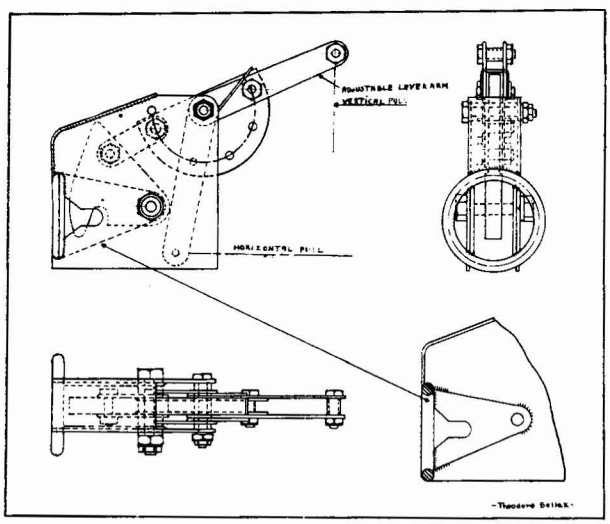
Foreign News

THE INTERNATIONAL RHÖN COMPETITIONS

Detailed news of both the international and national contests held on the Wasserkuppe in July have been slow in reaching us and will be included in the September issue. Notable entries in the International competition are Ludwig Hoffman with the "Moazagotl", Spaete with a Minimoa, Dittmar with his Condor II, Kurt Schmidt with the "Atalante", and Hanna Reitsch with her new "Reiher".

MECHANISM OF THE D.V.L. RELEASE

Much interest was aroused in the only approved German towing release used on the new German ships at Elmira and described in the June SOARING. The accompanying drawing shows in detail the working of the mechanism using the double ring on the tow line as illustrated in the earlier issue.



THE MUSGER MG-9

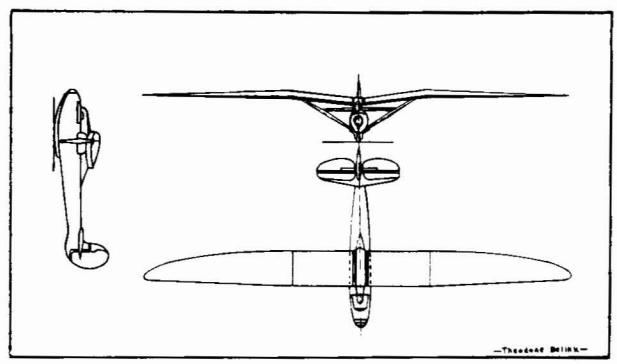
The Musger Mg-9 is an interesting Austrian design. It is a high performance two-place sailplane designed and built by Erwin Musger, a club instructor, as the best and safest means of teaching the technique of soaring flight to the "B" pilots of his group. Instruction with this ship has proved very successful. The student sits in front and is first introduced to soaring in slope winds and the irregularities of the ridge. After he has soloed along the ridge he is given dual instruction in cross-country thermal soaring.

For instrument flying instruction the positions of instructor and student is reversed so that the student sits behind where the seat is close to the c.g. of the sailplane. For this type of instruction the rear cockpit is covered up with a light metal cover. The advantages of this type of dual instruction are considerable, especially from the safety angle, and it is hoped that it will not be long before we will see similar ships in this country.

The two-seater high performance sailplane "Kamerad"

The wing of the Mg-9 is of the mono-spar, torsion-proof construction. The ship is built entirely of wood with the exception of the fittings and control cables. Its specifications are as follows:

Construction: High wing, wood, fabric covered.
Wings: Semi-cantilever with gull.
Elevators: Dampened.
Fuselage: Plywood covered.
Landing Gear: Wheel added for tow flying.
Overall Length: 23 ft. 10 in.
Span: 57 ft. 8 in.
Weight empty: 539 lbs.
Disposable load: 374 lbs.
Wing Area: 212 sq. ft.
Wing Loading: One person—3.4 lbs. per sq. ft.; 2 persons—4.2 lbs. per sq. ft.
Gliding Angle: 1:20.



THE DESIGN OF THE KING KITE

Relatively few really high performance sailplanes had been built in England up to September 1936 when work on the design of the "King Kite" was begun, and experience with this type of machine was somewhat limited. However, a great many useful lessons had been learned on "Hjordis", whose performance, as far as sinking speed was concerned, was in all probability second to none.

The immediately apparent differences between "Hjordis" and the "King Kite" were as follows:—considerable reduced taper, less cambered section, landing flaps, gulled shoulder wing, fixed tailplane, larger cockpit and instrument board, and better view for the pilot.

As far as performance was concerned, it was desirable to have a slightly greater speed range than "Hjordis", at the same time keeping the sinking speed as low as possible. This consideration involved a smaller twist on the wing; so as not to lose efficiency at high speeds, this in turn required less taper to avoid loss of lateral control near the stall. A twist of 3½ degrees was decided upon and a taper ratio of 2.5:1. A span of 51 feet and a root chord of about 4 feet gave an aspect ratio of about 18.5; a slight reduction on the 21 of "Hjordis".

The root wing section was NACA 23021 transforming into NACA 4412 at the tip. The reason for choosing NACA 23021 for the root section was because it combined a good all round performance with an extremely low moment coefficient; an important consideration since high diving speeds had to be catered to. NACA 4412 gave the desirable qualities for a tip section; high maximum lift and a gentle stall.

The comparatively high stalling speed and flat glide were likely to be troublesome for landing in small fields, so it was decided to fit landing flaps, since these by increasing the drag of the wing proportionately more than they increase the lift, steepen the glide as well as reduce the stalling speed.