

A KRANICH for High Altitude



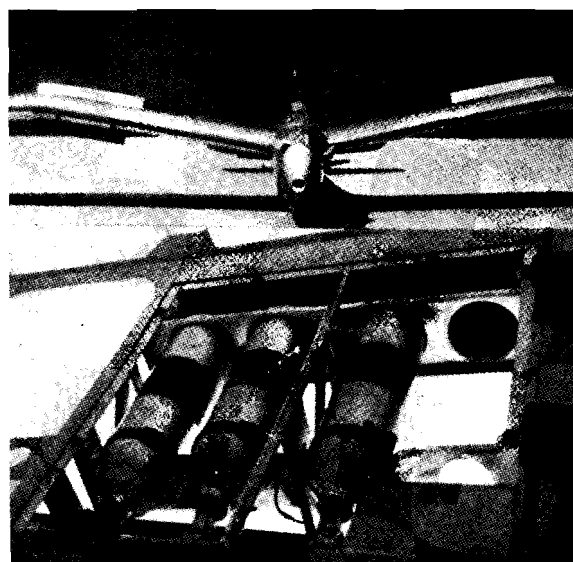
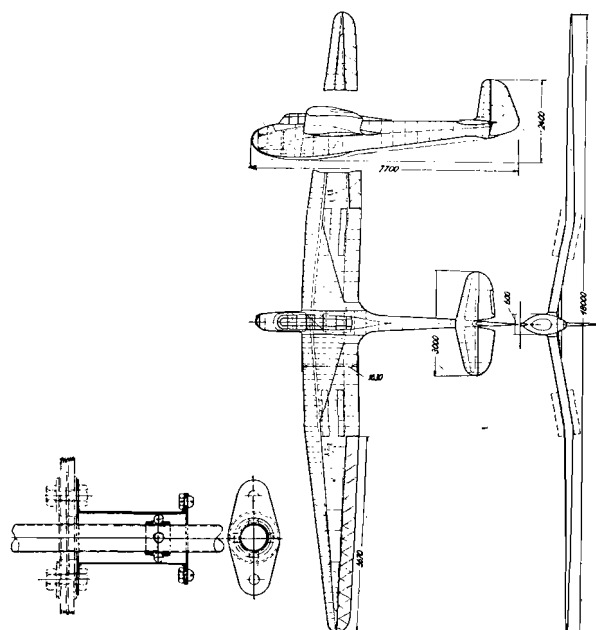
EDITOR'S NOTE: *This description of the special Kranich, translated from FLUGSPORT, is very timely as it coincides with the announcement on page 12 of a new world's altitude record made with this sailplane. It was also a Kranich with which the new endurance record was made at Rossitten.*

The well known Kranich two-seater, high performance sailplane was recently changed in a few respects by the DFS in order to carry out exploratory flights in upcurrents at high altitudes over the Alps. As a first step for security for the flights on instruments in the clouds, the sailplane was equipped with DFS brake flaps which, in addition to steepening the gliding ratio considerably, also gives the effect of increasing the dihedral angle of the wings from 4.5° to 10.5° , resulting in great lateral stability.

To avoid cable tension in the control mechanism as a result of contraction due to intense cold on reaching great heights, the elevators and ailerons are actuated by push-pull rods. Since the rods were so long, a proportionately greater number of bearings had to be used in order to keep the weight of the rods within reasonable limits. A special bearing, shown in figure 3, was developed. The production of these is inexpensive and the weight of each one is only 60 grams.

The bearing consists of an outer tube on which support flanges are welded. In a collar made of pressed steel, four balls are arranged in cavities with a diameter of 6 mm. and the push rod rides on these. The whole push rod assembly has proved very satisfactory as there is very little friction through lack of cable pulleys and an increased turning force is gained through greater stiffness. Also wear and tear on the cables is eliminated, and the pilot has better control over his ship, as he immediately senses every movement of the sailplane, for instance, the lessening of lateral control of the wing tips.

Six oxygen tanks for pilot and passenger are hung in the outer wings along strengthened ribs. They can be taken out from the under side of the wings. The contents of one tank is 300 liters which will supply one man one and a half to two hours of normal breathing.



Flugsport

Top—Brake flaps open
Bottom—Oxygen tanks in wing



Gliding in France

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In almost every country in the world, a sailor cannot get his Master's Certificate until he has served a certain number of years on sailing vessels. Yet, in my opinion, sailing is far less important as a means of valuable training for the merchant marine and the Navy than gliding and soaring is for aviation.