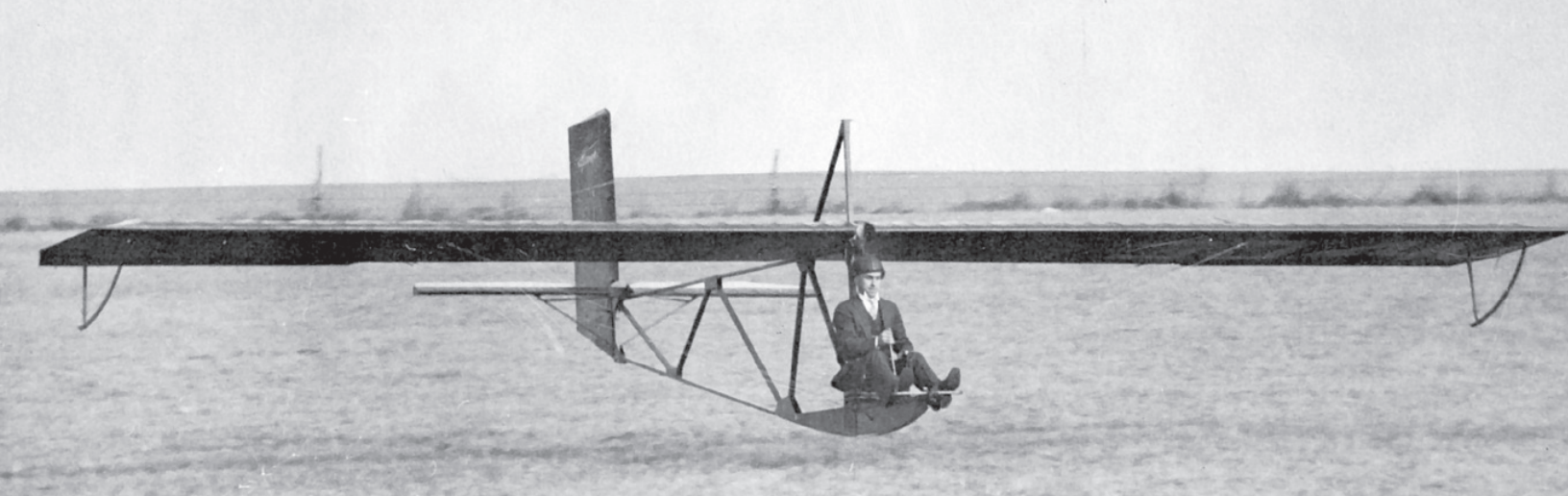


Cessna's Gliders

By Hayden Hamilton



A Cessna CG-2 gliding in to a landing.

Early in 1930 aircraft manufacturers found themselves struggling to keep their doors open. Lindbergh's transatlantic flight of 1927 had spurred an economic boom that had evaporated overnight on October 29, 1929, with the stock market crash that ushered in the Great Depression. Planes that had been selling for more than \$15,000, were being offered for under \$10,000, barely covering the cost of the engine. Companies like Stearman, Waco, Stinson, American Eagle, Aeronca and others were having difficulty making payroll and paying their suppliers. Striving to survive was the order of the day.

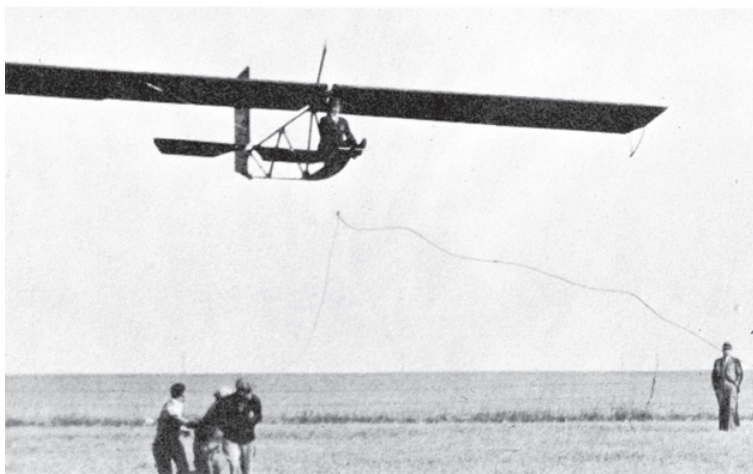
Clyde Cessna and his son Eldon understood that to sell planes you needed to have pilots as customers, but in the current economy, few could afford the expense associated with obtaining a pilot's license. Cash was just too tight. Some companies, like Aeronca, investigated creating low-cost, low-powered two-seat designs that they hoped could provide a low entry point into aviation while serving as a basic trainer. Eldon Cessna saw the opportunity differently. Looking at pilot training in Europe, he saw that the primary entry point for flying was gliding – low costs, fun and exciting; key elements for attracting individuals into aviation.

Eldon quickly created a primary glider design based on similar German designs of that period. The Cessna Glider, CG-1, that made its first flight (unmanned) on December 28, 1929. The wood and fabric plane had a 35-foot wingspan and an empty weight of 120 pounds. Flying speeds were in the 20-25 mph range with landing speed of around 15 mph. The plane could be launched by bungee cord, auto tow or air tow.

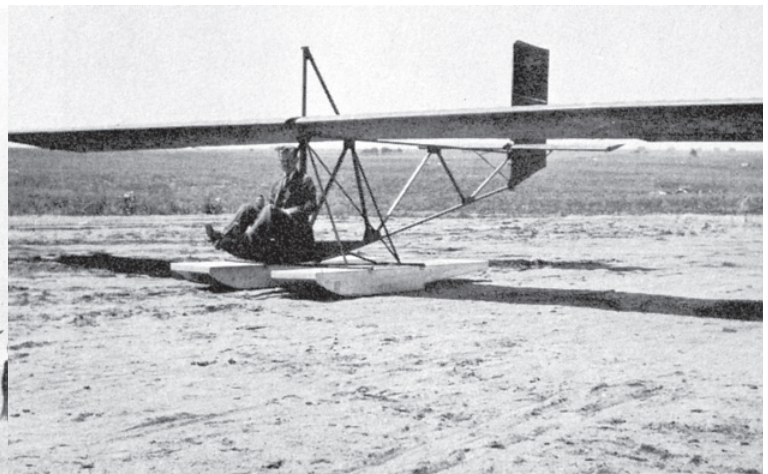
It was quickly refined for production as the CG-2. Introduced at the bargain basement price of \$400 for an assembled ship, or

only \$100 if you were willing to assemble it yourself from a kit of parts. Cessna launched a strong marketing campaign to promote their glider. This included advertisements with the tag line "Glider Pilots will be future transport pilots." They also got quite a bit of press coverage by having well known pilots like George Goebel, Frank Hawks and Charles Lindbergh try out their glider. Other personalities known to have flown the glider included Gilbert G. Budwig, Director of Air Regulations for the Department of Commerce, Dwayne Wallace, future head of Cessna, Walter Beech, and a number of local celebrities.

Cessna ran a series of advertisements promoting gliding as a path to becoming a commercial pilot. Interestingly, this message could be just as valid today as when Cessna used it in 1930.



The CG-1 and CG-2 could be launched via auto or aero tow with bungee cord launches probably being the most common.



A CG-2 fitted with floats.

Even at these low prices, Cessna realized they were beyond the reach of most individuals. Cessna began marketing the CG-2 as a club ship. If a group were to form a flying club that raised \$300, Cessna would provide a discounted glider if the group would pick it up at the factory. The strategy met with modest success, with flying clubs being quickly formed in Kansas, Nebraska, and Oklahoma – all within easy reach of Wichita – to take advantage of this discount, and a few more distantly located. The Wichita Glider Club was one of the first with Eldon Cessna as President; Edward A. Wright of Associated Aircraft Co. as First Vice-President; James P. Verts, Secretary of Cessna Aircraft, as Second Vice-President; Andrew H. Wehling, a glider enthusiast since 1908, as Treasurer; and Mildred E. Verts as an organizer of the Wichita Glider Club and director of the Dickinson Secretarial School of Wichita. One of the objectives of the club was to help keep Wichita in the forefront of aviation as “The Air Capital.”

Clyde Cessna reported at a February 5, 1930, annual stockholder’s meeting that 25 gliders were under construction and that sales were expected to be good. In spite of these promising prospects, the company was bleeding money and needed a large cash injection to survive. On February 26, 1930, the stockholders and board of directors voted to reorganize the Cessna Aircraft Co., bringing in two well-known Wichita individuals to the board. M.L. Arnold was elected vice president and treasurer to Clyde Cessna’s presidency, with Eldon serving as secretary.

Cessna and Arnold wanted to get the CG-2 national exposure and selected the St. Louis aeronautical exposition in March 1930 for this opportunity. Along with two powered designs, a CG-2 was exhibited at the exposition with the glider getting a lion’s share of the attention. On the flying club side, the cost of entry into aviation was much more affordable. A number of flying clubs across the nation were created with a membership of 10-15 members. For a \$100 kit version of the CG-2, this translated into less than a \$10 investment per individual. Newspaper reports show clubs being formed across country.

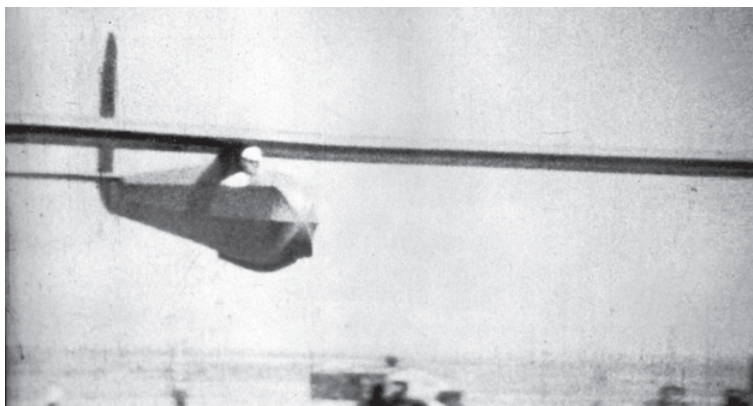
In March 1930 Eldon rolled out his second glider design – the Cessna Sailplane CS-1. Some reports indicate it was based

on the primary design featuring a fuselage and full cantilevered wing. Wingspan was about 45 feet and the plane weighed in at around 150 pounds. It was reported to have a glide ratio of 30:1 and early test flights lasted in the area of three minutes on a short (300 foot?) tow rope. The plane could be launched via bungee cord, auto tow, or aero tow. Reports also indicate that the wings may have been weak in torsion, making turning an interesting proposition.

The Wichita Evening Eagle reported on April 12, 1930, that a group of gliding enthusiasts including Eldon Cessna



The Wichita Glider Club promoted not only gliding, but also their town Wichita as the “Air Capital.”



Rare photo of the CS-1, NC322M, c/n 18, with Eldon Cessna at the controls at the Pawnee Plant in Wichita in 1930. The image was taken from a 1930 movie film strip. Note the fully cantilever wing and that the plane appears to be most likely painted silver.

had just returned from a trip where they had been test flying the CS-1 on the bluffs southwest of Manhattan, Kansas. True soaring flight was obtainable. According to the report, Eldon made three flights in the CS-1. The first achieved an altitude of about 200 ft during a 6.5 minute flight. During the second he attained an altitude of a 1,000 ft during a slightly more than 23 minutes flight. The third flight lasted about seven minutes with an altitude of about 150 feet.

The CS-1 was a one-off design that never saw production. It was given to the Wichita Flying Club that used it for some time before being scrapped.

The CG-2 primary glider saw around 80 examples (some reports claim as many as 300) of both kit and assembled being produced. In spite of such a low production run for a basic training design, two examples have survived. One is on display at the Museum of Flight in Seattle, Washington. This glider was purchased in 1930 for \$400 by the 10 members of the Yakima Glider Club in kit form and built out by the members. They operated this primary glider for 10 years. The second example, donated by Leland Hanselman and C. Van Airsdale, is on display at the EAA Museum in Oshkosh, Wisconsin.

The CG-2 was also used as a test bed for modifications that included the self-launch CPG-1 powered by a 10-hp Cleone and the Baby Cessna, NC133V, c/n 77. Eldon Cessna essentially took a CG-2, enclosed the fuselage, creating a tiny cabin, then added wheels and a 25-hp Cleone engine. This aircraft had the same wing span and over length of the CG-2.

None of these efforts really helped the company. Cessna continued to bleed cash and by mid-1930 the board of directors voted to shutter the facilities. It wouldn't be until 1933 that a reorganized and financed Cessna would re-emerge as an aircraft producer, eventually becoming the company we know today. ➔

SPECIFICATIONS

CG-2 Primary Glider

Crew: 1	Performance
Length: 18 ft 0 in	Vmax: 25 mph
Wingspan: 36 ft 2 in	Vs: 15 mph
Wing Area: 157 sft	Vc: 20 mph
Height: 6 ft 10 in	
Empty Weight: 120 lb	

CS-1 Sailplane

Crew: 1	L/D: 30:1
Length: ?	
Wingspan: 45 ft	
Height: ?	
Empty Weight: 150 lbs	

REFERENCES

- Cessna Guidebook*, Vol 1. By Mitch Mayborn and Bob Pickett. 1973, ISBN 9780912470108
- Borne on the South Wind*. By Frank Joseph Rowe and Craig Miner. Wichita Eagle & Beacon Pub Co, 1993. ISBN 1-880652-33-1
- Various Wichita newspaper articles from 1929, 1930, 1931.



A CG-2 fitted with a 10-hp Cleone engine.



Eldon Cessna created the "Baby Cessna" by wrapping the CS-2 frame in a fuselage and a tiny enclosed cabin, adding wheels and a 25-hp Cleone engine.