

INTERESTING GLIDERS

by PETER M. BOWERS



One of the more "Permanent" gliders on the American soaring scene is the Brieleb BG-6, designed by William G. "Gus" Brieleb and first flown in April, 1939. While this utility single-seater did not go into standard factory-type production, quite a few were built from kits or from factory-supplied blueprints, with the builders scrounging their own material.

For its size and weight, the BG-6 is probably one of the most rugged gliders ever built in this country. The empty weight is only 235 pounds but some of the main tubes in the welded steel tube fuselage are heavy enough to hold a large powered airplane together. Pilot protection in the event of a crash was given very careful consideration in the design stages. The two-piece wing is conventional wooden "Cub" airplane-type construction, with solid spruce spars, wood truss ribs, and steel wire cross bracing. V-struts with adjustable ends brace the wings, and jury struts protect them from buckling under inverted loads. The tail surfaces are welded steel, and the entire structure is fabric covered.

By present-day standards, the performance of the BG-6 is not impressive, but it must be remembered that this machine was designed twenty-one years ago, when performance over 20:1 was "High." The BG-6 was not intended to be an advanced sailplane - it was a utility, pure and simple, and a very good one. Its sinking speed was slightly over three feet per second, and the glide ratio was 16:1. However, thanks to its extremely short wing span, 32' 3", it had terrific maneuverability and

could sometimes stay up in narrow weak thermals that ships with lower sink lost because they couldn't circle tight enough. Because of this maneuverability and fast sink, the BG-6 was not fitted with spoilers. It could be sideslipped very easily.

One would think that because of their relatively few numbers in spite of good flight characteristics, there must have been something basically wrong with the BG-6. Such was not the case. The BG-6 can be considered a casualty of World War II. It received its Approved Type Certificate just as the war started in Europe, and by the time the United States was involved, procurement of aircraft materials for sporting purposes was impossible. The Army then bought up many privately-owned gliders for the training program, and a few BG-6's ended up with the military designation of TG-9. By the time the war ended, surplus two-seat training gliders filled most of the demand, and more up-to-date designs were also available. In spite of this, several more BG-6's were completed by individuals and clubs and are still flying.

The fact that ships like the BG-6 are flown in this day when some pilots look with scorn at anything less than 30:1 is the best proof that performance isn't everything. What the BG-6 lacks in performance it makes up for with other highly desirable characteristics that some of the hotter jobs just haven't got. Plans are still available from Gus Brieleb.

SPECIFICATIONS

Span	32' 3"
Length	18' 3 1/16"
Wing Area	117 Sq. Ft.

Aspect Ratio	8.9
Airfoil	NACA 4412
Empty Weight	235 Lbs.
Gross Weight	425 Lbs.
Stall Speed	32 MPH
L/D	16:1
Sink Speed	3 FPS Plus

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SKID PROBLEM SOLUTION

by VICTOR SWIERKOWSKI

For those pilots that fly their sailplanes off paved runways it has been a problem keeping up with skid repairs or replacements. Usually the skid would give up during a contest where a lot of take-offs and landings are made. I had this trouble with skids also, since 95% of my take-offs and landings have been done off airport runways.

Some experiments with hard metal alloys were made and as a result I have chosen one alloy that answers the requirements. It consists of a mild steel tube containing particles of tungsten carbide. On the first skid coated with this alloy I made over 200 landings before it needed more alloy welded on. This type of skid can be made light in weight yet very durable and inexpensive. Tungsten carbide is one of the hardest commercial materials known and is used as a diamond substitute in drilling and cutting earth formations. Therefore it is also very suitable for applications requiring maximum abrasion resistance such as skids on sailplanes.

For \$5.95 you can obtain a kit that contains one pound of the tungsten carbide welding rod alloy and instructions for application from VICTOR SAILPLANES CO., 213 26th Street, Sacramento 16, Calif. This kit contains a little more than the average sailplane should use on one skid.

REPRINTS AVAILABLE

The article "FAI Soaring Awards Rules & Procedures" in the March-April, 1958, issue of SOARING magazine has been reprinted and copies are available at 10¢ each from SSA, Box 66071, Los Angeles 66, Calif.

This is the kind of article that is useful to keep for handy reference in your sailplane or log book. The reprints were made available so that your SOARING magazine would not suffer too much abuse. Send a dime today for your extra copy.