determine maneuverability and control in turns.

During the above test flights there was a 12 to 20 mph wind blowing. There was some question about trying out a new job under such conditions but when it was found to possess excellent control and stability, the tests were continued.

The next stage was airplane tow to a safer altitude for stall, stability, maneuverability and high speed glide tests. These were begun the following week-end, March 29 and 30, at "Gus" Briegleb's El Mirage Soaring Site.

I was towed to 8000 feet above sea level and after release steeply banked 180s, right and left, with full control recoveries were executed. Next a series of stalls from level flight to gentle pull ups from 70 mph were made. Very tight spirals up to 45° bank were then made at various speeds both right and left with stalls in this position.

Extended glides at successively higher speeds were tried from the stall up to 80 mph, observing at the same time, attitude control pressures, and control positions. An attempt was made to get an approximate idea of the sailplane's performance by checking the rate of sink against the airspeed. Considerable atmospheric instability made any accurate check impossible on this flight.

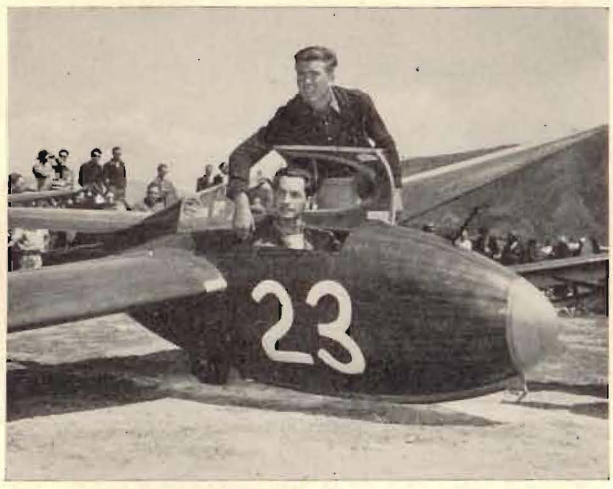
Rudder effectiveness was checked by kicking the nose violently from side to side. An angle of yaw of well over 30° from line of flight was experienced.

By this time I had only 1500 feet altitude remaining and headed for the ridge and 15 minutes of slope soaring to complete a one hour flight.

One additional airplane towed flight, 8 auto tows, and 1 winch was made during the same week-end for a total of 4 hours flying time. A number of thermal flights were made off the 900 foot auto tows, averaging 2500 feet of altitude above the dry lake and the remainder of the time was spent "sitting" on the ridge.

Flying this little job for Prue has given me the opportunity to experiment with two ideas I have had for a number of years; a small highly maneuverable sailplane, and a butterfly tail as first developed by the Italians in 1932.

I "influenced" Prue to use large control surfaces for good maneuverability and laid out the "V" tail for him.



Harold Huber in the Super Albatross. Harold will fly the Prue 160 at Wichita Falls.

Some conclusions may be drawn from the few flights made thus far as follows:

The Prue 160 is definitely a high performance sailplane. It has performed with the Bowlus "Super" and the TG-3A on the same ridge, and compares quite favorably in sink, being somewhat under 3 feet per second at 45 mph.

It has a flat angle of glide up to 85 mph which should make it a good cross-country job.

It has excellent maneuverability with finger tip control, but is not overly sensitive. This allows the pilot to take advantage of very small thermals which larger and heavier sailplanes have to pass by.

Stalling speed is 40 mph with ample warning. Nose high stalls result in a wing dropping in either direction but recovery is quick.

No horizontal instability (pitching) seems to result from violent use of the rudder as anticipated. In fact the control response seems to be quite normal in every respect. I'm convinced that the "V" tail is the answer to the sailplane designer's dream.

The Prue 160, like the Screaming Wiener, continues the trend toward smaller sailplanes with resulting advantages of greater maneuverability, ease of assembly, handling, transportation, and storage plus the considerable advantage of all metal construction.

Comments On Contest Rules

(Continued from page 10)

pilots and would probably overload launching facilities.

Paragraph 2.9 provides that a contestant who makes a distance flight in excess of 200 miles will receive on the following day contest points most nearly equal to his probable performance on such succeeding day, as determined by a simple formula.

Pre-war contests at Wichita Falls indicate that long distance flights will be the rule rather than the exception during the coming contest. For a flight of 200 airline miles, a ground crew must drive a total of 500 automobile miles, averaging 25 mph for the entire 24-hour period with time allowed only for assembly and disassembly and none for sleeping. A flight of 300 miles means 700 miles by car, averaging 35 mph for 24 hours. For 400 miles, 950 miles by car at 48 mph. This latter case is a physical impossibility. It must also be remembered that the farther a contestant flies, the greater the interval between landing and arrival of his crew.

If provision is not made for contestants making long flights to have the succeeding day off for rest and retrieve, few contenders will join in spirited competition. Those who do will be subjected to a gruelling retrieving marathon and will be flying their ships in a sleepless stupor. Moderate distance goal flights would be encouraged and long distance flights discouraged, inasmuch as a contestant can earn more points on two successive goal flights of 180 miles each than he can with a single flight in two days of 325 miles. Contestants with experience in retrieving from long flights strongly favor paragraph 2.9.

These rules, in their present stage of development, are, of course, far from perfect. Improvement can be made only if contestants will cooperate and express their ideas, opinions, and criticisms. Then real progress can be made toward satisfactory contest rules.