

SOME THOUGHTS ON CONTEST FLYING

Contest flying depends on four things—The Sailplane, the pilot, the weather and luck. Without trying to concern ourselves with the sailplane, the weather and the luck, it might be interesting to take a look at how a pilot's contest flying improves with experience.

In his first competitive flying a pilot is most concerned with altitude. He wants to keep plenty of air between himself and the ground. In order to do this he works plenty of thermals and his barograph chart will be filled with slowly rising lines and equally slow descents. These will be pretty closely spaced—that is, after reaching 5,000 feet, for example, and gliding to 4,000 feet at "Best cruise" he will discover a thermal and circle back to his original level. In doing this, he gets a very nice view of the countryside, but finds the more experienced pilots running away from him on the scoreboard.

His next thought seems to be speed on the course. Here, he is getting the right idea—get the nose down and get across the ground. He will work a thermal to the top and set off at some pre-determined high-speed sink which gives him perhaps 65 to 70 miles an hour on the airspeed indicator. He runs through a few thermals, grimly holding the stick forward, and perhaps catches the next thermal pretty low down. He may repeat this a number of times, but perhaps lacking the luck at some low point he is let down a couple of hours out and watches the other pilots sail on over him. A fast trip but a short one. He is now on the right track as far as speed goes, but is apt to cut his throat by emphasizing it too much.

On the average day he has perhaps noticed that there seems to be a level in the air where thermals go into high gear, so to speak. On a day in Texas we might find that lift varies somewhat in this fashion. From 500 ft. to 2500 ft. the lift is generally 3 ft. sec. From 2500 to 4500 it is 5 to 6 ft. sec. and above 4500 to 8000 it is variable 6 to 10 or 12 ft. sec. The figures are selected at random and of course can be determined only by trial for the particular day. It will be found usually that different altitudes pretty consistently give different rates of climb. Now our contestant pilot can begin to combine his two previous methods of flying a contest into one workable method.

The system finally arrived at should be aimed at producing the fastest possible glide while remaining in the most active belt of rising air. Of course he will undershoot into the less livelier air every once in a while, but in general the thermal should be worked to the top and a fast glide started back to (In our ex-

ample) 4500 ft. If he undershoots and gets down to 4500 ft. and finds no thermal the ship should be slowed until the next thermal is found, using best sink speed. Otherwise, between 8000 and 4500 he should be going just as fast as he can make the ship go. This glide should not be geared to the "Efficiency" of the sailplane but should be aimed at beating the clock and getting to the next profitable thermal as soon as possible. Shorten the time between the thermals—skip the unnecessary thermals—and get across the ground while the sun is still shining.

Finally—circling in thermals should be held to the minimum. Center the thermal quickly and ride it until it stops producing **maximum** climb. Note that this says maximum—not until it stop producing **any** climb. Our personal thought is that more miles have been thrown away by circling in the tops of thermals than in any other way. Let's look at it this way: A pilot works 15 thermals in a contest flight and circles a couple of extra minutes in the top of each one. Here is 30 minutes which—at the end of the flight would give you 30 minutes more of sun and perhaps 2 more thermals. 2 more thermals equals perhaps 25 miles or 30 miles longer flight. And 2 minutes extra circling is the exception and not the rule—most pilots are spending four and five minutes at the top of each thermal trying to squeeze out a few extra feet of height. The point is that we are not fighting for altitude but are struggling against a declining sun. This may be hard to remember at one or two o'clock in the afternoon—but lack of heat is what brings us down.

In order of importance our friend the contest pilot might stress the answers this way:

1. Fastest possible climb.
2. Fastest possible glide while remaining in the "live belt" of thermal activity.
3. Get away from the top of that thermal—the sooner the better.

Many other problems arise, of course—problems of terrain—the fact that thermals are sometimes stronger closer to the ground (generally during fairly high wind conditions) etc. We have to sprinkle an ample amount of pilotage and judgment into our formula every day in order to come up with a winner.

Come to think of it, the writer has never won a contest—perhaps some of the better boys will tell us what is wrong with this story.