

Fig. 2—Main Root Fittings

The main root fittings are composed of four straps on each main spar. To simplify construction, all of them are identical. Referring to Figure 2, the wing is attached to the fuselage by pins A, and corresponding pins in the rear spar. When pins B are removed, the wings may pivot about pins A, so that both wing tips may rest on the ground at the same time. This was done so that two people could assemble it easily. Both the wing and fuselage root fittings are attached to the structure by tubular rivets.

The spoilers are shown in Figure 4. This type of mechanism was chosen both because of its low cost and because of the ease with which it may be fitted to the wing contour. It is only necessary to make them too big and then plane off the excess material. They will not affect the wing contour by warping. It will be noted that they move in a plane parallel to the spar, and do not rotate, as is common in this country. They are enclosed in a plywood box that keeps water and dampness from entering the wing.

FUSELAGE

The fuselage is reinforced by bulkheads composed of two cap strips with a plywood web. They are so designed that only small strips of plywood are required, thus making it unnecessary to use up a whole sheet for each bulkhead. The cross section behind the wing is almond shaped, for simplicity in covering and for maneuverability. For purposes of stability and sensitivity of control, the fuselage is very long (24 feet).

Following standard German practice, there is no wheel. The hardwood main skid is mounted on doughnut-shaped rubber shock absorbers, and the spring for the tailskid consists of two tennis balls.

There is a luggage and barograph compartment behind the main bulkhead, which is accessible from the outside.

Fig. 3—Spoiler Mechanism

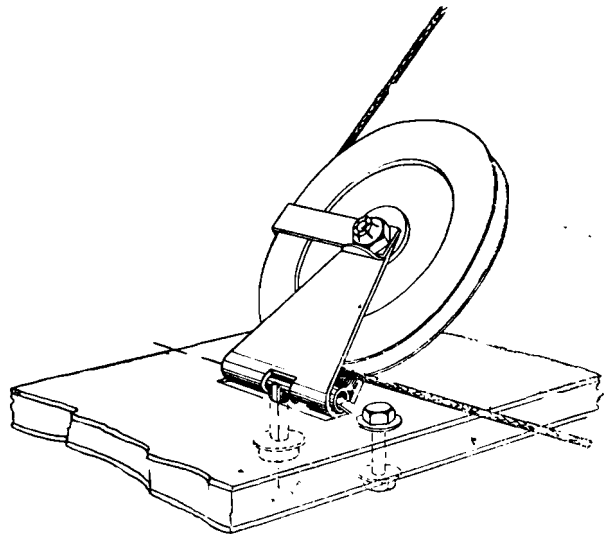
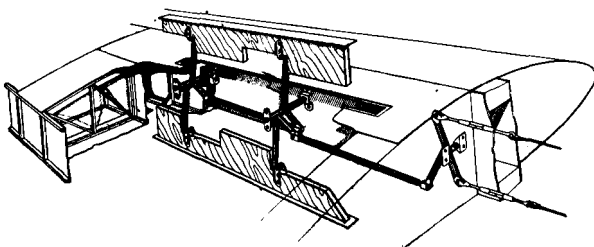


Fig. 4—Pulley Installation

TAIL SURFACES

The elevator and fin are of two spar construction with stressed skin leading edge. The spar and rib construction is identical, being a plywood web with cap strips on one side only, to form a channel section. The elevator and rudder are statically balanced, with a torsion-resistant spar and straight ribs. There is a trim tab on the elevator that can be operated in flight. The elevator and stabilizer assembly is attached to the fuselage by one bolt and wing nut.

CONTROL SYSTEM

Only four ball bearings are used in the entire control system. All other important bearings are bronze bushed and pressure lubricated. There are no press fits, and only one size of reamer is used. The control stick and torque tube installation are mounted on universal bearings so that no alignment is necessary for installation.

All the pulleys are mounted as in Figure 4, so that only one type of pulley and pulley bracket is necessary on the entire ship.

Either of two simple rudder pedal installations are optional. One is adjustable in flight. The other is not adjustable at any time.

The sailplane may either be built from plans furnished by the factory, or it may be bought completely built. At a later date, we will publish the particulars on obtaining the plans.

Sinking speed vs. forward speed

