stable with me at a weight of 150 pounds sitting back in the seat.

However, in directional stability the sailplane was excellent. By giving a rudder kick and returning rudder to neutral, I found that in one-half of an oscillation the little baby was back to straight flight, all in 4 seconds.

Oh yes, I should mention how we got a tuft to put on the bubble. A lady was visiting the glider field who had in her car a first aid kit. Dr. Eppler asked her for a bandage which we unravelled and with a piece of adhesive tape we stuck it to the canopy

The rudder control forces were quite low. It might be a good idea to install a spring to center the rudder and give some gradient so that one can feel the center.

Following the rudder tests I made a few turns at various speeds for angles of bank from 45° to —45°. The time for normal soaring speed of 60 km./hr. (37.3 mph) was 6 seconds for the complete maneuver.

Because the directional stability is so good and the aileron control excellent, the adverse yaw even at 54 km./hr. (33.6 mph) was found to be practically zero. Therefore, reducing the aileron differential should not increase the adverse yaw but, because of the greater total aileron deflection with 1:1 differential, the turning time from +45° to —45° should improve.

After these various gyrations I settled down to really getting to know this lady, as Phoenix had already proven herself. At 52 km./hr. (32.3 mph) the sinking speed was 0.5 m./sec. (1.64 ft./sec.). It was still 0.5 m./sec. at 60 km./hr. (37.3 mph), indicating a relatively flat polar. The sinking speed at 140 km./hr. (87 mph) appeared to be a little over one meter (3.28 feet) per second. Acceleration with a very low pitch angle was rapid while going from 52 km./hr. to 140 in 12 seconds.

Circling and maneuvering were good. Going into turns smoothly was no problem. At 45° bank and 70 km./hr. (43.5 mph) the variometer said 0.8 m./sec. (2.63 ft./sec.). If during an entrance to a turn or coming out of one you should skid only 10°, the ship growls at you with a low pitched noise right in your ears. Talking about noise, the most fascinating thing about Phoenix was the lack of noise. From 700 meters (2300 feet) altitude I heard a train whistle which appeared to come from a town about 5 miles away. Real quiet is the word for this sailplane.

I enjoyed particularly slow flight in this machine. In the Kite there is a lot of buffetting in slow flight. Not so with Phoenix which is quiet right down to 54 km./hr. (33 mph). Also, the Kite has a lot of adverse yaw making it hard to maneuver in slow flight. Phoenix retains her control down to stall speed in spite of very small ailerons..

At about 400 meters (1300 feet) near the Flugplatz Tahnweide, which means Rooster Airport, I made a pattern for the field approaching over a high tension power line (typical airport). With the flaps down to 40° one can see over the nose nicely because the nose pitches down.

On Phoenix one controls glide angle by speeding up or slowing down. The sinking speed rises much faster than the forward speed and thus a steeper glide results. Altitude is lost rapidly.

Coming in over the wires at 200 meters (650 feet) I put down 90° flap and aimed for the touch down point. I made it nicely. Then I followed Dr. Eppler's advice of touching down tail first. She squatted nicely and was almost to a complete stop when she went into a "ringelpitz" (ground loop I must admit). Embarrassing yes, but with no damage except to my ego.

On examining the cause of the ground loop I found the skid too rocking-chairish and also, with the c.g. behind the normal contact point, one has an unstable configuration on the ground unless the tail skid is held down. However, I cannot be excused for this torture to Phoenix for I should have kept the tail skid down by holding back on the stick.

In summary I would say, Dave, that Phoenix has great potential. She follows a new formula of low wing loading and low drag. With a few simple changes she will possess real soft flight qualities allowing comfortable and relaxed flying over long periods of time.

Phoenix also promises to be a good sailplane for dynamic soaring research. She has the stability at low speeds and the quick response needed at these low speeds.

If the group here will permit it we will bring Phoenix to Mississippi State University this winter for a complete flight research on the little bird. Herr Naegele will come with the sailplane to fly it and make such modifications as are needed.

While she is at our place I hope you will have an opportunity to fly this jewel.

DAD

(Editor's Note: The Stuttgart Academic Flight Group did grant Mississippi State University the loan of Phoenix for the 1958-1959 winter months. We will look forward to receiving a report on the results of the flight tests conducted at M.S.U.)

Second Hand Pleasure

by FREDA SMITH

The sun is bright
The breezes light
Spring at last, a soaring day for sure.
How long this has been waited for!

The first of the season, not all turn out.
This is for the really eager hearts and stout.
Pack up the family — rush let's go!
No time for dawdling, drop that hoe.
No Sunday gardening, a-glidering we go.

Six days we are normal, Sunday gypsies.
The call of the wild blue yonder.
Wife and kiddies may clutter up the scene.
But Father leads — we follow. Is he mean?
This man whose will we must succumb to?

Many may ask, and sometimes we wonder.
But this day has been good
Such thrills he has been heir to.
A happy Dad — a floating soul
And such pleasure will make our life more whole.