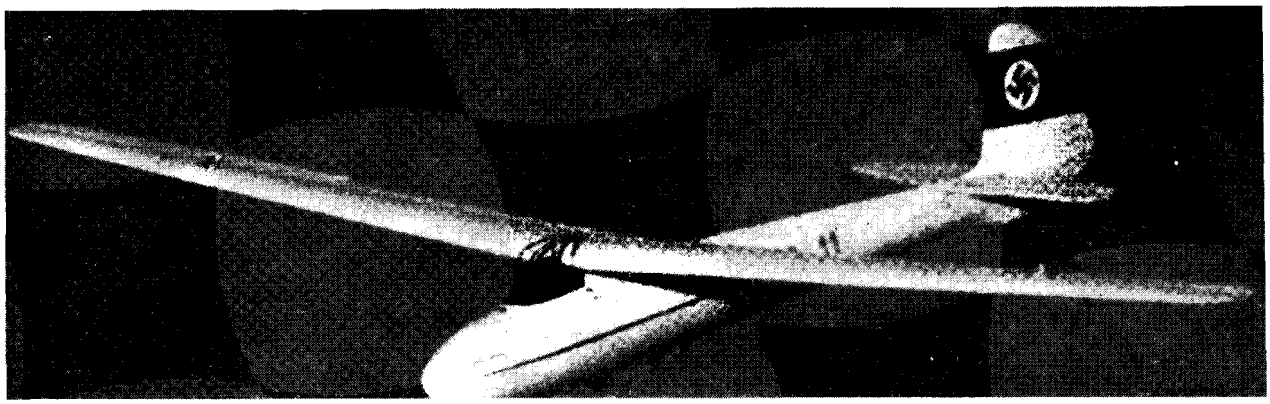

The OLYMPIC Sailplane

Condensed from an article in Flugsport

Translated by Peter Riedel

According to the rules of the 1940 Olympics, to be held in Finland, all pilots competing in the contest must fly the same type of sailplane. The design of this ship was selected by the F.A.I. General specifications were issued but were of such a nature that designers were allowed a great deal of latitude. The final tests were made in Rome from February 19-25, under the observance of an international commission. Out of five ships from Germany, Italy, and Poland, the DFS "Meise", of Germany, was chosen.

The most outstanding feature of the DFS "Meise" is that fact that, although the performance is excellent, the main purpose of the design is to provide a ship that can be built and handled by inexperienced workmen, without the use of expensive or complicated tools. It is a high wing type, of standard plywood construction with semi-monocque fuselage and full cantilever wings and tail. There are no complicated welded fittings or parts. It can be assembled by three men in eight minutes, and dissembled in four minutes. The specifications are as follows:

Span	49.5 sq. ft.
Wing area	161.0 sq. ft.
Aspect ratio	15.0
Wing loading	3.09 lbs./sq. ft.
Empty weight	354.0 lbs.
Gross weight	496.0 lbs.
Minimum sinking speed	2.2 ft. per sec.
Best gliding angle	25 to 1
Stalling speed	31.5 m.p.h.

WING

The engineering of the wing was based on the wings of the D.F.S. "Reiher" and the D.F.S. "Weihe". A straight taper of 2.6 to 1 is used with an average chord of 3.3 feet. There is no gull, since it has been found by experiment that the proper combination of dihedral and rudder give sufficient stability on spiraling. The wing section varies from gö 549 at the root (16% thickness) to gö 676 at the tip. The 549 section extends to 60% of the semi-span. The combination of the high CL of the tip section, and a seven degree washout at the tip, insures excellent control at the stall. A dihedral of 2.5 degrees to the neutral axis is used.

The wing is composed of a single D spar with an I beam web, and a very light rear spar, which carries the aileron. The aileron is hinged in four places.

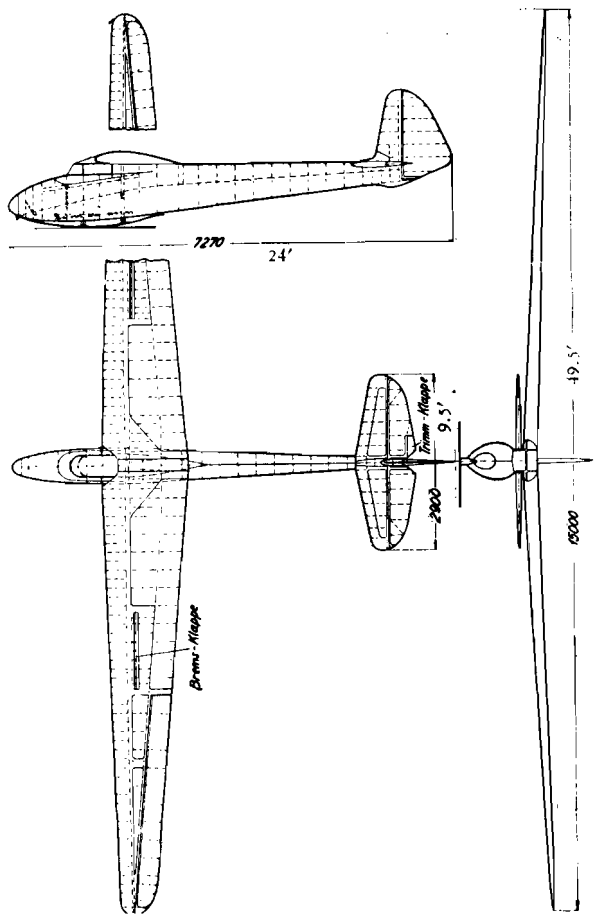

Fig. 1