

ing 300 ft. per minute. He averaged 100 ft. per minute climb in thermals with an apparent inversion or wind shear that put a cap on the lift at 4000 ft. above the ground, a comparatively low ceiling for us. This invisible cap began to be troublesome about 3:00 p.m. as it was apparent that the lift was dying.

Each time Merv soared to the top of a thermal he was a bit lower and a little closer to the airport. At four-twenty we were extremely on edge. With fifteen minutes to go Merv was about 1200 ft., soaring true, but drifting badly. He came toward us again at 4:30, reaching the edge of the field at eight hundred feet. Five minutes to go. We prayed as he made a slow turn away and then another. "Good, he's made it." But no, he is coming back again; this time clearing the wires at 300 ft., then another turn away and a second one. 4:30 — two minutes from 300 ft. Can he do it? Merv turned back to the runway, edging southward for a little more of that reduced sink over the wires. He S turns still farther south, slowed to 42 mph, fighting the second hand of his watch. At thirty seconds to go he starts his final turn onto the field, clearing the wires by fifty feet, slowly cruising up the runway, floating, holding her off until the last seconds, then landing at five hours one minute after release.

Bob Heizer Soars 4 Hrs, 54 Min, Gains 10,600 Ft. on First Silver C Try

Labor Day, just the day after Merv Hicks completed his duration leg and Silver C badge, proved interesting to Bob Heizer. Bob had worked hard to get his commercial glider license and now hoped to work on his Silver C legs.

He took off early and failed to hang on. Ten minutes later he tried again, and again landed after a brief struggle with zero sink. We huddled around the glider, advising, "Don't dive those turns," "Flatten out in the core of lift," "Speed up a little, you're flying too slow," "Slow down a little, you're flying too fast"—Did you ever wonder how you ever learned to soar at all?

Bob gritted his teeth and took off for the third time. Right off tow he went to 9000 ASL and began to soar mightily. He tells us that letting the ball go a shade off center kills 50 to 100 ft. per minute lift in thermals and we realize that he is learning rapidly and well.

After lunch we lowered the top of Fred and Marges' convertible and leaned back to watch the glider soar-

ing 12,600 ft. above us. Bob was flying at 90 mph with spoilers open. Snow poured into the cockpit and he wrapped his wrist with a map to avoid the numbing cold on the back of his hand while holding full spoiler. The glider began to disappear upward in the venomous black haze and we were concerned momentarily. But Bob came spinning down to get out of the evil clutches—first two turns then a recovery and then two more exasperated turns in spin—can't seem to stay out of these clouds! He headed out east at an incredible speed and disappeared ahead of the now moving cold front at 16,000 ASL.

We put two new tires on the glider trailer and a battery in the tail light case, assuming that Bob was going southeast to Limon.

Actually Bob rode the front to Strassburg, about forty-five miles east, where it disintegrated. He headed back to Denver, losing 8000 ft. in only twenty minutes, flying through the aftermath of the front. On the way down he too began to notice the effects of anoxia. While passing over the Naval Air Station at Buckley Field he decided to give the "blow torch" boys a thrill by landing the glider there. Saner reasoning took over at 10,000 ft. and he headed farther west. At Sky Ranch Airport, east of Denver, he found a little light lift which proved unworkable and he landed at 4 hrs. 54 min. from release and 20 miles x-country.

And that concludes the Colorado Soaring story. The year's exploits are a tribute to the fine weather available as well as to the ability of the pilots. The state averages 296 sunny days a year and when the sun shines out here a Schweizer TC3 can soar. When the club recovers the ship this winter, per Doc Raspet's suggestions about surfacing to achieve laminar flow, we will have a ship to make Gold Badge flights in. And the installation of oxygen and electric turn and bank will make it possible to use the tremendous energy available from the summer thunderstorms and cold fronts.

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UNUSUAL GLIDERS

by PETE M. BOWERS

Credit for building the fastest gliders in the world must go to the Japanese, who produced two in the closing months of World War II.

When the Japanese began their suicide "Kamikaze" attacks on US warships, they used standard tactical aircraft loaded with high explosives. These were relatively large and slow, and made good targets for defending fighters and anti-aircraft, so something more elusive had to be developed. This turned out to be the tiny piloted missile that was carried by a bomber, and released some distance from the target, completing the one-way trip under the control of the human pilot. This device was named "Baka" (Japanese for "Fool") by the Allies and "Oka" by the Japanese.



The Oka had a wingspan of only sixteen and one-half feet, and carried 2640 pounds of explosive in its 20-foot fuselage. Three liquid rocket motors in the tail gave it an impact velocity of 620 mph, although its normal glider speed was only 230 mph. It was necessary to get performance and operational data on the OKA before sending it into action, so a test program was inaugurated.

A number of Okas were built as unpowered trainers, with a block of cast iron in an elongated nose replacing the warhead, the rocket tubes deleted and the tail cone faired over, and a few extra flight instruments. Major outward changes were the addition of flaps and a king-size landing skid. This had to be strong, for even with the flaps and light load, the landing speed of this baby glider was estimated at something over 170 mph!



The other hot Japanese glider was also a test model for a powered ship.

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