A RARE BIRD, THE FALCON

by FRED DAAMS

Some ten years ago I was a member of a gliding club in the small but beautiful country of Holland.

Nobody in our active organization was very happy when one fellow who was the backbone of the group emigrated to the U.S.A. Later we heard that with some friends there in his new homeland he was building a sailplane. Of course we envied him as doing something like that in Holland would be two or three times as hard as building a Cherokee II in New Zealand. That fellow, by the way, was Johnny Bierens and the sailplane, the "Alibi."

Little did I know then that sometime in the future I would be privileged to do the same thing. After a tour of duty in the Dutch Air Force, including jet and gunnery training in the U.S.A., I also found myself on my way to this wonderful country for good.

As my wife came from the Phoenix area we made straight for the Arizona desert.

Flying previously in Uncle Sam's hot rods over the sun-scorched hills and valleys, I had wondered why there were no sailplanes in this thermal-breeding country. In May, 1955, however, I met Don Barnard through a story in the local newspaper. Don was flying an L-K and doing a wonderful job of advertising soaring. In fact, Joe Lincoln, an old pro by now, got the bug on a ride in Don's ship.

In August, 1955, the Arizona Soaring Association was formed and three ships, an L-K, TG-3A and Cinema were on active flying status. Soon a Pratt-Read and the Bowlus Baby of Joe Lincoln were added.

A good time of soaring and working was had by all until we had that disastrous week in April, 1956. The Baby, the TG-3A and the Pratt-Read were all put out of commission in short order. One member landed the Baby short of the runway and hit a ditch. Next, a gust of wind blew the TG-3A wing off the trailer. To top it all off, on Saturday I had to put the Pratt-Read in between 10-ft. houlders and 30-ft. Sarguaros. My co-pilot, Clay Hartman, and I ended up by leaving the left wing in a big mesquite tree and landing the remainder of the ship in a conventional but short manner.

Not long after all this a set of L-K wings came into my possession. Slowly I started working on them, replacing some leading edge plywood. In 1958 work was started on a fuselage. A pylon tank was used for the forward section back to the drag fitting, the skin being .056.

The tail cone consists of two sheets of 7075 T6 .032 thick. These are riveted to two 7075 T6 angles of 1 x 1 x ⅛, which run to the vertical stabilizer spar.

Originally I planned a swept-back vertical tail, but on one of my scavenging hunts I spotted this tail assembly that was sawed off a wrecked ship in the mountains. The rudder, fin and one elevator were usable, so for $25 I could not afford to pass it up. I built a set of folding stabilizers. Four-degree dihedral was used, both in the wing and stabilizers. A V-tail was not used, just because I was unfamiliar with the design and efficiency at the time.

The tow hook is located two feet in front of the C.G. next to the conventional skid.

The canopy is of the same kind I used in the Air Force except that now it is flying backwards and it can be slowed down to 35 mph and still fly. It gives exceptional visibility, even superior to the F-84. It hinges, like the mouth of an aligator, at a point just in front of the main wing fittings.

All during the construction of the ship Don Barnard assisted me whenever he could and I know he was even more anxious to try it out. So on April 21st at Deer Valley Airport the Falcon got its first look at a runway. With plenty of help we had the ship assembled at 8:30 A.M. With clear skies it was truly a perfect day for test flying. With 300 feet of tow line Don made four flights in a straight line, while I drove the tow car. It was a great sight to see the Falcon off the ground after toiling so long in the 100-plus-degree heat of the workshop.

After the fourth auto tow we decided to take her to the take-off point for aero tow. Around 1:00 P.M., Joe Lincoln arrived with the tow ship. When Don came down from that 30-minute flight he was excited about the way the ship handled. We removed the 20 pounds of lead so I could find out for myself. During the weight-and-balance check we found that for Don to fly the ship this weight had to be added as he is about 60 pounds lighter than I am. For a perfect trim I could use about a four-pound weight in the tail, but since we felt this was negligible we did not bother to put it in. And indeed when I released from the towplane very slight back-pressure was experienced to keep the airspeed from building up.

After going through a half-hour of various maneuvers I felt the Falcon might live up to its name, and after a recent flight of 2½ hours I believe that she is able to give me the rewards I've been looking for for a long, long time.

Fred Daams with his one-of-a-kind Falcon sailplane which utilizes L-K wings and Cessna parts for the empennage.