soaring may open up entirely new fields to conquer. It need not stifle interest and destroy progress, rather, it should stimulate competition and create a need for more progress. At the same time the sport will become more interesting for the rank individualists among you. You will be spurred to greater efforts to produce a ship that will outfly and outpoint the sleek Fiberglas jobs. Who can say, perhaps the next glass sailplane selected for manufacture will be your own! Indeed, it should be. Think of the superior performance granted your pet ship by the Fiberglas method.

And now what of the barn builders and wood butchers? Do you want to try this new material. Go ahead! Your editor can tell you where it is available. If you've got some extra green stuff, lay in a supply of material. It is surprisingly easy to work and the results will probably surprise you. Drive the big boys into it and then see how fast they start making the production kits and ships from it!

How much better can the RJ-5, the R-6, the Jenny Mae be when they are all decked out in their new dresses? Ask Dr. Raspect what a wing without waviness will do compared to the usual wing. Who says see-dee min. can't approach that of the black buzzard (0059). And Paul, how about the 2-25 or the "new one" made of Fiberglas. Oh, yes, some will say that this material is slightly heavier. So what! Everybody is going to higher wing loadings than ever before. That ol' gremlin speed continues to rear his ugly head.

To those of you who have recovered boat and canoe bottoms with laminations of Fiberglas and plastic, why not build a mock-up or form of the intended sail plane and lay on a laminated shell of Fiberglas? When you're through, pull out the mock-up and slap in the formers. There's the fuselage, now for the wings.

These are some of the possibilities which lie ahead of us all. If we wish to use them directly for our own dream-ships then we are free to do so. If we wish to imbue others with our spirit, then we can do that, too. Finally, it is well to remember that we are living in a buyer's market, and if we give voice loud enough, long enough and make our desires known, then the manufacturers can do naught but accede to our wishes. Without the consumer the manufacturer is lost.

*—Taylorcraft, Inc., Conway, Pa.
[1]Flying, Nov. 1956, PP 36.

INTERESTING GLIDERS

by PETER M. BOWERS

Here's another glider that started out as a powered airplane. Back in 1930, Ed Heath, famous as a racing pilot and the designer of the "Heath Parasol," built up a biplane glider from the major components of one of his parasols.

The protoype "Super Soarer," as this biplane acrobatic glider was called, used a built-up wooden fuselage, but the later production models used standard 1928-model parasol fuselages with an extra section added forward of the firewall to accommodate the pilot. The protoype appears to have been strictly a single-seater, but the production model, plans for which were published in the 1932 "Modern Mechanics Flying and Glider Manual," was a two-seater.

The Heath "Super Soarer"

The upper wing was a stock parasol wing except for not having gas tanks in it, and the lower wing was of equal span and chord, shortened at the fuselage end. Ailerons were fitted to both wings, which were built up with wood spars and ribs. The tail surfaces were composite wood and steel tube construction, enlarged considerably over those of the standard parasol. The landing gear was identical to that of the power plane.

According to accounts in contemporary magazines, Ed Heath is credited with performing the first loop to be made in a glider with this machine. He was towed to 1,500 feet behind a World War I Standard J-1 trainer powered by a 90 hp Curtiss OX-5 engine, and made his first loop immediately following release from tow at 65 mph. He completed two more in succession before landing.

Aerodynamic knowledge, or the lack of it at that time, was amazing. According to a magazine account, Ed maintained that he had to loop right off the tow, because otherwise the glider slowed right down to its glide speed of 25 mph, and that it couldn't be dived as fast as the 65 mph that the Standard could tow it! Also, the loop had to be entered down wind so that the wind could blow the tail over the top of the loop!

These must have been his comments after the first loops only. He soon developed other means of building up speed, for one of the Super Soarers later claimed a record of over 2,000 loops. Ed must have had structural limits in mind when he said that the ship couldn't be dived as fast as it could be towed, for it came apart on him during acrobatics at an air show, and the famous race pilot and designer lost his life.

In view of the fact that the Super Soarer was acknowledged to have so much drag that its free-flight terminal velocity was less than its aero tow speed, the claim of 18.1 glide for the design must be taken with a handful of salt. However, this is not too far out of line with some of the claims made for contemporary primaries, which were advertised at 15:1. This makes a person wonder just how glide ratios were determined in those days. A few calculations along this line should turn up interesting results. Accurate data presently available shows that the best cleaned-up primary could only show 10:1, and that even a relatively clean secondary like the Baker-MacMillan "Cadet" could do only 15:1. The Grunau "Baby" and "Wolf" sailplanes, with aspect ratios of 14, gave glides of only 17:1. What, then, of a biplane with an equivalent monoplane aspect ratio of about 3, lots of struts and

(Continued on Page 18)