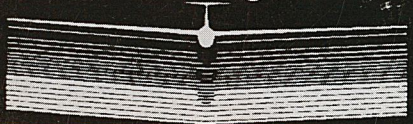


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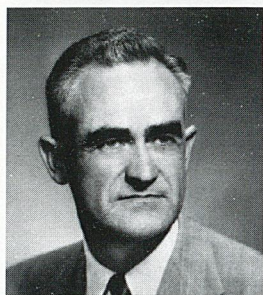
Historical Journal
Volume 23, Number 1
2001



National Soaring Museum



On The Cover



The Nomad And Its Builder, Robert Stanley

The Bob Stanley Nomad sailplane was the 1939 winner of the *Aviation* magazine trophy for Outstanding Sailplane

Design. Piloted by its builder, this ship was also the holder of the American altitude record for motorless aircraft (17,264 feet above release). At that time, the Nomad was a clear-cut departure from the classical German tradition, both as to choice of material, structural arrangement, and aerodynamic design.

Stanley later wrote that the restricted use of sailplanes in the United States during those years made the average designer a stranger to the "intriguing problems inherent to the design of the high-performance soaring planes." He maintained that engineers who had never flown soaring planes in clouds or turbulent air could really appreciate the load factors on sailplanes in free flight.

"The

N.A.C.A. (National Advisory Committee for Aeronautics) recording accelerometer carried on the Nomad registered frequent 4g and occasional 7g accelerations in flight," the designer/builder wrote.

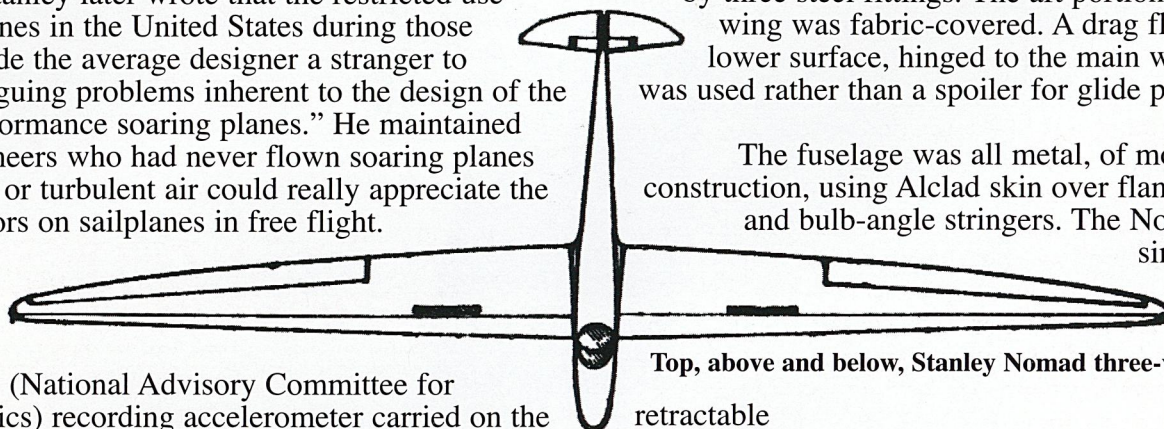
He said that in America, those who build sail planes at home had to rely on contest flying to defray expenses, "for the domestic sailplane market could not subsist on government support as is often enjoyed abroad. Hence, great sacrifices had to be made to the gods of distance, speed and altitude, or their design equivalents, gliding angle, sinking speed and turning radius, to enable sailplanes to compete successfully for the modest rewards offered in competitive flying." (*The Sailplane Nomad-1939*)

As a naval pilot stationed ashore in San Diego, and sharing a bungalow with four others, Stanley endeavored to build those characteristics into his dream ship. "My basement was so tiny that I had to build the fuselage in four sections, the ailerons in two sections, and to assemble the wing spars on the lawn." He had no help from the other cadets either. None of them had the skills necessary to maintain the level of workmanship that Stanley required. "They were most tolerant, however, of my bandsaw whining away at late hours of the night, and of my pounding out sheet metal ribs on Sunday mornings before the

hours that late sleepers like to arise," said Stanley.

With an aspect ratio of 18, the 57-foot wings were semi-elliptical with a straight leading edge and a curved trailing edge. The airfoil tapered in thickness as well as planform from an N.A.C.A. 23018 at wing root to an N.A.C.A. 23012 at the tip, and of varying incidence (a fixed angle at which the wing is attached to the fuselage) to compensate for the non-uniformity in downwash, and to provide good lateral control. The spruce and mahogany wing was attached by three steel fittings. The aft portion of the wing was fabric-covered. A drag flap on the lower surface, hinged to the main wing beam, was used rather than a spoiler for glide path control.

The fuselage was all metal, of monocoque construction, using Alclad skin over flanged frames and bulb-angle stringers. The Nomad had a single



Top, above and below, Stanley Nomad three-view.

retractable wheel. The metal keel was used on rough ground, or where fields were so small that considerable braking action was needed. Special care was taken in reinforcing the forward part of the fuselage to care for the hazards of crash and nose-over. The cockpit enclosure was formed of transparent material; the rear part folded inside the fuselage so the ship could be flown with either an open or closed cockpit.



The original 1938 Stanley ship had a conventional fin, rudder, stabilizer and elevator.

Empty weight: 380 lbs.

Allowable gross weight: 550 lbs.

Allowable air speed: 90 m.p.h.

Safety factor at that speed: 10g.

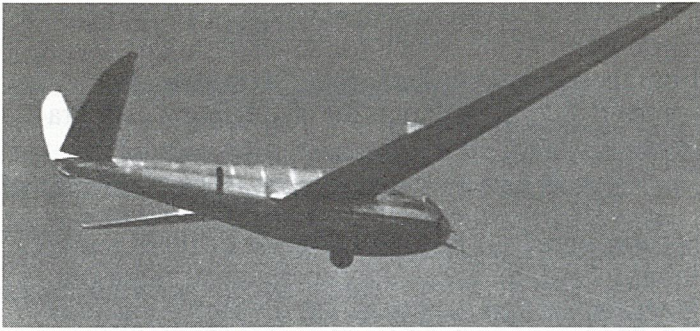
Wing area: 180 sq. ft.

Wing loading: 3.1 lbs./sq./ft.

Fuselage length: 21 ft.

The builder fitted a small ballast tank into the tail end of the ship to accommodate different weights of the pilot rather than achieve aerodynamic balance by elevators alone. In order to minimize friction and pilot fatigue on long flights, all controls except flaps were

In cover photo, note the patched area where wing failure later occurred. (NSM multi-media collection)



Nomad on tow at the 10th Nationals, Elmira, NY. (NSM multi-media collection)

mounted on ball bearings. Stanley wrote, "Even before I finished, the idea of a V-tail was formulated and was number one on the list of things to do next." (*Soaring*-October, 1938)

He feverishly rushed his plane to completion in June of 1938, just in time to leave San Diego for the 9th National Soaring Contest in Elmira, NY. "With a zeal worthy of perhaps a better cause, I subordinated recreation, friendships, every waking hour to the insatiable gods of design and production," he wrote. It wasn't until final modification a year later, and some 12,000 miles of travel that the name Nomad, like the wandering tribe, suggested itself to Stanley. (Critique of Nomad by R. Stanley)

A leave problem arose however when a fleet order signed by the imperious and often caustic, driving hammer of Navy air, Admiral Ernest King, ordered further gunnery training for all pilots. His immediate superior, who by Navy custom had to at least process, if not grant, the gliderman's leave request, and Stanley were called before the Navy's top airman. Both anticipated a dressing down, for what in essence was circumventing an order. After a short explanatory interview, Stanley was asked to leave the room. His unsmiling C.O. came out later and told him that his leave was granted. "I probably got permission only because I was a lousy gunner," Stanley wrote.

On his first flight in the 9th Soaring Contest, Stanley soared 144 miles, and established a new altitude record. The following flight, from Elmira to the Delaware Water Gap, souvenir hunters stole the easily-detached elevator off the Nomad, effectively taking his ship out of the contest, but not its pilot. On his return to Elmira, the Soaring Society of America offered Stanley the Ross Ibis, for a distance try. "I'd never even sat in this ship before, so it was indeed optimistic of me to expect any performance with it." (*Soaring*-Sept 38) He and Ibis made a successful 219-mile dash to Washington, D.C., setting an American distance record. The late Peter Riedel commented in the November 1977 *Soaring*, that he,

(Riedel) soared 225 miles to the same destination, but did not count for record purposes, because he was a German national, then attached to the German Embassy.

On his return to duty, Stanley was ordered to Pensacola as an instructor in instrument flying and advanced combat tactics. While there, he rebuilt his 1938 mount utilizing the V-tail, the first American sailplane so designed. He wrote in the January-February *Soaring*, 1944, "Since the V-tail incorporates two surfaces, instead of three, and since these surfaces are inclined to each other at an angle of approximately 90 degrees, they can perform the same function as a conventional rudder and elevator, if their motion is properly controlled. Also less total area, hence less drag. The empennage is lifted above the wing wake and hence is more effective for a given area. The tail is lifted up out of the weeds. For less weight only two movable surfaces need be built instead of three. The empennage is easily removed for trailering, without affecting basic rigging. Wind tunnel tests indicated good spin recovery characteristics."

In 1939, he entered the rebuilt V-tail Nomad in the 10th Nationals at Elmira, and established a new altitude record of 17,264 ft. above the point of release from an auto tow. His was said to be the first sailplane to land at LaGuardia Field, as a result of a goal flight to the New York 1939 World's Fair.



Stanley showing onlookers Nomad's unique canopy design at the 1939 Nationals. (NSM multi-media collection)

Stanley's notoriety was highlighted further when the Nomad's left wing twisted off at 3,000 ft. over Harris Hill during a stunt flight celebrating the birth of a daughter to the Richard C. DuPonts. Stanley worked all the previous night repairing the earlier damaged wing spar. Apparently the glued joints did not have enough time to properly set, and when stressed, failed. The Saturday, July 3, *Elmira Advertiser* lamented, "At the end of the Gypsy trail as far as the 10th Nationals are concerned." Pinned in by the centrifugal force of the whirling Nomad, Stanley attempted to squeeze out of the tiny cockpit by grasping the stub of the broken wing spar protrud-

ing from the fuselage, but his shoe caught in the rudder pedal. He had to drag his foot out of the shoe, wrench himself free, and pull the D-ring almost simultaneously to deploy the chute. The chute opened 600 feet over the ground! (September 1977, *Soaring*) He saw the craft circling, fall and heard the crash when it struck in a cornfield. "It was the first time I'd ever seen my plane in flight, and even with one wing she was a beauty," he was quoted as saying afterward. He never repaired the Nomad. It was subsequently restored and is now in the Smithsonian National Air and Space Museum collection.

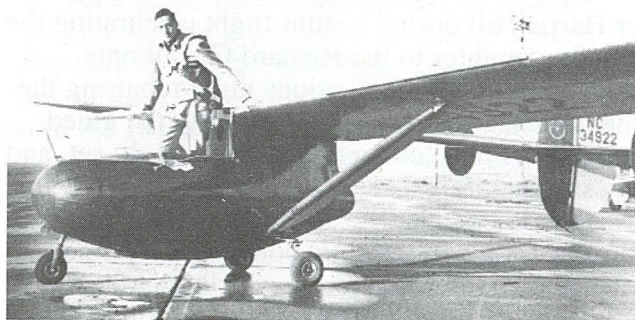


Stanley (second from left) coming out of the woods after failure of Nomad's left wing. (NSM multimedia collection)

Robert M. Stanley was born in 1912, at Elrene, OK. The family moved to Los Angeles in the late 1920s. In 1935 he received his aeronautical degree, with honors, from the California Institute of Technology. While employed at Douglas Aircraft to earn tuition money, he participated in the design of the DC-1, -2, and -3, also the XFD-1 Navy fighter, and the TBD-1 torpedo plane. He patented a mechanically-controlled reversible pitch propeller, and later found that it had been copied in propellers used by the German Luftwaffe.

(Hall of Fame - Continued from page 11)

Over a third of the book is about his love affair with soaring ("no, my obsession"); then about the scientists and engineers at the Hanford, WA atomic facility. The last part of the book is about growing up during the Great Depression and the changes it made on those who experienced it.

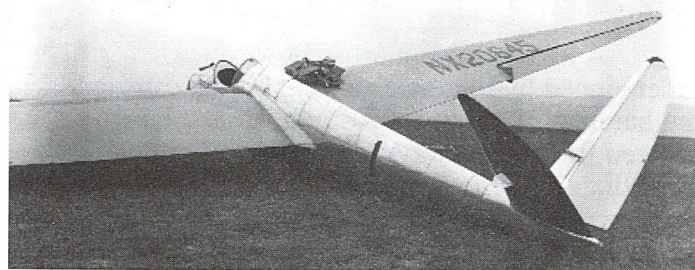


Moore's engineless Dragonfly. (Al Withrow photo)

He received his Navy wings in 1935. Later he participated in the search for Amelia Earhart, flying from the aircraft carrier U.S.S. Lexington, and received a commendation for also being a cartographer.

He joined Bell Aircraft in 1940, and rose to become chief test pilot and director of flight research. In mid-1942, he began the experimental flight program for the first American jet, the Bell Airacomet XP-59A, and was its first pilot. In 1944 he became a Bell vice president, and was responsible for the design and production of the Bell X-1 and X-2, the first American rocket to exceed Mach 1 and 2 speeds. (*National Aviation Hall of Fame*, Spring 1990, Issue 2)

He founded Stanley Aviation in 1948, where he had many inventions to his credit. He was a member of the National Aviation Hall of Fame (1990), and the United States Soaring Hall of Fame (1977). He was a director of the Soaring Society of America, and from 1939 to 1946 held the United States Sailplane Altitude Record, and the 2-place Distance Record.



The V-tail Nomad at the 1939, 10th Nationals. (NSM multimedia collection)

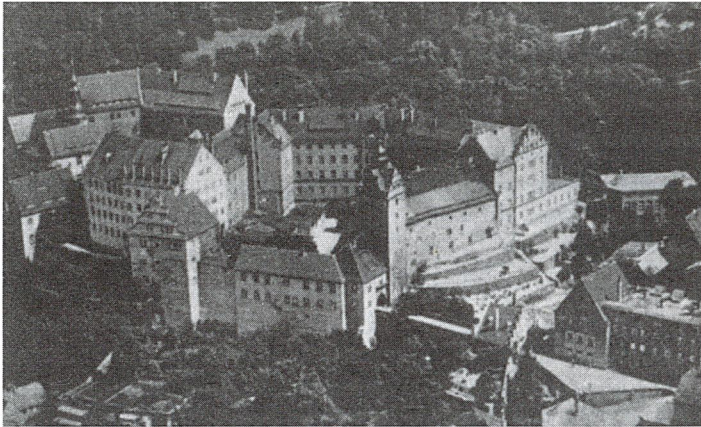
He mentioned the Nelson Hummingbird that he had acquired some years ago, "the last still flying." He flew it for five years, and felt that it was far ahead of its time. "It still has features of ease of operation that present self-launchers haven't matched. He donated it to the Southwest Soaring Museum, Moriarity, NM, feeling that they could take better care of it than he could. (The NSM has a Nelson Hummingbird presently on exhibit.) Moore felt that "it was a tragedy in American soaring that Ted Nelson and his company were not able to complete a lot of them."

Moore, one of the Northwest's outstanding soaring mentors, closed by expressing his gratitude for being selected for induction in the United States Soaring Hall of Fame.

The Colditz Cock and the Great Escape Scenario

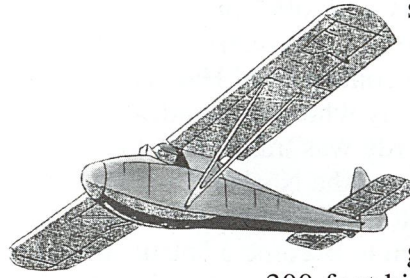
The New York Times, April 30, 2000, obituary headlined: "Jack Best Dies at 87; Plotted Daring Escape From Nazis." Best was one of a British prisoner-of-war group that disguised and built the Colditz Cock, the great escape glider.

Christmas Day, 1943: Best and other POWs were in Oflag IVC Colditz Prison, a huge Saxon Castle near Leipzig. It was said to be one of the most forbidding World War II prisoner of war camps in the Third Reich.



Colditz Castle, Oflag IVC, P.O.W. prison near Leipzig. The attic and proposed launching roof are behind the spire at extreme left. Photo from *The Powerless Ones In Peace and War* by Michael Cumming.

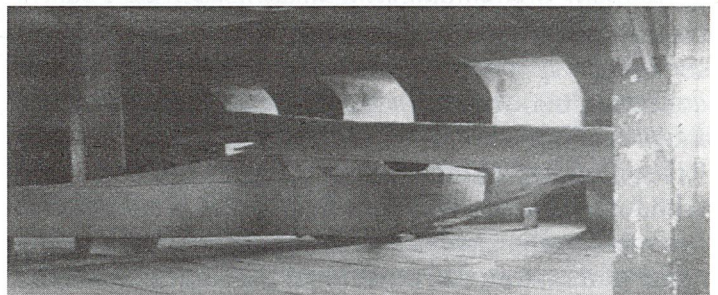
Escape! They talked about it, thought about it, and dreamed about it. After an extensive evaluation of several wildly imaginative plans, the Escape Committee agreed to form and implement a bizarre project to build an escape glider, the Colditz Cock. This prison's clientele were not your regular run-of-the-war POWs. These were R.N., R.A.F., Army, and Merchant Marine officers considered troublesome and escape-oriented. Some had made previous attempts from various POW camps in Germany's Fortress Europa. Most, but not all, were re-netted and consigned to Colditz where the security was severe, even quite possibly terminal. The POWs' scheme, blithely named "Heavy Industries," went into production of the Colditz Cock glider, January 1, 1944. The Committee set up the following organizational structure: the operative four were Tony Rolt, Bill Goldfinch, Jack Best, and Geoffrey Wardle. There were 12 assistant skilled workers and a crew of 40 security inmate "stooges" whose function was to warn of approaching guards (referred to by the industrialists as "goons") in time to mask on-going construction. The original scheme was to build a two-



seater. The personnel capacity was to be determined by how much wing section could be concealed. The challenge was formidable. The grim, cliff-edged,

300-foot high Colditz was thought to be escape-proof. There were shear drops, sparkling with barbed wire, a medieval moat, probing searchlights and suspicious guards, many of whom were invalidated from the brutal Russian Front. If that weren't enough, unknown to the Heavy Industries group, there was a rat eating away at the guts of planned Colditz escapes. A turncoat naval lieutenant, Walter Purdy was alerting his captors of planned escapes. (*The Powerless Ones in Peace and War* by Michael Cummings, pgs. 123-142)

The February 2001, Massachusetts Institute of Technology Soaring Association newsletter *Leading Edge*, picked up a story from the *London Sunday Times* regarding newly released MI5 files. One detailed the extent of Purdy's betrayal inside Colditz. Miraculously, he never penetrated the cordon of secu-



The Colditz Cock in the attic, next to the launching site. Photo from *The Powerless Ones In Peace and War*, by Michael Cumming.

rity enveloping the Heavy Industries scheme.

The files alleged that Purdy passed information to the Nazis concerning MI9. MI9 was a super secret network of British Prisoners Of War, who sent coded messages in letters home that were monitored by intelligence operatives in London. Purdy betrayed at least one planned escape when he saw a man crawling out of a tunnel. There was also a strong suspicion that Purdy gave the Germans information about MI9 activities inside POW camps.

Prewar, Purdy was a member of Oswald Mosely's British Union of Fascists. He joined the Merchant Navy at the beginning of World War II, and later was transferred to the Royal Navy. The cruiser

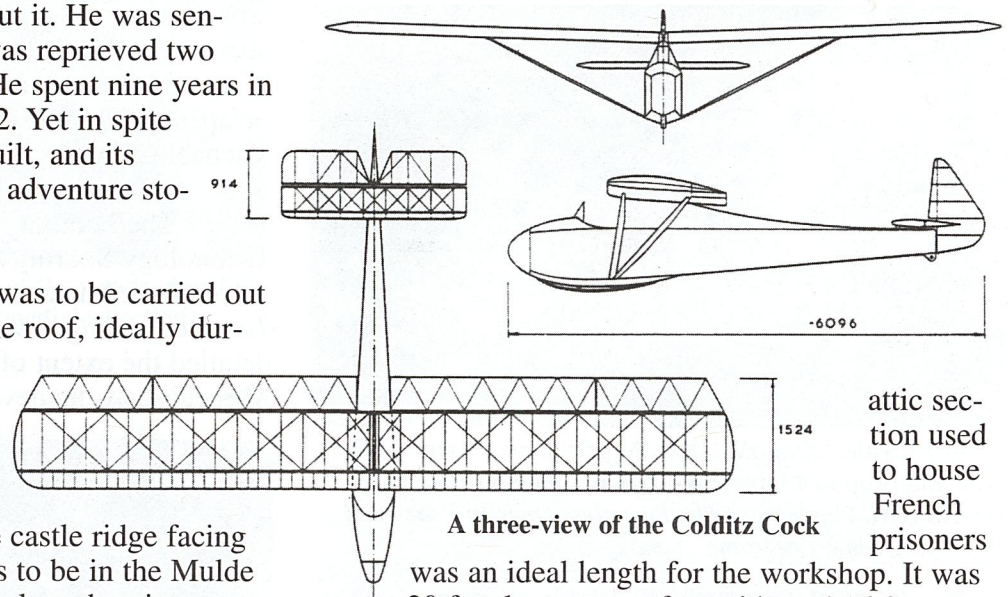
on which he served was sunk off Norway and he was fished out and imprisoned by the Germans. While imprisoned, he tried to contact Lord Haw Haw, a traitorous Briton in Germany who was broadcasting enemy propaganda. Purdy was transferred to a "rest camp," near Berlin, where the Nazis planned to develop a British Freikorps to fight the Russians. The Germans persuaded him to become a "plant" inside Colditz Castle, where a series of breaks from the supposedly break-proof facility had embarrassed the high command.

After the war, Purdy was arrested. His trial was held privately (in camera) and only a few people outside of the military knew about it. He was sentenced to hang in 1945, but he was reprieved two days before his execution date. He spent nine years in prison. He died of cancer in 1982. Yet in spite of it all, the Colditz Cock was built, and its assembly makes one of the great adventure stories of World War II.

The launching operation was to be carried out on a moonlit night from the castle roof, ideally during an air raid, when the Germans would be less likely to use their searchlights to scan the castle battlements. The chosen launch spot was a semi-concealed 600-foot run along the castle ridge facing the prevailing wind. Landing was to be in the Mulde River, flowing 200 feet below the launch point. Although the river was out of sight, the plotters had become familiar with the area's geography by grilling some of the more conversational guards. Scheduled touchdown would be in about two or three feet of water, enabling the occupants to scurry landward and make their way to a railroad station, then on to neutral Switzerland. Castle diversions were planned if the flight was discovered. The runway was to be from tables with legs astraddle the castle ridge. The glider was to be mounted on a four-wheel dolly with a rope passing from an automatic release hook on the dolly over a pulley at the end of the runway with a two-ton stone ballast falling down at the end of the castle to give an acceleration of 30 miles per hour. Two of the Colditz guards actually watched a working test model, but failed to realize its implication. (*Soaring* January-February 1947, *Escape Glider* by Alex Dawidoff and A. H. Lukins)

Goldfinch, drawing on his remembered experiences, and with books from the Colditz library, prepared rough sketches of the proposed glider.

Configuration, proportions, weight, gliding angle, sinking speed, and hundreds of aerodynamic details had to be resolved. Working on an inch/foot scale, Goldfinch drew up a three-view drawing of the proposed glider. "The eventual wingspan was 33 feet, a little bigger than a Messerschmitt 109 fighter, yet still smaller than the Spitfire. Calculations called for a length of 19-3/4 feet. It was projected to have an empty weight of 240 pounds and a wing loading of just under 3-1/2 pounds per square foot," Michael Cumming said in his book. The approximate glide angle was 12 to 1. Total secrecy had to be maintained. Still the construction site had to be in the immediate vicinity of the launch. A recently vacated



A three-view of the Colditz Cock

was an ideal length for the workshop. It was 20 feet long, seven feet wide and 16 feet to the adjacent rooftop ridge. It was remote, locked up, out of bounds and the guards probably wouldn't check it too often. Bricks could be removed from the rooftop end for a launching opening. The attic was sealed off. A false wall was erected. It consisted of stolen doors and wood panels covered with mud-layered canvas to simulate patching. Entrance was from the room below, via a concealed trap door.

The construction materials were spirited to the workplace. They consisted of wooden floorboard and bed slats, shaped to specifications. (In *The Powerless Ones*, Cumming said, "The guards always seemed to accept a certain amount of wastage.") The tight-knit, blue-and-white checked bed covers served as glider covering. Tools that were provided by the Red Cross for the camp theater were strictly off limits to conform with international law. The would-be glidermen crafted their own. For instance, a side-framed saw was made. It had a beech handle from a bed board, the frame from iron window bars. The blade came from a phonograph spring. A wood plane, eight-and-

one-half inches long, had a blade made from a kitchen knife. Drills were made from nails. A drill for metal was obtained by bribery. An elaborate intelligence system with POW sentinels (stooges) was worked out. Suspicious movements by the guards inside or outside the castle alerted the glider builders within 10 to 15 seconds. The glider started to take shape. The task was carried on by the light of a hole in the gable and by a jury-rigged, fat-fed lamp. Sometimes the conspirators would see the light of a guard's flashlight peep through a crack in the plaster. They would remain motionless, on occasion, for as long as an hour, until the intruder moved on.

Cupboard doors were sawed for ribs. Bed boards and shelving were fashioned into struts, ribs and diagonal wing bracing. Plywood was scrounged from locker door panels. Cigarettes, a wartime medium of exchange, were used to obtain glue and casein from the Nazi guards. The covering bed sheet material was doped with the milk ration boiled and applied hot. Stripped barbed wire and scrounged telephone and electric wire were used for the glider's controls. Cumming said that Charles Lockett ran thorough



A New York Times obit. photo of Jack Best, left, one of the "Heavy Industries" planners of the Colditz Cock glider escape. Fellow Colditz POW Bill Goldfinch at right, is shown with John Lee (in the cockpit), who flew the recently constructed glider replica.

tests on the finished components. Lorne Welch carefully checked the wing, heaving it at the wing tips, upwards on the rear spar, downwards on the forward spar. The two-place Colditz Cock was almost ready, and the exuberant Escape Committee decided to hold a POW Open House! Word of mouth invitations went to all senior officers in the camp. Two or three at a time were allowed up the trap door under the strictest security to view the progress. Douglas Bader, the famous legless ace, was heaved up and rattled through the hatchway, mechanical legs and all. Then, when all seemed to be in readiness, the operation was cancelled. Early in 1945, it was apparent that the war was winding down. Word seeped through from Allied authorities that all escape actions were to be suspended. The

Gestapo was becoming increasingly truculent with regard to escapees. In April 1945, Hodges' liberating Fifth American Army rolled over the area ending the question of whether or not the Colditz Cock would really fly. *The Times* reported that at war's end, it was broken up and used for firewood.



Fast Forward to 1999. Not one, but two Colditz Cock reproductions were being built. From *VGC News*

The Colditz Cock replica, on tow in Hampshire, England. The original glider was never flown. The Colditz POWs were liberated by Hodges' Fifth American Army before the original was flown. At the war's end it was believed to have been broken up and used for firewood.

(#99 Spring 2000) Chris Wills reported that longtime Colditz enthusiast, Martin Francis, has undertaken the task. Another was built by Southdown Aero Services of Lasham, England, from Bill Goldfinch's original drawings. Wills said the latter was successfully flown twice from a winch tow on January 23 at Odiham by internationally known sailplane pilot and author, Derek Piggott. Wills continued, "To meet present day requirements, the replica had to be made from aircraft materials, no pieces cut from floor boards. But it is covered with German cotton with a gingham pattern just as the original was. So after all these years the speculation as to whether the Colditz Cock would fly has now been put to rest." He slyly added, "We hope no one is suggesting that it be launched from the roof of the castle as was originally

ISSN# 0892-0516

NSM Historical Journal is a publication of National Soaring Museum,
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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 accomplished by a stamped self-addressed envelope. No compensation other than credit will be given.

Publisher - National Soaring Museum
Executive Director - Brian L. Little
Editor & Layout - William E. Gallagher

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.

H. R. Gimmey, Sacramento, CA, and Robert Lee Moore, Richland, WA, were inducted into the United States Soaring Hall of Fame, February 9, following a reception hosted by the National Soaring Museum. Gimmey and Moore were honored during the 2001 Soaring Society of America annual meeting held at the Indianapolis, IN, RCA Convention Center.

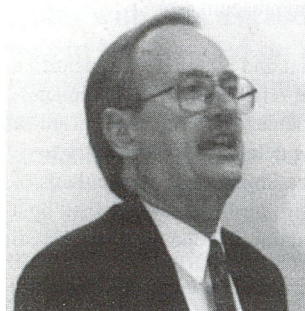
National Soaring Museum President Robert Ball, Vienna, VA, introduced Larry Sanderson, Hobbs, NM, President of the Soaring Society of America. Sanderson said that this year marked a major change in the way that new members of the Hall of Fame were chosen. For the first time, the nominees were named by the SSA Board of Directors and the choices were voted on by 25-year members of the Society.

Sanderson said that over 3,000 ballots went out and participation was excellent. The goal was to have people who support the Society be given an opportunity to select and vote their choices for Hall of Fame membership. "People were pleased to have the opportunity to participate," Sanderson said, "I think that we are going to do it in coming years. The goal is to have people who have supported the SSA the longest, and who have known most about the men and women who are a part of our organization, choose those to be honored. And tonight, I commend you for choosing these two men."



Robert H. Ball, President of the National Soaring Museum Board of Trustees welcomed attendees to the 2000 U. S. Soaring Hall of Fame ceremonies

He then introduced Gary Kemp, Willow, CA, who Sanderson said in 1984 decided that he was going to be guilty of being the contest director who called the longest single task in Open Class history, 509 miles. Sanderson smiled and added, "Being new to competition soaring, that didn't mean much to me, but when it was announced there was a great gasp from among the contestants, followed by several four-letter words." Kemp is volunteer Chairman of the U.S. Soaring Team committee.



Larry Sanderson, President of the Soaring Society of America, explained the new method of U.S. Soaring Hall of Fame selection.

H.Ray Gimmey and Robert Lee Moore, the Soaring Society of America's Year 2000 Selections To The United States Soaring Hall of Fame.



United States Soaring Hall of Fame members at the Indianapolis, IN, 2000 induction ceremonies: Standing, l to r, Hannes Linke (1999), E. Gene Hammond (1996), Edgar D. Seymour (1995), Bernald S. Smith (1984), George Applebay (1999). Seated, l to r, Sterling Starr (1979), Bertha M. Ryan (1972), H. Ray Gimmey, and Robert Lee Moore, 2000 inductees, Alcide Santelli (1979), William C. Sproull (1997). Also present were Floyd J. Sweet (1963), Charlie Spratt (1993). Howard E. Burr (1987), Henry G. Combs (1988) not pictured (NSM staff photo)

Kemp said that Ray Gimmey's first glider ride was in April of 1964, in a Schweizer 2-22. Gimmey has flown in competition at the world level longer than anyone else in the United States. He started flying at Paderborn (then West Germany) in 1981, and will fly in South Africa in 2001. Kemp said, "I was talking to Ray's wife Ruth earlier, and she said that as we pilots get older, it seems we want to fly more and more. That is certainly true with the many contests that Ray is flying in this year and has flown during the past year." He said that Gimmey is an inveterate competitor, and has shown his abilities over the years by winning six Open, two 15-Meter, and one Sports-Class championships. The only other sailplane pilot to have won championships in the four classes currently recognized, is Karl Striedieck.

Kemp mentioned Gimmey's concern for others. In competition, when everyone was using convoluted location codes, he would openly report positions to his ground crew. He was very free with his information, and is well thought of by younger people entering competition." Gimmey served as PASCO (Pacific Soaring Council) president, started the Chico (CA) soaring club and instructed for many years.

Kemp said, "He has contributed greatly on many levels in the Region and throughout the U.S. I can't speak more highly of him."

Ray Gimmey said that he was greatly honored, "because so many of my heroes, flying and administrative types are in the Hall of Fame."

He said that whatever successes he had in the past "in this wonderful sport" could not have happened without the support of people who made contributions in time and energy. He said, "My wife, Ruth, has been my cheerleader and crew throughout our marriage, and Dick Brandt has been probably the most honest and giving person that I have ever known." Gimmey said that Brandt, who passed away about a year ago, and his wife Bea gave him the use of their Nimbus III to fly for 13 years, while they crewed for him at the National and World Championships, 1987 through 1997. "For anyone attending a national or international competition, Dick was there, with a trailer packed full of anything that we didn't need, but someone else did," he said.

Gimmey extended his thanks to people who run the contests: "Charlie Spratt, the ultimate CD, Mark



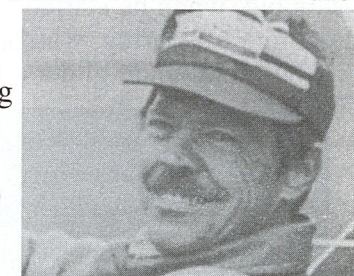
Garry Kemp (above) spoke on behalf of his friend and soaring competitor and Hall of Fame inductee, Ray Gimmey.

that they are now extending their reach over to Lubbock, TX. Then he said that there are people like Gary and Nancy Kemp, who this year alone are involved as Competition Director or Manager, or both in Open, 15 Meter, and Sports Class Nationals at Montague, CA. As members of PASCO they continued a 30-year tradition in organizing and supporting contests in California and Nevada.

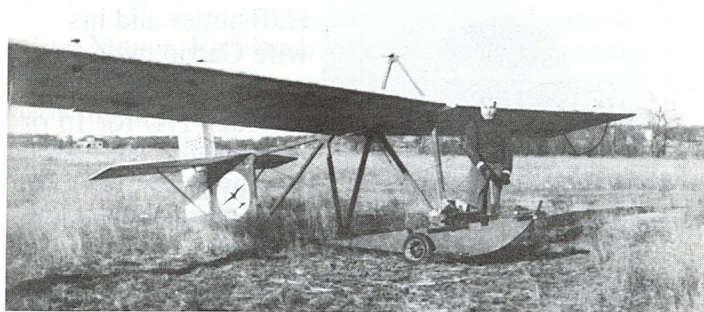
Gimmey said that these are just a few of the people who excel at providing the time, energy and means for sailplane pilots to play the ultimate three-dimensional game. He also extended his appreciation to all the others who help run contests, and those members that take care of business at the Soaring Society of America.

In introducing Janice Armstrong (Tehachapi, CA), Sanderson recalled her work on the National Soaring Museum's Arvin, CA National Landmark of Soaring site and also for editing *The Sailplane Builder Newsletter*. "A tireless worker," he said.

Ms. Armstrong remembered meeting Robert Lee Moore, when he first came to a Sailplane Homebuilders' meeting. Moore grew up in Texas and went to



Ray Gimmey on the starting grid. (Carl Herold photo) school with one of her best friends, the late Jim Maupin, an outstanding sailplane designer and builder. We had a strong connection with the Maupin family. "I believe that the Moore-Dixon glider that Bob and his team built there in Texas was the first glider that Jim Maupin flew. We have ties going back a long, long way."



The Moore-Dixon Primary Glider, from Moore's book *As I Knew Him*.

She said that like many others of Moore's generation, he first discovered soaring in a 1929 article that appeared in the *National Geographic*. He was the first SSA director from his area. He was involved in the creation of SSA chapters and in the formation of three glider clubs. Armstrong continued: "Many of you know him from the thousands of superb air-to-air photographs he has had published." Moore holds Diamond #13. "He's done a huge amount to support us all, and pushed the Standard Class when it wasn't the thing to do, politically."

Robert Lee Moore opened by saying that he never writes a speech, "I think it's deadly." "But," he added with a smile, "since I passed my 81st birthday, I need a few notes to remind me of things I know quite well, but sometimes have difficulty bringing to mind."

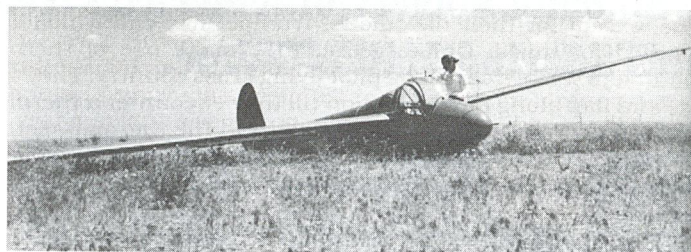
The new Hall-of-Famer said that he was eight years old, when he started dreaming of soaring, watching clouds, soaring birds and building crude gliders. He said that when he was



NSM trustee, Janice Armstrong introduced long-time sailplaner, photographer and writer, 2000 inductee, Robert Lee Moore.



Hall of Famers, Alcide Santelli left, and Edgar D. Seymour recalled old times at the Indianapolis Hall of Fame reception.



Robert Lee Moore's Schweizer SGS 1-21. (Don Santee photo) about 12 or 13, he and a friend built a Chanute-type hang-glider from plans that they found in a 1907 *Popular Mechanics*. "Ours was a flop---fortunately." He said, "had it survived its maiden trials, we were going to jump off a cliff!" A few years later he spotted the first copy of *Soaring* in the high school library. It cost one dollar, "a large amount of money for some of us in the depths of the Great Depression." Moore became a junior member of the Soaring Society of America.

Moore convinced Jim Maupin and some high school friends that, for what they were spending on making advanced model airplanes, resources could be pooled and they could build something that all could actually fly in. "So we found some plans in the back of a book that was published in England. And we built, with some modifications, a Dixon primary."

Moore mentioned his high school correspondence with Lewin Barringer, then manager of the SSA. "Even though we were just kids, he responded and confided his dream of coming to the Mid-West and proving that it was possible to make long-distance flights over flat country."

In 1938 Moore and his glider club members combined their finances, borrowed some of their fathers' cars, and drove to Wichita Falls, TX to visit Barringer, Richard DuPont, and to see the Minimoa. "We thought that ship was the most beautiful thing we had ever seen." (Both the Minimoa and the DuPont Winch are in the NSM collection.) Barringer succeeded in making a flight of over 200 miles to Tulsa, OK. "While in Wichita Falls, we saw Harlan



Bertha Ryan and Hannes Linke, members of the Hall of Fame, caught up on soaring friends.



H. Ray Gimme, 2000 Hall of Fame inductee, recounted some of his soaring experiences, and paid tribute to his soaring friends and competitors.

and tire money to get them across the country to the Elmira Nationals."

With the coming of World War II, private flying essentially stopped, with most of Moore's club members going into the Air Corps as glider or power pilots and instructors. "Jim Maupin had a distinguished career in military aviation. Later as you know, he became a designer of many great aircraft, including the Carbon Dragon." Moore was rejected by the military due to a chronic asthmatic condition.

Moore graduated from the University of Texas after the war. His allergies forced him as far away from Texas as he could get to find a job. The young chemist wound up at the Bechtel Hanford plant in Richland, WA, where they were making plutonium for atomic bombs.

There, Moore met a Texas style wheeler-dealer, Al Withrow. They became good friends and induced about a dozen friends to kick-in \$50 apiece toward the purchase of a Schweizer TG-3A, and start a glider club. The Richland glider club lasted only two years before Withrow demolished the TG-3A. "I was the only slow-burner who could take it after that," the speaker said.

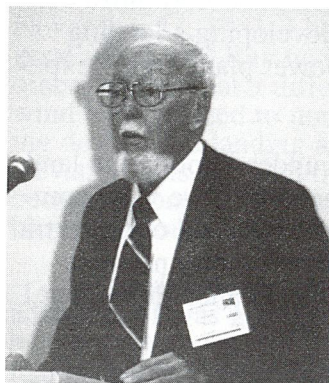
Moore traced SSA development through the 50s, and was the first regional director elected from the Northwest. He said that around 1957, Lloyd Licher was hired as SSA Manager. "He and his wife, Rose Marie, started running the Society and publishing the magazine, literally from their living room, while at the same time raising two nice boys."

Moore was appointed membership committee chairman and said that in that capacity he considered himself an advocate or ombudsman for the average

Ross in his brother's shop building the Ibis, the twin to the famous Zanon, that would later gain fame within the hands of John Robinson." The following pre-war seasons, the surrounding towns offered prize money for the first pilot to land there. "California pilots now had a chance to win some gasoline

glider pilot or enthusiast "out in the sticks." One of the first ideas that he and Lloyd implemented was to hold the first in a series of contests to sign up new members. Want ads and SSA chapter rebates were also used to expand membership.

In one fund-raising promotion, the speaker mentioned a 10 year-old Schweizer 1-21, one of only two built. The ship was generously donated to the Society by a wealthy Colorado man, to be sold at a silent auction. Moore smiled, "Lloyd called and told me that mine was the top bid, and thanked me for my generous offer. Then he added that I could have bid substantially less and still won." Moore said that he flew the 1-21 in every contest west of the Mississippi during the years that he had it. "Always in the top five, and never lower than tenth place." He also mentioned the Schweizer 1-26, and commended Paul A. Schweizer for his idea of a one-class contest as being one of the great successes of American soaring.



Writer, photographer and 2000 Hall of Fame Inductee Robert Lee Moore reflected on his life in soaring.

Moore discussed the development of the Standard Class internationally. It was a simple, inexpensive sailplane, fixed wheel, no flaps, no water ballast, and suitable for club use. Although the idea was supported by Paul Schweizer, not all the directors agreed. But we persisted, and for a good many years, all that was done

during our national class contest, essentially an open class contest, was to have an asterisk inserted after the names of those with standard class sailplanes.

During Moore's years as a director and vice president, the SSA hired well-known aviation writer, Alex Dawydoff as Editor of *Soaring*. Moore said that there followed a series of editors, "the last and best being the late Doug Lamont." He added, "I'm so pleased that I now have John Good, as an associate; his imprint is already being made on the magazine."

He referred briefly to his book, *As I Knew Him*. Around 10 years ago, Moore was extremely ill; "I thought I was going to die" he said. During his long convalescence, he wrote a family history. He wrote a few paragraphs about himself, "so my nieces and nephews would know how their mad uncle out in Washington got the way he was, and it grew into a book."

(continued on page 4)

A Never Undershoot or Overshoot Sailplane Landing Method

By John Robinson

In the mid-30s, pilots soaring on the slope winds at Torrey Pines, CA, we were tired of the high tides preventing our flying when strong winds blew. We had been towing on the beach for take-off and landing. There was only a bare field on top of the cliffs that was not being used by farmers. We had permission to use this field, so each of us was developing a landing pattern; none of us had any power plane flying experience.

Taking any chance of undershooting the landing was totally out of the question; so we were coming toward the field high, and getting rid of the extra altitude. A couple of the pilots tried left and right turns, or S-turns to increase the distance flown, but I did not like that.

I experimented with doing a "slip or skid" if you will, and that worked just fine. My rudder was large and had 45-degree travel each way, so I could drop a wing, kick top rudder, and slide down the wing toward the field with a lot of drag!

Just before landing I would straighten out the plane, land at 50 or 60 m.p.h., and if I wanted to stop quickly, I would put most of the weight on the nose-skid with down elevator at 25 degrees. This was the way before the invention of spoilers.

About this time some information from N.A.C.A. (National Advisory Committee on Aeronautics) gave a formula for the drag on anything moving through the air. This said, "The drag increases as the square of the velocity." Now here was some information that I could use!

This I did in my landing approach "skid maneuvers." When I increased speed from 50 to 71 m.p.h., the drag was doubled. At 90 m.p.h., the drag would be more than three times as much, and at 100 m.p.h., it would be four times as much...Wowee!



John Robinson, right, with Raymon H. Parker (U.S. Soaring Hall of Fame members, 1954 and 1964 respectively) and Robinson's championship sailplane, Zanon

And then spoilers were invented, which I used with an increase in speed, to make landing approaches very easy, and precise.

Sometimes, when pilots I knew aspired to go cross-country, I would increase their con-

fidence for landing in a farmer's field, with a two-place demonstration of my landing method. Much later, when we were required to get a bi-annual review from a licensed instructor, I delighted in showing them my "precision landing method," which was always a new experience for them.

There are two ways to gain speed. One just dive for it, or two, if the distance to the field is already short, quickly pull up steeply, and while you still have elevator control, a full forward stick to a vertical dive, with full spoilers. At 85 m.p.h. round it out to about 95 m.p.h. and fly "uphill" at 100 m.p.h. to slow down quickly.

This will get rid of an extra 300 feet of altitude at the start! The pilot always has the option of less speed, and adjustable spoiler settings. I always land fast with good elevator control. The spoilers act as air brakes to slow one down on the roll out. I NEVER do a slow or stall landing.

In the 1970s, I was flying friends' sailplanes, tow planes, or renting a ship to soar. At Hemet, CA, a gliding operation was being run by a man and wife team of instructors (I forget their names.) When he gave me a bi-annual checkout, I showed him one of my special landings. He was delighted, and asked me to take his wife up and show her one. I did, and she liked it.

Sometime later, I heard her describe to another wife. She said, "We were 300 feet too high for a landing, and suddenly the horizon disappeared and everything was blue, and then everything turned green, and we were doing 100 m.p.h. When we slowed down, that extra 100 feet just disappeared, and we made a perfect landing."

Airplane Pilot's View: Sailplane Landings With A Big Question Mark

By John Robinson

After World War II, I bought a Laister-Kauffmann two-place sailplane that had been built for the Army Training Program. With a friend who had a Waco biplane with a tow-hook, and another friend to be ground-crew helper, I started flying passengers for a small fee per flight at Monrovia Airport, CA.

The south side of the Sierra Madre Mountains was very close, and I would tow into the canyon to

release the tow-line, and show the passenger how we climb a glider in thermals. If there were none, I would fly in a few circles to explain the system, and then glide back to the airport.

For many years later pilots and strangers would tell me that I gave them their first glider flight! I had great confidence in my landing system of always starting very high to allow for any down-draft that might cause an undershoot. Then I would combine spoilers with my "speed-drag" invention, to eliminate unnecessary altitude for precision landings.

If there were airplanes in the pattern, I would join them and take my turn. In case the one ahead of me was taking an unnecessarily long downwind leg, I could dive down quickly, land, and be turning off the runway at the far end, before he had returned. I never in my life found it necessary to take the right-of-way from a power plane, as the law says a glider can.

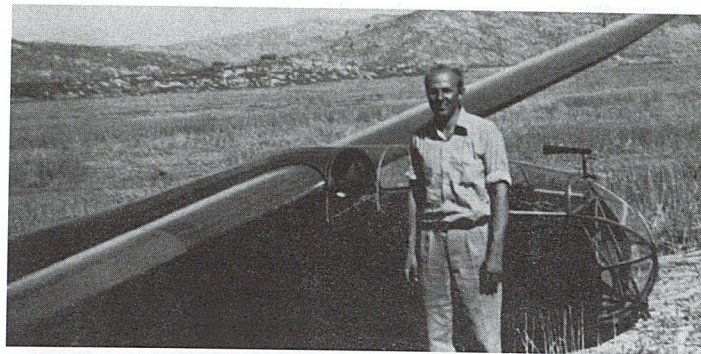
When I was making these landings, I noticed that many pilots and mechanics would come out of the hangars, lining both sides of the runway to watch my landings. One day, I asked one of the three pilots that I knew pretty well, "How come there is so much interest in my landings?"

"Well John," he said, "Everyone fouls-up a landing sometime, and we just give the engine some throttle and go around for another try. Now you don't have an engine to throttle up, and I'm going to be watching when you screw-up!!"

I did not tell my friend that I was touching down within five feet of the same spot on the runway every time. Why spoil his fun? ...For safe landings.



John Robinson with 1968 Hall of Famer, Helen R. Dick, at the Torrey Pines Landmark of Soaring dedication.



Robinson and his Robin #4 sailplane, showing the ship's transparent nose, 1938.

Landing Sailplane In Very High Winds

By John Robinson

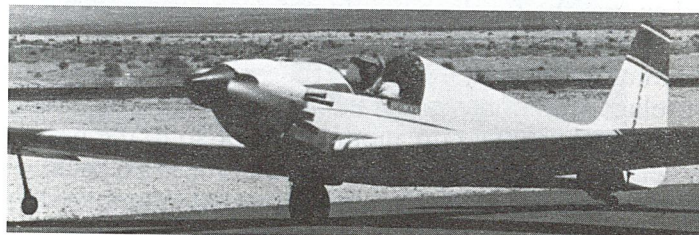
When Raymon Parker, and Larry Edgar were flying the Mountain Wave Project at Bishop, CA, we were using two-place Pratt Read sailplanes. On November 11, 1951, I had been up to 24,000 feet in good wave, and Ray had reached 34,000 feet in the other sailplane, at a different location. When the west wind had changed to northwest, we were both coming down for a landing at Bishop Airport (4,000 feet elevation.) As I passed through 7,000 feet, the wind became stronger from the north, and I could see dust blowing about 10 miles north of the airport.

I radioed this to Ray in the other ship, and added that I was going to land on the ramp by the hangar, not on the runway. I made my approach at 80 m.p.h., landed and rolled five feet, as I held full spoilers and wheel braked hard! The air-speed indicator still read 70 m.p.h.!

The gang opened the doors and wheeled me in quickly. Ray came in and did the same thing. After we closed the doors we all retired to Bob Symon's hangar, about 150 feet away to the east.

Within a half hour we heard a thunderous noise. We ran to the window and watched the roof of our large hangar blow off! We all ran over to assess the damage to the six sailplanes, five assembled, and my Zanon in its trailer.

We were greeted by an eight-foot long, two-by-four standing through the wing of Ray Parker's Tiny Mite, its bottom end on the floor. It did not even break a rib or anything else but the fabric, a very minor repair for Ray.



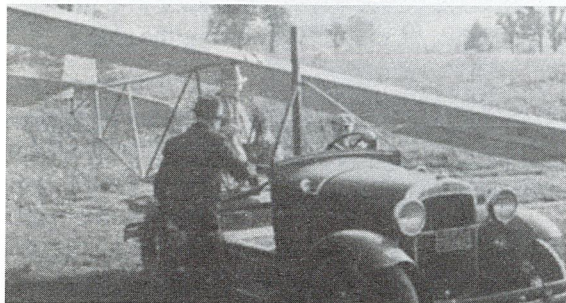
1989 photo by Kay Ondek, of Robinson in his RF4D Fournier motorglider on take-off roll California City, CA.

There was no other damage, so we could continue our Wave Project the next morning. We were very lucky!

From the Archives

The Auto Glider

The November, 1937 issue of *Soaring* carried a story of unique primary glider training device, the Auto-Glider. In those days, there were few, if any, two-place gliders for training.



The auto-glider, E.E. Brubaker at left.

The Auto-Glider was designed by Edison E. Brubaker of

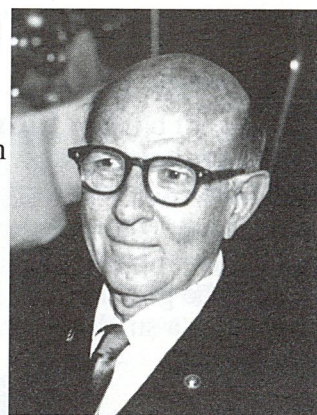
Kenhorst, PA, "to give primary instruction with complete safety for the student, and without risk to the equipment." It consisted of a Waco primary glider resting on a flat truck platform, fitted to a stripped down car. The nose of the glider was secured through a universal shock absorber to a vertical mounted rod, supported at both ends, behind the driver's seat. The fastened glider was free to swing through a 60-degree arc. On the vertical rods slotted rear side, the attached nose of the glider was free to move one to four feet up and down.

The glider's wing tips were equipped with extra long wooden skids to protect them from touching the ground. The landing skid rested on sections of tire casing laid across the car's platform.

Brubaker, although not a pilot himself, worked out a system of "that had given valuable instruction to more than 20 students," the *Soaring* article reported.

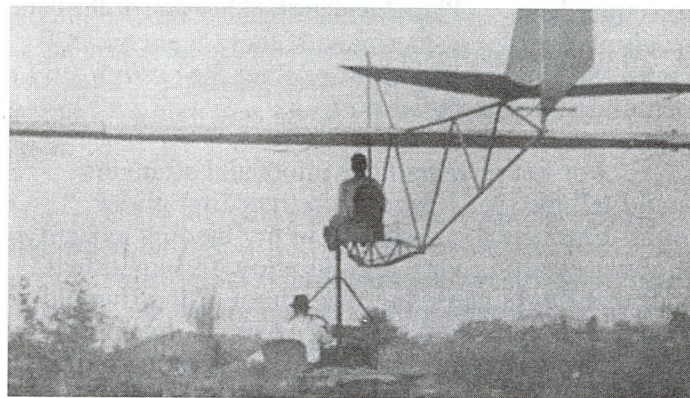
When the student began his training, the car was driven just fast enough to give him lateral control. The nose is held down by a bolt through the movable upright bar, and secured with a safety pin. Rudiments of rudder control also were taught. As the tail swung from side to side, lateral control was limited so that the fuselage would not drop onto a wheel or off the side of the car. When the student had become proficient at keeping the wings level and fuselage well centered on the platform, the pin in the upright was moved up another foot or so to the next hole, and the car's speed was increased. With back pressure on the stick, the student was able to take off and lift the glider about two feet. As the pilot's skill increased, a pin is moved up to the top of the bar, allowing him to make flights of up to four feet. From

John Robinson was the first American to earn *Soaring's* highest award, the Diamond "C" in his sailplane, Zanonia. He won three successive national soaring contests with Zanonia in 1940, 1941, and 1946. In 1949, he was the first to set an altitude record in a new world record classification; absolute altitude above sea level, 33,500 feet. He won

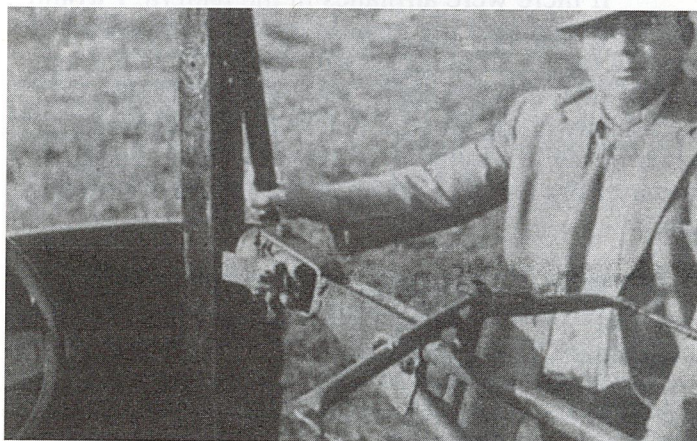


John Robinson

the prestigious Lilienthal Medal in 1950. Robinson, along with Larry Edgar and Raymon Parker were pilots involved in the 1950-1952 Mountain Wave Project. He is a 1954 inductee into the United States Soaring Hall of Fame, and has written several articles appearing in *Soaring*.



A student flies the glider at the top of the bar.

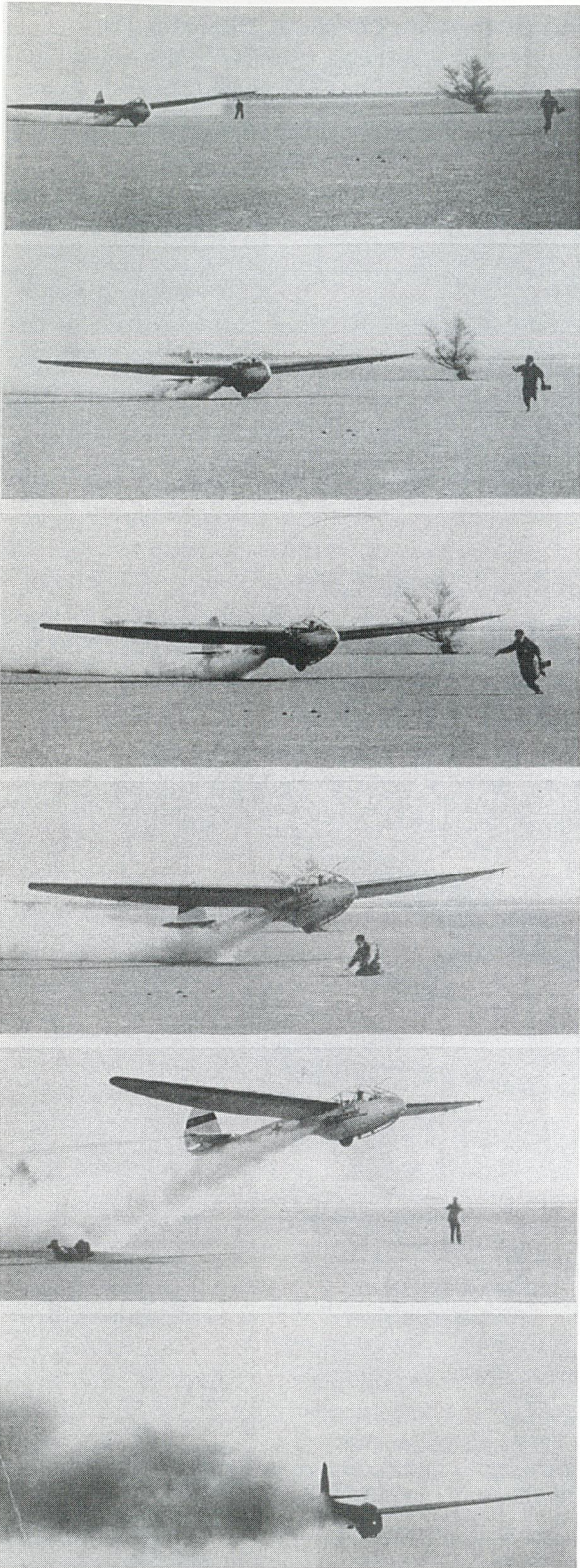


Close-up of the universal attachment.

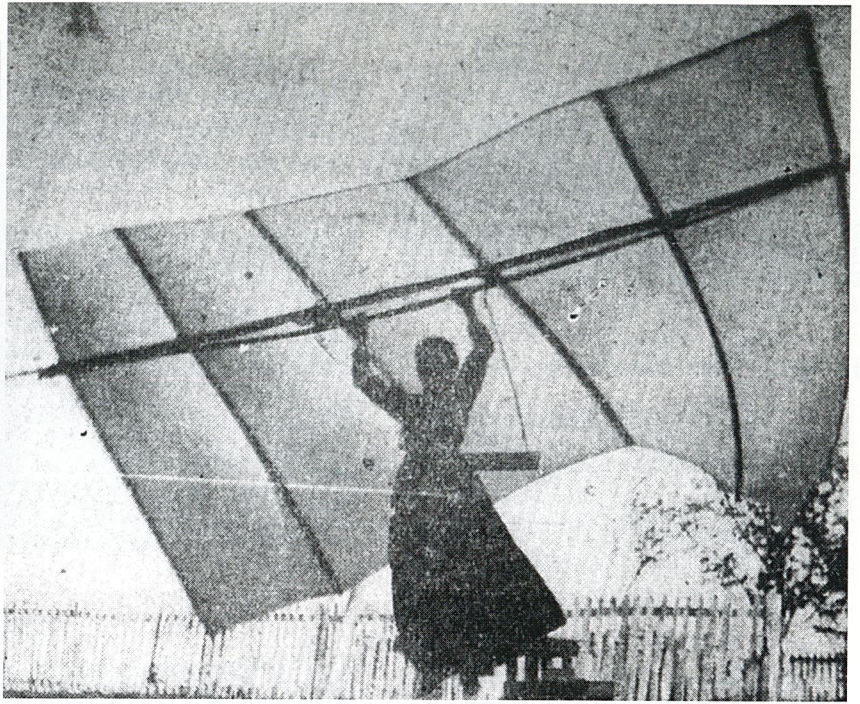
this height, the pilot was able to simulate landing when the car was put in neutral, and allowed to "free-wheel" and slow down.

The story continued, "In our opinion, the cost of such a set-up could be kept very low. All that is needed is a used car, a primary glider, old tire casings, long wing skids and the Brubaker universal device which could be constructed for a reasonable price.

(From the Archives continued)



Glider Charges Photographer. A Pratt Read swerves toward *Life* Photographer Allan Grant as one rocket motor fails to start. Grant runs to escape, then dives to the ground as the pilot noses the glider up, just missing him. Grant took the bottom photo lying on his back as the Pratt Read whooshed by. (*Life* magazine-no date, probably late 40s or early 50s)

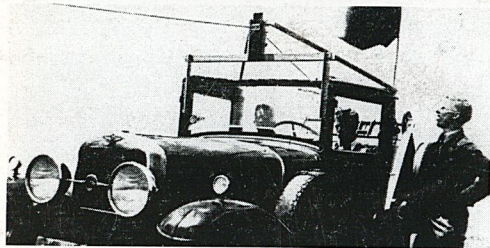


"Doctors wife flew in 1902 in Maryland," the headline read. "Dr. Charles Zimmerman took a poor view of flight by balloon when the Twentieth Century was new, and he attempted to come up with his own answer to the problem of heavier-than-air flying machines. One of his products is shown, carting Mrs. Zimmerman across the back lawn. It was apparently controlled by lines from the ground, not by the pilot. She always had faith in what Charles was trying to accomplish." (From Mrs. Ida Zimmerman's March 14, 1951, *Washington Post* obituary. She was 89.)



"Preparing for heavy traffic out of the skies. Alcide (Tom Sawyer) Santelli, Providence, RI, whitewashes the stumps on the ridge landing field when his ship is becalmed. He'll trade the job for a jack knife with a broken blade." (*Elmira Star-Gazette*, July, 1933)

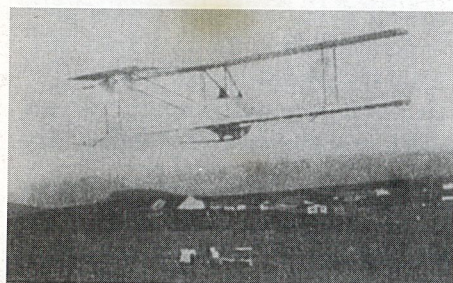
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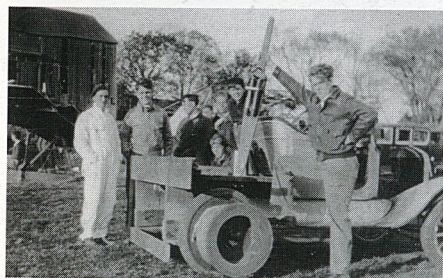
The famous 1932, "De-gravitator" winch, on what later became Elmira's Harris Hill glider field. (Elmira Star -Gazette)



Anthony H. G. Fokker, the renowned airplane builder, taking off in a glider that he had designed. In 1922 he became the first pilot to carry a passenger in a glider.



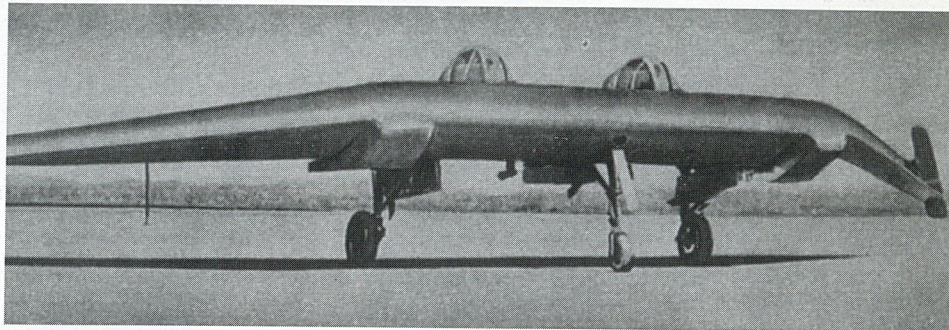
Fokker's first flight in 1922, on the German Wasserkuppe in a glider that he designed and built.



The first auto-winch built in the United States, Aero Club Albatross, New Jersey, 1931.(Above and below, Gus Scheurer, NSM multi-media collection)



The headline read, "Tailless Glider Seating Two Completes 2,400 Mile Trip." The January 1949, *Popular Science* article continued, "Similar in size to the U.S. Air Force's flying wing, a giant glider developed in Canada, has no tail section. The motorless craft, which carries two men, has a tricycle landing gear that is retractable. It recently completed a 2,400 mile trip."



SECOND ANNUAL NATIONAL GLIDING AND SOARING CONTEST

SPONSORED BY THE NATIONAL GLIDER ASSOCIATION, ASSOCIATED GLIDER CLUBS AND THE ELMIRA ASSOCIATION OF COMMERCE

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WARREN E. EATON
REPRESENTING N.G.A. PILOTS
ALBERT HASTINGS
REPRESENTING N.G.A.