

The "GOEVIER" TWO-SEATER SAILPLANE

by Martin Schempp

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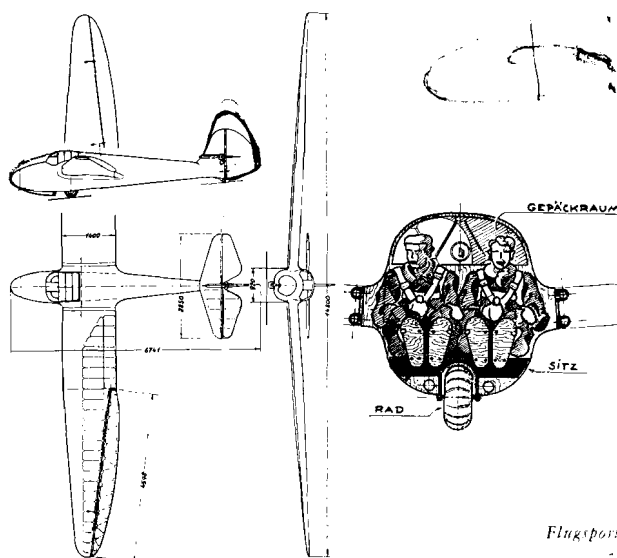
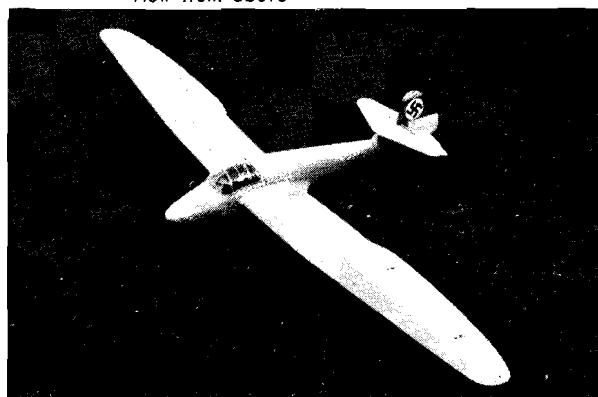
A new two-seater intermediate sailplane for training purposes is being placed on the market under the trade name of "Goevier" by the Sport-Flugzeugbau Schempp-Hirth, at Göppingen, Germany. The designs for the new machine were prepared by Wolf Hirth and Wolfgang Hütter.

The "Goevier" is a full-cantilever mid-wing design with a span of 49'4". The two seats are arranged side by side, which, in a type of this description, is most convenient for both the instructor and pupil. Despite this seating arrangement, the fuselage is no more than 36 $\frac{3}{4}$ " wide. This was obtained by arranging a suitable wing connection at a height at which the arm and shoulder of each occupant could be accommodated comfortably in the wing root.

The performance of the "Goevier" two-seater is at least as high if not actually higher than that of a standard single-seater intermediate training sailplane like the "Wolf". The structural weight is no more than 396 lbs., which is only 55 lbs. more than that of a single-seater full-cantilever sailplane with mid-wing, of approximately the same wing span. Owing to the control arrangement of the pilots' seats, the sensitivity of control is remarkably good. The ailerons, which are large, are very effective. They are drawn backwards in the usual manner and have practically a constant span to the end of the wing.

The influence of previous designs such as those of the "Wolf", the "Minimoo", also designed by Wolf Hirth, and those of types "28" and "H 17", designed by the Hütter brothers, are clearly discernible. The wings are constructed with a C-spar, open in front, with a torsion nose of plywood. The spar on which the aileron hinges consists of a C-spar, open behind, which

View from above



also serves to cover the gap. The conditions of visibility in the "Goevier" have been made unusually good by providing a large cockpit fairing of Astralon with a framework of thin steel tubing, with windows fastening at the side, and by designing the fuselage with a steep slope in front.

The instrument board is built into the fuselage and not into the cockpit cover, so that the instruments are always at the correct distance from the eyes of the pilot, while the fairing is sufficiently light to be flung off rapidly in case of emergency. As no more than one set of instruments is required for this two-seater sailplane, there is a considerable saving in initial cost.

The fuselage, which is round in cross-section, is made entirely of plywood. It is interesting to note that the space between the two main bulkheads has been utilized to take provisions and is large enough to accommodate sufficient luggage, even for a week-end. The pilot's cockpit is provided with a firm bottom, which is completely enclosed. All the cable lines and moving parts are arranged underneath this floorboard or seat. The release knob is fitted in the centre of the instrument board; the lever for the wheel brake is mounted between the two pilots, because, like other sailplanes produced by the Sport-Flugzeugbau Schempp-Hirth, the "Goevier" is fitted with a single-wheel undercarriage, provided with a 15 $\frac{1}{4}$ " x 6" balloon tire. This wheel is directly underneath the pilots' seat so that, when landing, the main weight, i. e., the weight of the pilots, is transmitted directly to the undercarriage, because the seat spars also serve as wheel spars. At the same time, the wheel is in front of the centre of gravity of the glider, as in a conventional aeroplane. It must therefore be forced down when starting, while the landing also is at two points, i. e., on the wheel and the tail skid, just as in an aeroplane. This feature makes it easier for a pilot accustomed to a sailplane to learn the landing characteristics of an aeroplane.

The tail unit is high, and accordingly protected from possible ground damage. The elevators and rudders are damped. The elevators are braced downwards. Handles are fitted in front of the elevators on both sides of the fuselage, to facilitate transport over rough country, even with the pilots on board.

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