campaign Co-Chair, and Vice President/NSM Board, Paul Hardy Schweizer
Right: Campaign Co-Chair, and NSM Board member, Bernald S. Smith calls on NSM Board President Linn M. Buell to break ground. (Staff photos)

that after the first year-and-a-half effort, we are exactly fifty percent toward that goal, and I'm confident we can get the rest of the way there." Next, he outlined the three goals of the campaign: building expansion, exhibits, and endowments.

Noting that the Museum has become the repository of 72 sailplanes, he said, "We simply don't have enough room to show what we have." He said that historically, there are only two museums in the world that really capture the history of soaring, one in Poppenhausen, Germany, where the Germans started soaring in the 20s, and here in Elmira where the first national glider meet was held in 1930. SSA president Larry Sanderson had just visited the museum at Poppenhausen and sent pictures.

"This museum is just head and shoulders above anything that exists in the world today capturing the history of soaring. It's something we take great pride in," Schweizer said.

He said that NSM has done "some pretty wonderful things," and called attention to the museum's sailplane collection, archives, and various symposia to promote soaring aeronautics, and related physical sciences through exhibits. Also mentioned were The National Landmarks of Soaring, school programs, aviation camps, and special events.

The facilities expansion segment of the Heritage Campaign, with a goal of \$1,400,000, will double the Museum's exhibit space, adding approximately 10,000 square feet.

An expanded library, a 4,000-square foot addition to the Heritage Hangar, new quarters for the gift shop, refurbished lobby to accommodate group tours, and a visitor orientation theater, are all in the plan.

"Which leads us to the second thing: exhibits," he said. "We've allocated three-quarters of a million dollars to upgrade the exhibits in the National Soaring Museum. When we last updated the exhibits twenty years ago, it was simply a different age. Then, we hadn't even conceived of things that we can do today."

Schweizer said that he was excited about the ability to use computer technology to develop interactive and video exhibits so that the Museum becomes attractive to everyone, not just the one-half of one-percent of the world that has an interest in sailplanes, but anybody who has an interest in aviation.

"It will be more than a collection of old gliders," he said. "It will help educate people and really get them enthusiastic about flight."

The third portion of the campaign is endowment. Schweizer said that anyone who runs a campaign, or is involved with non-profit organizations knows how important endowed funds are. "We want to increase our endowment from \$1.5 to \$2.5 million. I think it is a critical goal. It will give us the financial stability that will carry us forward for the next 20 years." He closed by saying that this is a high water mark for the Museum. "What we're doing here is going to be good for the community, for soaring in general throughout the country. It's something that we all can take pride in." Linn Buell said that the National Soaring Museum is related to three organizations structurally: Chemung County, the Soaring Society of America, and the Harris Hill Soaring Corp. She called on G. Thomas

Tranter, Jr., Chemung County Executive, who spoke on behalf of the County administration and legislature. He acknowledged the Schweizers and the late Edward A. Mooers, former Elmira mayor and soaring enthusiast, for their vision and leadership. Tranter said, "We're so fortunate that we are the cradle of aviation history in the Southern Tier. It's an opportunity to promote our area, increase tourism, and equally important, to educate our young people. The County has been a partner all the way through this. Congratulations to the trustees and

the staff. Keep up the good work."

Representing the Harris Hill Soaring Corporation was its president, Monty Sullivan, Beaver Dams, NY, a corporate executive pilot. He started at Harris Hill as a junior member when he was 13 years old. "So you can see how the youth program has helped me, in my life and career." He added that his daughter is now a Girl Scout and the various aspects of aviation that her troop can visit in this area are absolutely incredible. "We, in the Harris Hill Soaring Corporation, are glad to be a part of this."

Edward F. Byars, Clemson, SC, is Director-At-Large and Past Chairman of the Soaring Society of America. He said



that SSA President Larry Sanderson, Hobbs, NM and Chairman Frank Reid, Lancaster SC were unable to attend today's ceremonies, but sent their warmest greetings. Byars said, "We in the Soaring Society are really proud to be partners with the Museum. We pledge to always work closely with you on joint projects on the promotion of soaring, future and past."

Co-Chairman Bernald S. Smith, Fremont, CA, reminded the audience that the National Soaring Museum is really not an Elmira operation; it is national and worldwide in scope. He said that he would like to start off the first turning of groundbreaking in absentia for a donor who is deceased, Howard C. Blossom, St. Louis, MO. In his will, Blossom (U.S. Soaring Hall of Fame-1989) left a major donation "that is going to help our endowment tremendously," Smith said. He added, "Howard wanted to do something for soaring; he did things for soaring that were quiet, and this was a quiet thing that he did. So Howard, the first turn goes to you."

Smith called on Tranter for the second turn of earth. Presenting him with a miniature engraved shovel, Smith said, "We wouldn't be here if it weren't for you guys."

Smith mentioned the tremendous contributions and support the Schweizer family has made. In recognition of that commitment, a new wing will be named Schweizer Hall. "There's going to be a beautiful change in the shape and look of this building, with a lot of glass," Smith said. He added, "I was just introduced to the third Schweizer generation today; who knows how far it will go? The Schweizer Hall is a substantial donation by the family and a major reason for this Museum being here." Smith asked each of the Schweizers, first Ernie and Eileen, then Paul A. and Virginia (Ginny) and then Bill (Peg was unable to attend) to come forward and turn a spadeful of earth marking the expansion.

Smith was the next groundbreaker, saying, "for me and my wife Marilyn; unfortunately she couldn't be here. The first one was for Howard, this one's for us."

Smith commented that a lot of people were involved in this project, and that they were from all over the country. To illustrate, he next called on Jeff Byard, Atascadero, CA, immediate past president and present National Soaring Museum board member for a turn of the spade.



Attendees at the Heritage Campaign luncheon.



Right: Bernald S. Smith raises a champagne toast to the success of the Campaign

"We are very pleased that the Schweizer Aircraft Corporation has been such a strong supporter," Smith said as he called on W. Stuart Schweizer, president of the Schweizer Aircraft Corp, to join the groundbreakers.

"One of the strongest forms of local support was from a man already mentioned, Eddie Mooers," Smith said. He introduced Mooers's daughter, Nelson Mooers van den Blink, treasurer and trustee of the National Soaring Museum. Calling her forward for the ceremonial earth turning, he added that Nelson and her company, the Hilliard Corporation, have been very good to the Museum.



The Schweizer Brothers, Left to right: Ernest, Paul A., and William at NSM, beneath a reproduction of their first glider, the SGP 1-1. The Brothers are sponsors of the Heritage Campaign's new Schweizer Hall.



Smith asked, "One of the great supporters of the Museum," retired Chemung Canal Trust Company's vice president, John Hintz, a member of the Museum board, to come up and turn earth.

Smith then asked NSM board president, Linn Buell along with attending NSM trustees to take their turns: Robert Ball, Vienna, VA, Region Four SSA director; Ed Byars, Clemson, SC, SSA Director-At-Large; Mike Belosky, Chemung County Buildings and Grounds Director; Ann Clarke, manager of the Elmira-Corning Regional Airport; James Orsillo, Big Flats, NY, president & CEO, Orthstar Enterprises, Inc.; Karin Schlosser, Esq., and Paul Hardy Schweizer, vice president, Schweizer Aircraft Corporation.

Commending the NSM staff for their effort and dedication, Smith asked that they come forward and be recognized.

Linn Buell closed the groundbreaking ceremonies and invited attendees to a luncheon in the NSM's Edward A. Mooers Community Room, and a toast to the success of the campaign.

Left: W. Stuart Schweizer; Right: Nelson Mooers van den Blink take part in the groundbreaking ceremonies, Co-chairman Smith at the rostrum.



(Lustig Sky Train Continued from page 7)



Times Wide World Photo.
AN OFFICIAL SEND-OFF FOR THE "SKY TRAIN."
Mayor LaGuardia handing a sack of mail to Pilot Jack O'Meara for delivery in Washington, while Mrs. Floyd Bennett looks on, as the gliders left Floyd Bennett Field yesterday morning. The "train" got as far as Philadelphia, where it was forced down by head winds.

Above: N.Y. Times, Friday, August 3, 1934.

Right: Philadelphia Inquirer, Saturday, August 4, 1934.

Philadelphia an hour later. As they were flying over the heart of the metropolis, they experienced "the roughest air that had ever been our misfortune to experience," Smith wrote. He added, "For some time it appeared that we would be separated from our tow-plane, right over the city!" But the Train had made it within gliding distance of the Philadelphia Airport, and the Professor cut loose to land. Surprisingly, O'Meara in the first glider, released, forcing Smith to do the same. After landing, they found that the Eaglerock, battling head winds, had nearly run out of fuel. After snatching a light lunch, the train pilots were back in the air, only to be turned back by flashes of lightning stabbing through gray clouds ahead.

By 10 the next morning, the sun had broken through the overnight fog and the Lustig airmen took off for Baltimore.

Conditions were much more favorable, though Keim was still ploughing through a headwind. One at a time the trio landed at Logan Field to drop off the Smith glider and refuel the tow plane.

After a few minutes Keim in the Eaglerock and

O'Meara in the PS-2 took off for Washington. Later a wire informed Smith that O'Meara had successfully landed in the Eclipse "almost within shouting distance of the Capitol," Smith said. O'Meara was received there by a group of government officials. Keim landed at Hoover Airport.

O'Meara's glider was de-rigged by members of the Washington Glider Club, trailered to Hoover Field, and readied for the return trip.

The return flight began the following morning. O'Meara and Keim landed at Logan Field, hooked up Smith for the Philadelphia leg, and the Train was airborne again.

"But we were due for an alarming experience," Smith wrote. "Shortly, we were confronted with a billowing cloud bank that towered upward from the 4,000 foot level to probably 10,000 feet and extended far to either side of our path." Keim tried to slide under it, but that caused a serious slacking of the tow line. Nose down, the gliders speeded up and were in danger of over-taking the Eaglerock. The air became violently rough.

Smith continued, "Suddenly I saw Jack encounter a terrific bump

AIRPLANE TRAIN BRINGING MAIL TO AIRPORT HERE

Motored Craft Towing 2
Glanders Leaves From
Philadelphia

GOAL OF INTERRUPTED
TRIP IS WASHINGTON

Flight Halted Over Night
By Weather—Return
Hop Slated

[By the Associated Press]
Philadelphia, Aug. 3.—The New York to Washington "sky train" flight was resumed today when two gliders and a towing airplane left the Philadelphia airport and headed South.

The glider and plane pilots were on the field with their craft more than an hour before the takeoff, awaiting weather reports. A thick, early morning haze had lifted and the skies had cleared almost completely when they left the ground. Both motorless ships carried mail, one cargo for Baltimore, where No. 2 "car" will be "sidetracked," and the other for Washington.

Bad Weather Grounds Ships
The flight started at Brooklyn yesterday, but had weather grounded the ships here overnight. The return flight may be made later today or tomorrow, contingent upon weather conditions, the promoters said.
Elwood Keim piloted the "locomotive." At the controls of the gliders, hooked tandem fashion on a steel tow-rope, were Jack O'Meara, 1933 glider champion, scheduled to land at Washington, and Stanley Smith, Lindonville, N. Y., former glider champion, whose craft will drop off at Baltimore.

Logan Field Officials Ready For Train
Officials at Logan Field today were waiting for the arrival of the aerial mail train and had made plans to guard the Baltimore glider at the field. The glider will be placed in one of the hangars at the field, where it will remain until the "locomotive" biplane returns to Baltimore to pick it up. The flight is being privately promoted and no special reception plans were made either by the Postoffice or by the city officials.

Glider Lands From Air-Mail "Train" In Pioneer Flight

Right: *The Sun*, Baltimore, Saturday Morning, August 4, 1934. Below: A Washington newspaper reported a sizeable crowd greeted the Lustig Ski Train.



'Sky Train' Reaches Capital To Drop Off Third of Gliders

Washington, Aug. 3—(AP)—The first sky train came through today a bit behind schedule but after what Jack O'Meara, who arranged the flight, called a "perfectly successful" one despite the fact two days were consumed in switching off gliders between here and New York.

After a detail of park police and a sizeable crowd had waited several hours yesterday and today, the single-motored biplane with its one remaining glider in tow appeared high over the White House. It circled widely once and cut loose a mail-laden glider.

O'Meara brought the glider to a smooth landing on the ellipse just south of the White House grounds after circling half a dozen times to reduce his momentum.

Forty minutes before, the plane

piloted by Elwood Keim had left Baltimore where it had to refuel after dropping off Glider Number 2 piloted by Stanley Smith of Lynndonville, N. Y., the 1933 glider champion. The nearly two-hour flight to Baltimore was delayed when the sky train ran into a storm yesterday south of Philadelphia where it had cut loose the first of the three trailing gliders, piloted by Dr. R. E. Franklin, glider designer and professor of aeronautics at Michigan State University.

The object of the flight was to demonstrate that by hooking on motorless planes, the full pulling capacity of an airplane could be utilized over and above its limited carrying or load capacity.

The plane tomorrow will pick up the three gliders for a return trip to Floyd Bennett Field.

He stated that their aim was to prove that the sky train concept had commercial value of sufficient importance that could no longer be looked on as a stunt, but should be the object of scientific research and development.

He closed by saying, "Then, I believe, the sky train will prove itself to be an efficient and worthwhile phase of commercial aeronautics."

- (1) *N.Y. Times*, Sunday, June 30, 1935.
- (2) *Wings Like Eagles, The Story of Soaring in The United States* by Paul A. Schweizer.
- (3) *America's First Sky Train* by Stanley W. Smith.
- (4) *Airmail: an Illustrated History* by Donald Holmes.

and with a lurch he was over on his back. Then my left wing was forced down. I pushed the stick right with all my might; nothing! With a sickening jolt I was on my back. An instant later I was right-side-up and I looked through the rapidly thickening mist for Jack. He had disappeared."

Then he saw O'Meara 100 feet below. Smith released the tow line. By now he was flying blind and, in a swirling mass of gray, gravely in danger of a mid-air collision. Diving, he dropped 2,000 feet, and was at 4,000 feet before coming out of the cloud. He saw O'Meara a few hundred feet away almost at the same altitude. Keim circled back, then headed north, with O'Meara and Smith thermalling and spiraling the last 20 miles to Philadelphia. Smith said that due to their high speed during the first hour they were much closer to their destination than he thought. "Keim brought the Eaglerock in 15 minutes before we were even in sight."

A hot cup of coffee, several sandwiches, a hook up with Professor Franklin, and the Lustig Sky Train was off on its final leg to New York's Floyd Bennett Field. After some difficulty getting out of a small field with the entire Train, at 50 feet they were forced to land when the cable broke.

Finally, after a successful take-off and a rough climb to 5,000 feet the Train proceeded, making good time to New York. "We descended in sweeping spirals to the final landing on the smooth concrete of Floyd Bennett Field," Smith said. The flight had aroused considerable public interest, particularly the object of the flight.



To the Editor:

RE: Volume 21, Number 1, NSM Historical Journal

Dear Editor,

Very much enjoyed the article on the XCG-16. Because I am researching and writing about the USAAF Glider Test Base. It is a must that I correct the given location of the test of the XCG-16. It was flown at March Field in July of 1944 and on inspection, twelve deficiencies were found. In August, 1944 it was ferried to the test base where more than seventy-six flights were made. The base was at the Clinton County Army Air Field at Wilmington, Ohio not Orlando, FL. Reporting directly to the commander at Wright Field, CCAAF enjoyed some distinguished glider pilots and power pilots such as Chet Decker, Bob Cardinas, Fred Dent, Jr, Norm Rentour, Lloyd Santmyer and occasionally Floyd Sweet and Mike Murphy.

Sincerely,

Charles L. Day

P.S., I ignored names first reading My information says Hawley Bowlus was not a passenger in the fatal MC-1 crash. Gabel, pilot, Morrison, co-pilot, duPont, Chandler, Perl, and Wells were crew and passengers.

The National Soaring Museum received the following comments from Raul Blacksten, of Downey, CA., historian for the Vintage Sailplane Association.

1. Although Ruth Bowlus said that Claude Ryan's Jennys were delivered to Bowlus, I believe it actually was the Standards that were delivered to Bowlus and converted at the Bowlus Ranch. It was when Ryan could not handle the larger aircraft that he sought his flight school chum.
2. Ryan Airlines was misnamed. The actual LA to San Diego airline was named something like Los Angeles-San Diego Transport, or something similar (I forget exactly). Ryan Airlines was the name of the company which built airplanes like the M-1 and M-2. Mahoney-Ryan Airlines built the Brougham and the Spirit of St. Louis. Claude Ryan had sold out to BF Mahoney a year before the Spirit of St. Louis was built.
3. The Ryan M-1 was a collaboration between Bowlus and Ryan. Ryan was not competent to design or build an airplane, Bowlus was. The Spirit of St. Louis was an evolution of the M-1. The Spirit was actually a modified Brougham.
4. The "Paper Wing" was the Model SP-1 (s/n 16) and was a one-off. The Model SP-D (s/n 17), Model A (s/n 18 to 24), and Model S1000 (s/n 25 on) were similar in appearance but of conventional construction.

5. There was only one "Albatross I." It was built in 1933 and was s/n 1 of the Bowlus-duPont Senior Albatross Series. Others in the Series were the Dragonfly (s/n 2, 1933), Falcon (s/n 3, 1934), and Albatross II (s/n 4, 1934). NSM has the Albatross I, the Falcon is in the NASM, I have the Albatross II.
6. The Bowlus-Hirth Soaring School was in NYC in 1931.
7. Bowlus was chief instructor at Curtiss-Wright Aeronautical Institute, in Glendale, CA 1931-32.
8. The roughly 200 Road Chief and other travel trailers (including 2 Motor Chief motorhomes) were built 1934-36.
9. The Bennett Transport was built by Bowlus in his shop. Vance Breese crashed it on its first landing.
10. The 2-place BA-102 Baby Albatross hanging in the NSM was re-designated as the BTS-100 after Ted Nelson had Bowlus do extensive repairs and modifications.
11. Bowlus Sailplane Co. was not backed by Glenn Martin.
12. Bowlus did not cease "commercial production" and shift to full-time military work. He left Bowlus Sailplanes, which continued to operate until the outbreak of war, and began General Airborne Transport.
13. Bowlus did not build the XCG-7 or XCG-8. He may have consulted on the design, but Douglas Aircraft did the engineering and the gliders were built at Douglas's El Segundo plant. This project was so secret that even the Plant Manager did not know of it. These gliders were built using old glue and reject plywood. When Bowlus test flew the XCG-8, he was frightened to death and proclaimed it to be the most unsafe aircraft he ever flew.
14. The XBM-5 (XTG-12) was built by Bowlus for Douglas. All photos I have seen lead me to believe that only one was built (either that or they all had the same "N" number).
15. The AGA-XCG-9 is a new one on me.
16. The "Twin Hotspur" did not pre-date the XCG-16 but was developed concurrently.
17. Mrs. Bowlus is not certain where Al Criz came from, but thinks he was the Pullman Company's man. Pullman backed General Airborne Transport.
18. The MC-1, built in an old dry cleaner's shop, was the 1/2 scale prototype of the XCG-16. The full-scale glider was the XCG-16.
19. The ill-fated crew of the XCG-16 was Richard duPont, Col. Percival E. Gabel, Howard Morrison, Curley Chandler, Harry Perl, and Myron Wells. Bowlus was not allowed on the glider during the flight by Col. Gabel. Perl and Wells alone survived.
20. The test was unscheduled and had been demanded by Col. Gabel who was the man who would ultimately decide whether or not to buy the glider. No test flight could possibly have taken place on an Army Air Force base without AAF permission or authority.
21. Col. Gabel had almost no experience in gliders and none whatsoever in large gliders. He was told not to go down into the towplane (a B-17) wake but did anyway. The glider pitched up and went into PIO (pilot induced oscillations). The rope finally broke. The ballast shifted to the rear of the glider and caused it to go into a flat spin. Morrison, the co-pilot, was unable to regain control of the glider.

22. Ruth Bowlus said it is not true that the subsequent two XCG-16s were six months late or three times the cost.

23. The XCG-16 was flight tested by Paul Tuntland at Clinton County AAFB, near Dayton, Ohio.

24. The XCG-16 was found to be superior in every measured test to any glider used by the Allies during WW II.

25. The contract was canceled due to a winding down of the war. The Laister-Kauffmann CG-10 Trojan Horse was canceled at the same time.

I am preparing an authorized article on the XCG-16 which will be documented with primary sources.

By the way, it is my contention that the XCG-16 was inspired by the 1929 Northrop Flying Wing. Northrop and Bowlus had been friends since 1925.

[The NSM thanks Mr. Blacksten for taking the time to research this interesting segment of WW II glider history and bringing it to our attention. Editor.]

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Phone (607) 734-3128, Fax (607) 732-6745
E-mail: nsm@soaringmuseum.org
Web site: <http://www.soaringmuseum.org>

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 the NSM. Material that is to be returned must be accompanied by a stamped, self-addressed envelope. No compensation other than credit will be given.

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The National Soaring Museum is an affiliate of The Soaring Society of America and, as such, is the official repository for all its documents and artifacts.

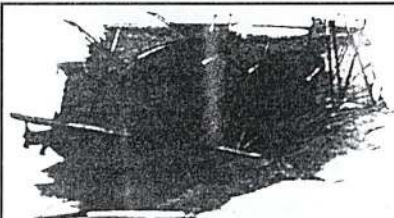
THE FIRST 2-PLACE DUAL CONTROL GLIDER IN PRODUCTION



The LEONARD

Weight 205 lbs.
Wing span 34 ft.
Wing cord 8 ft.
Aspect ratio 8.8
Durable ribs with aircraft spruce and plywood gossamer nailed and glued.
Spars of solid airplane spruce.
Rate of climb 800 ft. per minute. W
Rate of glide in dead air 15 to 1.
Landing speed 19 miles per hr.

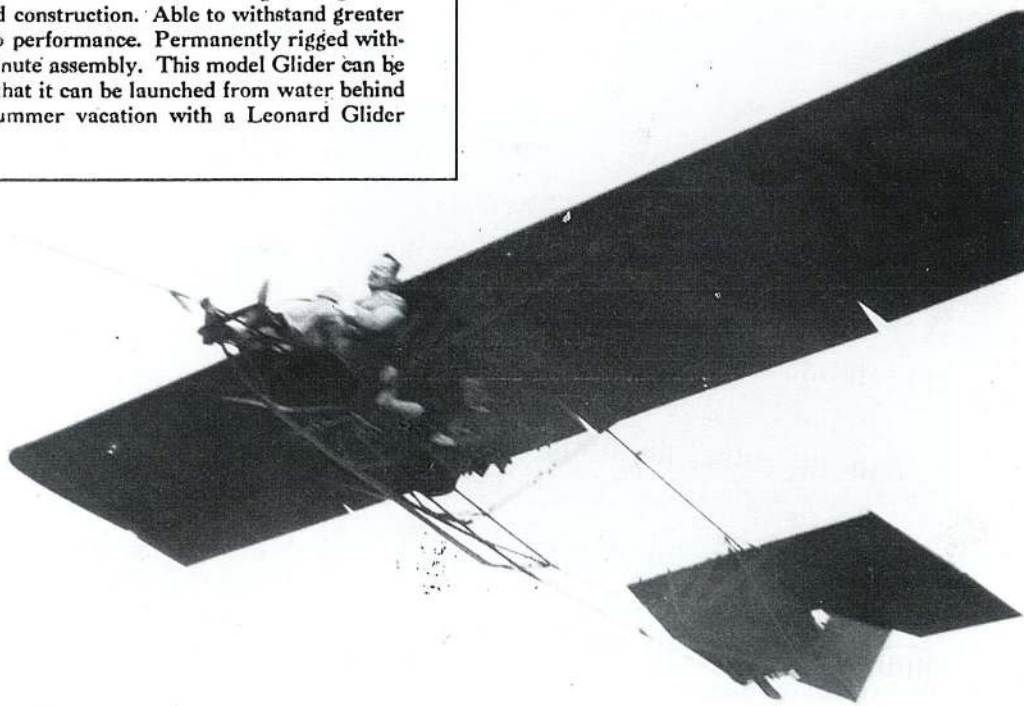
Designed by graduate aeronautical engineers to meet the requirements of U. S. Dept. of Commerce. Reinforced steel tubing marks great forward step in sturdy construction of motorless aircraft. Leonard 2-place gliders are made of unbendable steel tubing fuselage and weigh less than similar size of wood construction. Able to withstand greater shock and strain without sacrifice to performance. Permanently rigged without external wire bracing. Five minute assembly. This model Glider can be equipped with Leonard pontoons so that it can be launched from water behind speed boat. Add to the fun of your summer vacation with a Leonard Glider for use on water.



2-SEAT GLIDER ENABLES INSTRUCTOR TO ACCOMPANY STUDENT.

Reduces hazards, assures safety. Doubles usefulness of glider, also minimizes rough landings, damage to craft. Glider operated from either seat. The right way to learn to fly is in a Leonard 2 place "safety twin" control system glider.

Above and above right:
A Leonard "Dual Control"
primary-type glider
advertisement in the
July 5, 1930,
Aviation magazine

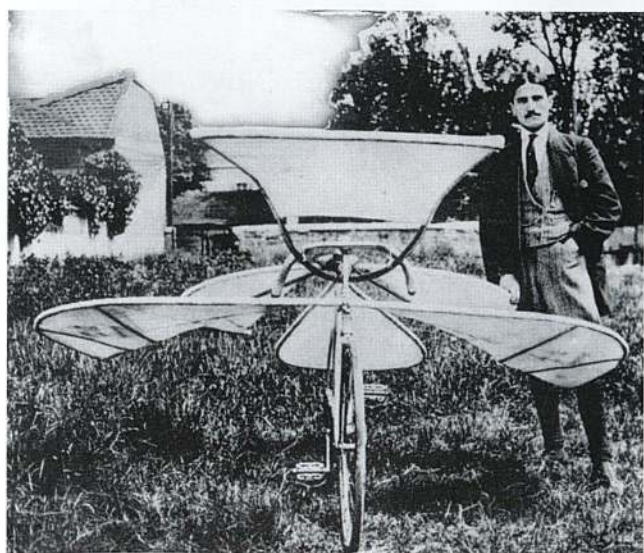


From the NSM Multimedia Archives



Below: W.A. Scott landing his Schweizer 1-26 at the hangar. Sandor (Alex) Aldott contest photo, Sept., 1962 (NSM Multimedia Archives.)

Above and Above Right:
At the 1920 Rhon Contest, many interesting experimental designs appeared - including hang gliders, biplanes and triplanes - even some with folding wing panels. Pictured, a 3-wing tandem monoplane named "Mai Kafer" (June Bug). The wings lacked adjustable (moveable) angles. Translated from *Die Geschichte, Des Segelfluges, 60 Jahre Wasser Kuppe*, by Georg Brutting, NSM Multimedia Archives



Left:
"Halcyon bicyclette with Victor Lamothe; has Hutchison pneumatics and is furnished with two pairs of wings of different size but the same principle of construction. A stabilizing tail is placed behind and above the mortice wheel. This wing is rigid. Total length, ten feet; front wing, seven feet long, rear wing is five feet. Weight of empty machine is about 40 pounds. William Thompson, Malden-on-Hudson, Nov. 17, 1930," written on the picture's reverse side.

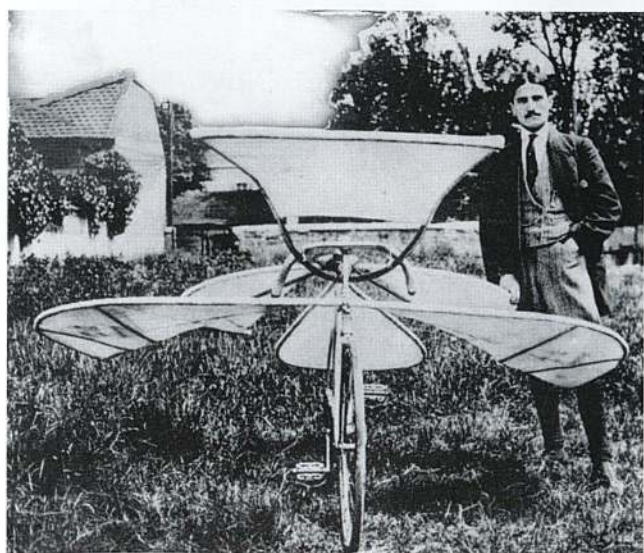
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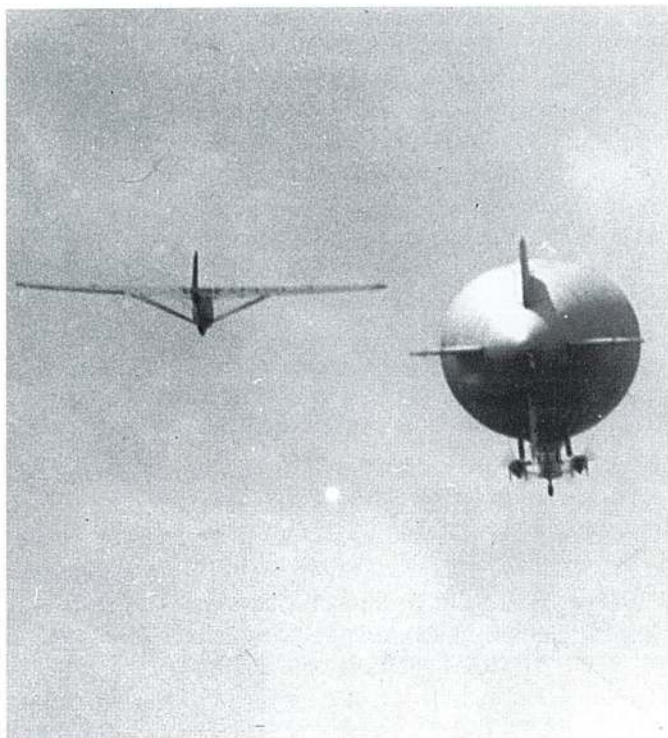
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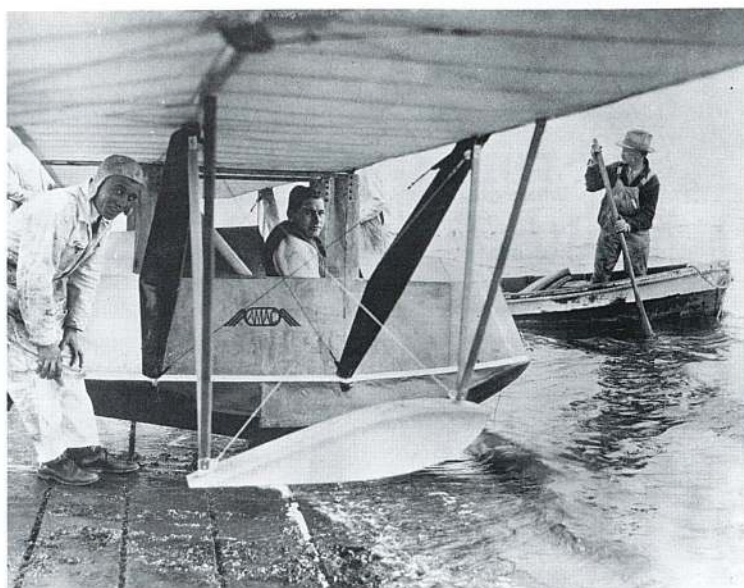
(NSM Multimedia Archives)

More from the NSM Archives

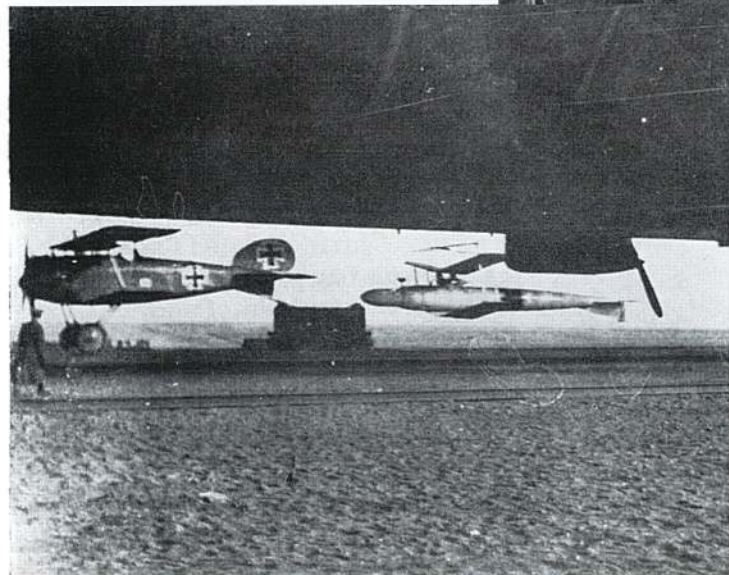
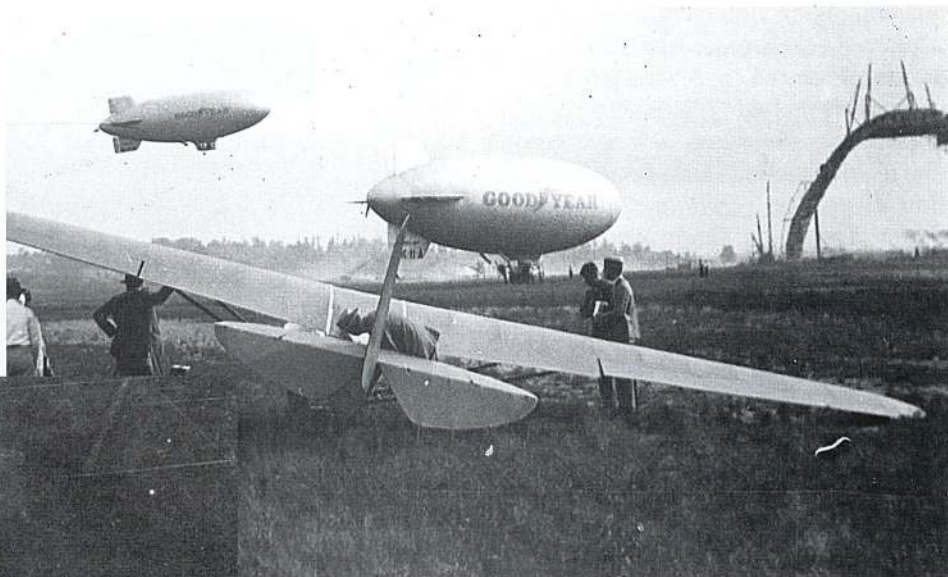


Above: The Baker McMillan "Cadet II" on tow behind the Goodyear airship, "Vigilant." (NSM Multimedia Archives)

Right: "Before the take-off of the airship-towed Baker-McMillan 'Cadet II' glider. The craft is being tied to the Goodyear airship, 'Vigilant' by a 500 foot steel cable, while the Goodyear 'Puritan', sister ship of the 'Vigilant,' cruises about overhead. In the background is the Zeppelin factory and dock under construction at the Akron, OH, Municipal Airport. Feb. 19, 1930." (on reverse of Walter Burton photo, NSM Multimedia Archives)



Above: "May 20, 1930, R.T. Atwater, 3rd, noted war flyer, about to take off at Port Washington, L.I. is the first amphibian glider to make successful flights in the United States. The glider has been tested by Atwater at Port Washington and will be demonstrated at the New York Water Carnival, April 25 and 26, at the Queensboro Golf and Country Club, Queensboro, L.I. The amphibian glider was designed and built by The American Motorless Aviation Company, of which Atwater is chief pilot. He served as Scout Pilot, Instructor, and Flight commander in France during WWI, and is credited with having brought down seven enemy planes." (on reverse of photo, NSM Multimedia Archives)



A WW I photo of an Albatross D III fighter (left) and a torpedo-carrying glider hung under German Zeppelin L 35 for flight testing. From *The Zeppelin in Combat, a History of the German Naval Airship Division, 1912-1918*, by Douglas Robinson, pub. by G.T. Foulis, Henley-on-Thames, Oxfordshire, England.