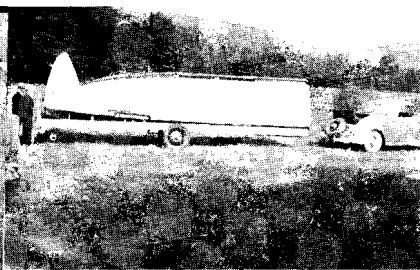
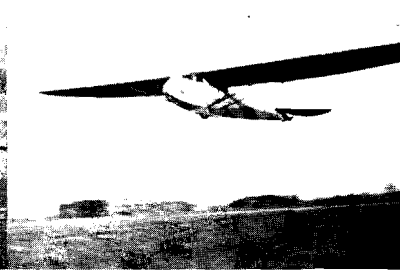


The A.B.C. Sailplane



A.B.C. Sailplane on its trailer



Taking off

## The A.B.C. Sailplane

Photos by Caton Photo Company

SEVERAL novel innovations characterize the design of the A.B.C. Sailplane. This new ship, designed by Art Schultz and built by members of the A.B.C. Glider Club of Detroit, was given its first soaring flights last fall along Lake Michigan's Sand Dunes where it has already accumulated 25 hours of soaring time.

Its general specifications are given on the three-view drawing. The wing is a combination of a series of recently developed NACA airfoils using the 6212 at the root for high lift and the 2412, washed out at the tip, for low drag and for controllability at the stall. The plan form presents an elliptical taper from the strut points out.

Another distinctly American feature is the use of welded steel tube fuselage and tail surfaces. The fuselage form is carefully faired out to provide a minimum of drag, yet provide good visibility, comfort and a high landing angle. The cockpit cover provides adequate protection from wind and rain, yet is sufficiently open at the sides to permit easy sensing of air speed, etc.

The horizontal tail surfaces are hinged at the fuselage to permit them to fold up alongside of the rudder. To fold it is necessary only to remove one pin from each lower stabilizer strut, the elevator control being so arranged that it need not be disconnected. Extra fittings

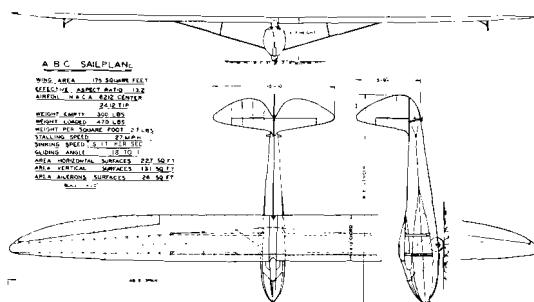
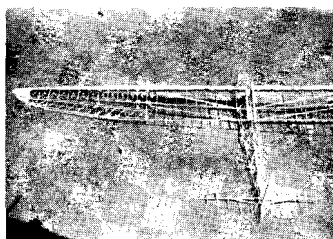
are provided to lock the surfaces in place when folded and also to prevent the rudder and elevators from flapping against each other in transit. The ship is transported on a specially designed trailer. The folding tail combined with other quick-assembly features permit the ship to be put together in a minimum of time.

The control system comprises a wheel operating the ailerons through chain and sprocket and cables; a push-pull tube operates the elevators, and pedals and cables operate the rudder. Needle and ball bearings are employed in the aileron control system.

The single wheel landing gear is augmented by a forward skid and a tail skid. The wheel is fitted with an efficient brake. For airport operation the wings are fitted with tip skids which can be removed for soaring flights.

The ship has been designed particularly rugged to withstand routine airport towing, as well as airplane towing and thermic soaring. In performance it is comparable to the Göppingen 1 (Wolf). It will be one of the new designs entered in the design competition at the 1937 Elmira Contest. Actual flight tests have given the sinking speed of the A.B.C. sailplane at 2.8 feet per second and the gliding angle at 18 to 1.

Skeleton assembly



The cockpit before covering

