RESUME OF TECHNICAL SESSIONS OF THE OSTIV

by F. H. Matteson

The technical sessions were carried on in the Hotel du Commerce in St. Yan with the exception of those held when meteorological sessions were not being held; these being in the Salle du Cinema also in St. Yan. The sessions were usually under the chairmanship of Mr. Boris Cijan of Yugoslavia, whose fluency in English, French and German was of such value in unifying the discussions. The session on Design and Construction was under the leadership of Mr. K. G. Wilkinson of England.

On Saturday, July 7, papers were presented on Aerodynamics, and Structures and Aeroelasticity. Frank G. Irving presented his paper "Flight Testing of British Protoype Gliders," giving the methods of the B.G.A. test groups used to test gliders for airworthiness. Joseph Cornisch, III, of Mississippi State College described powered boundary-layer control experiments on a TG-3 sailplane in his paper, "Improving Sailplane Performance with Suction Boundary Layer Control." By removing the boundary layer through small perforations in the wing surface, sizable reductions in landing speeds were attained. Mr. Cijan analyzed the basic structural design parameters for metal wings including the torsional and bending frequency ratio, which is critical in flutter prevention. His paper was called "Structural Parameters for a Metal Wing in the Design Stage."

Some of the inherent limitations of a type of a laminated wood used in beams of German gliders were given by Hans Zacher in "Einige Erfahrungen mit Schichtholzern" (Some Experiences with Laminated Woods). He later presented in a very brief form his contribution to the papers on airworthiness requirements "Wunsche zur Anderung der Bauvorschiften" (Desires to the Modification of Construction Regulations). The other paper on airworthiness was "Bauvorschriften und Musterprufung von Segelflugzeugen in der Schweiz" (Construction Regulations and Type Testing of Gliders in Switzerland) by M. Peyer. This paper outlined the procedure by which the Swiss developed their regulations relating to design and testing of gliders. The value of careful accident investigation as an aid to improved safety was discussed.

On Monday, July 9, papers were presented on Design and Construction. The first topic had many delegates wondering until Herr W. Schafer explained that his "Stausstrahlpropeller fur Segelflugzeuge" (Ramjet Propeller for Gliders) was an experiment towards the development of a light-weight propulsion unit for powered gliders. Tests on a small propeller at Stuttgart, Germany, showed comparative initial costs and weights of 20 per cent of those for an internal-combustion type unit. The principle, which is employed in some small helicopters, would, if used as a glider, provide launching at 10 per cent of the cost of winch methods.

M. Charles Fauvel, designer of the well-known AV 36 flying wing glider, discussed design of his craft in "Evolution d'une Formule suivant son Emploi." He recently completed the two-place version of his flying wing, and it was demonstrated later in the week. His latest creation is a large machine with a 3-section wing and a single 3-part vertical surface. That evening a discussion of the paper "The Restricted Class of Competition Glider" by Lorne Welch was attended by a large group of delegates and pilots. The FAI had asked the OSTIV to set up the limitations for a restricted class of sailplanes for international competition as an effort towards the reduction in costs of sailplanes. Welch set forth his suggestions as a result of his studies. They resulted in a single class for either single or 2-place gliders. The basic limitation was a 15 meter span for single seaters and an 18 meter span for the 2-seaters. Dive brakes and a fixed landing wheel were required, and flaps, variable camber wings and other such complications were prohibited. Certification by the country of origin and quantity production would be required. Spirited discussions took place on this paper which would seem to indicate that there is little concurrence between the various countries on the desirability of, limitations for, or feasibility of a limited class for international competitions.

Further papers on design and con-

INTERESTING GLIDERS

by Peter M. Bowers

Gliders that evolve into powered airplanes are fairly common in history, but the reverse, powered planes that revert to gliders, are somewhat of a rarity.

The Fokker illustrated here is unique in several respects. First, it is, or was, a fighter plane; the well-known D-VIII, or "Flying Razor" of World War I. Very little was done to the basic airframe to convert it. As with U.S. light planes that were converted to training gliders in WW-II, the engine was removed and the nose was extended to allow the pilot to sit as far forward as possible in order to preserve the balance. The standard airplane landing gear was shortened only slightly, so the final product

still looked like a conventional airplane. This was not a departure from the conventional configuration of the time—the modern mono-wheel or single-skid-under-the-belly landing gear had not become accepted at the time, and many of the early postwar-I gliders used two-wheel gear.

The ex-fighter was never intended to be a lightweight floater in the accepted mode of the time—its wingspan of only 27 feet 6 inches would make it a "hot" ship even today. Actually, it was suited for the purpose for which it was intended—aerial touring. No record can be found that the former fighter was ever towed behind an airplane, and it is extremely likely that the whole think was just a bit of a novelty whipped up by the whimsical Tony Fokker to attract attention at the 1921 Paris Aero show, where this photo was taken. The accepted date for the first aero-towed flight is around 1926.