

BREGUET XIV A2 & B2

By Tim Hayward-Brown

A seldom seen French reconnaissance/bomber makes a great flyer for indoor duration events. Easy to build construction.

In 1916 the first of over 8,000 Breguet XIV took to the sky. The A2 reconnaissance and B2 bomber versions equipped more than seventy French escadrille on the Western Front and went on to be produced well into the mid-1920s.

Color schemes varied from plain fabric to five-color camouflage with complex markings. So do some research before you decide which version to build.

Putting it together

There's nothing scary in building the fuselage. Build the two side frames and make a nice square box girder. The forward decking was made using a combination of soft block and sheet balsa. The rear deck uses hard 1/32 square stringers.

A neat fitting and practical noseblock is essential for accurate thrust adjustment and consistent flying. A good job at this stage will avoid a lot of frustration later on.

Flying surfaces. I decided to make my wings light, simple and strong, hence the single spar structure and flat bottomed airfoil. If you like, though, it wouldn't take much to scale up these wings a bit with some undercamber and another spar. That's up to you. Add about 3/32 inch washout to each panel. I have found this really helps with stability.

The vertical tail is the only bit of laminating to be done. I use thinned PVA (like Pacer's Hinge Glue or equivalent) between the laminations.

Undercarriage. The undercarriage and wing struts are made from 1/32-inch basswood. The Bre 14 has a small wing-like fairing over the axle, like some of the famous Fokkers. Glue the axle to the center of this winglet only. This allows the axle to flex up and back to cushion landings.

Finishing and flying

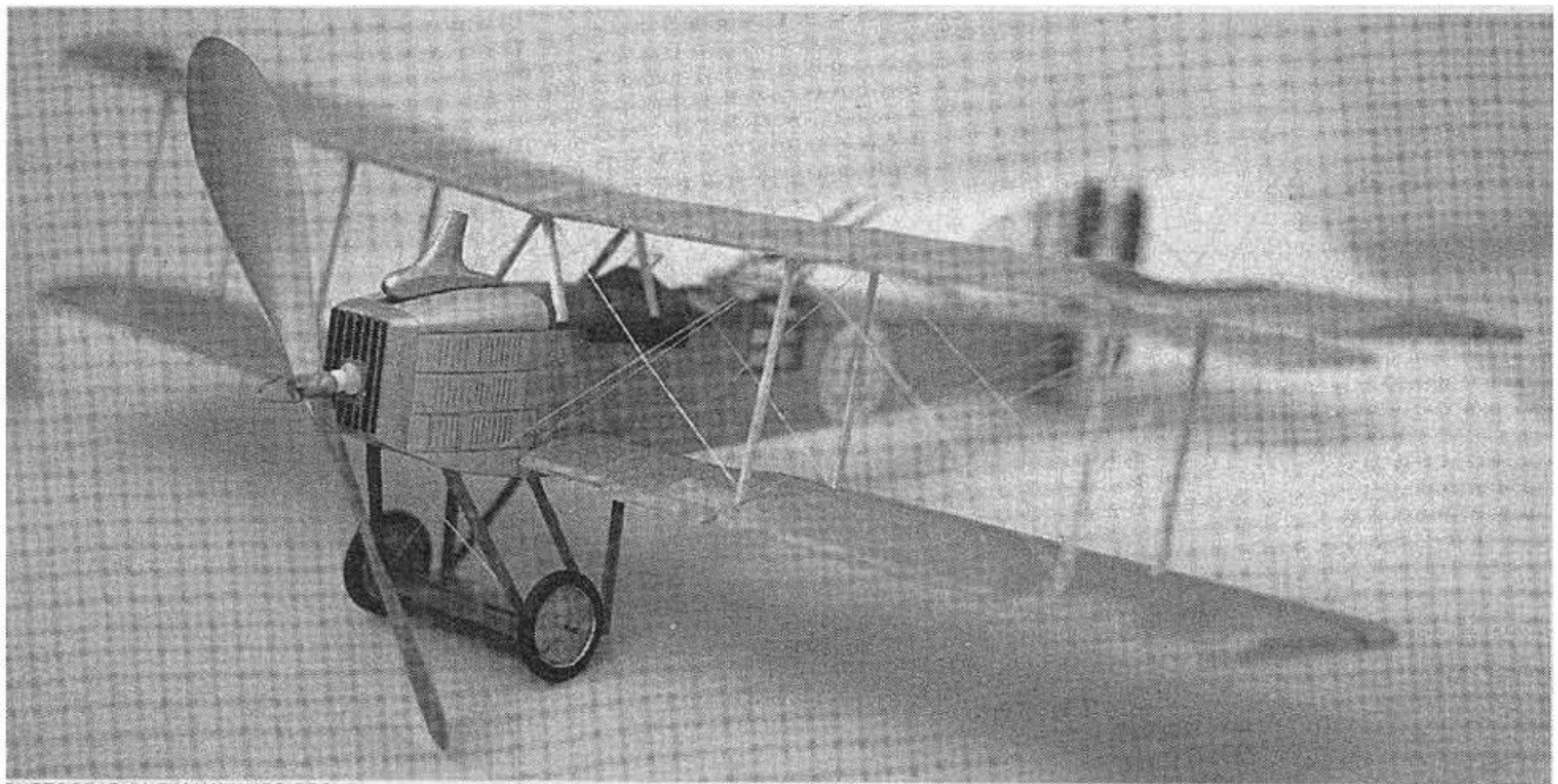
For the sake of clarity, many details have been omitted from the construction drawings—like the three rows of louvres each side of the engine cowl—so refer to your own research when finishing the model. (The louvres on my model were simply drawn on.) Armament for the Bre 14 varied depending on availability and purpose, but generally included twin guns for the observer and one gun firing forward mounted to the port side of the fuselage.

Make up some jigs to help align the wings. Don't trust your eyesight! Trimming small models is hard enough without having to cope with wonky wings. Make the struts over-length and push fit them into holes in the strut supports. They can be adjusted till the wings line up properly and then cyanoed in place.

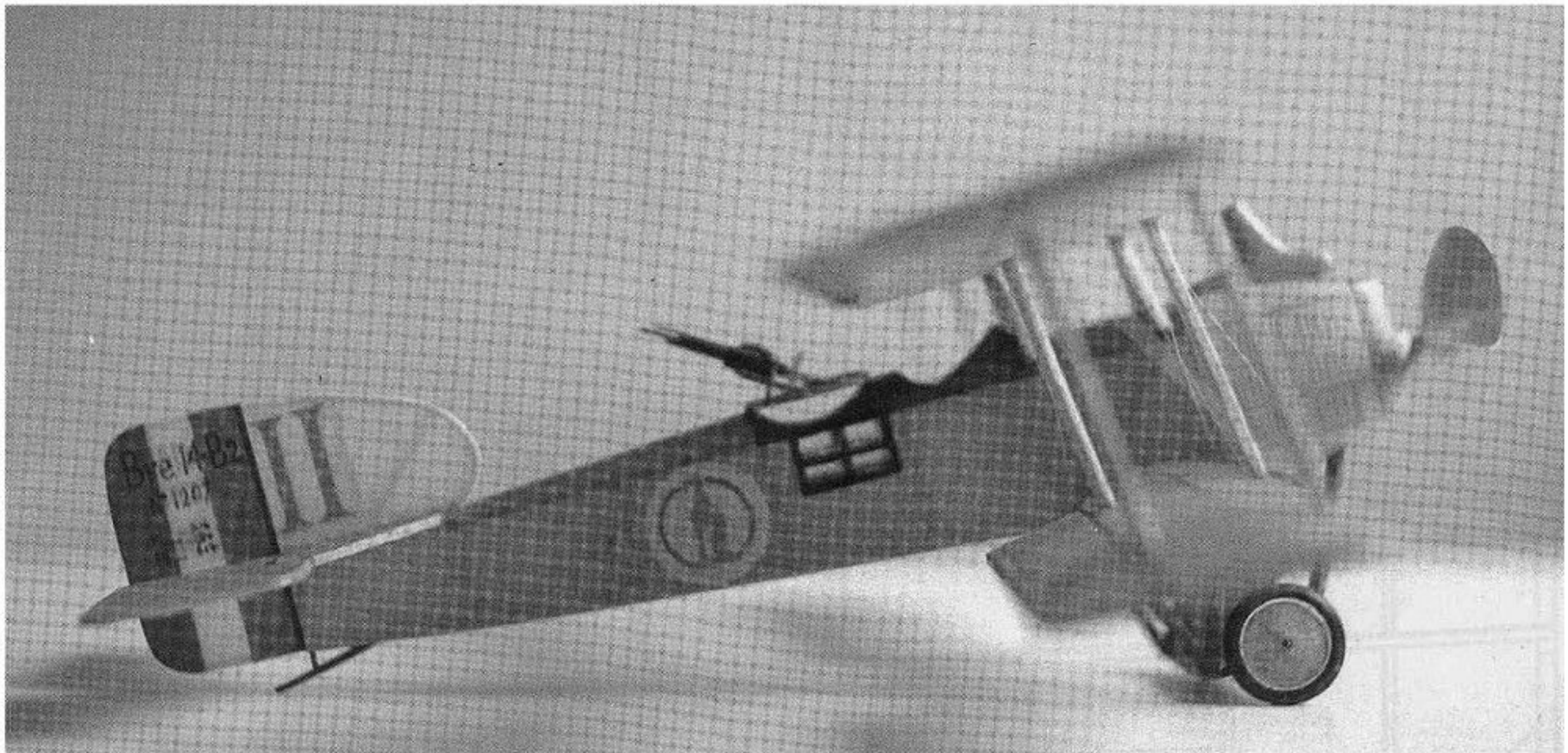
My model weighs about 16 grams without rubber. Indoors it uses a loop of .110 FAI Tan II. Outdoors it flies on 1/8 rubber. The model was nose heavy at first and I had to shave the plastic prop down quite a lot to make it balance. Scrape the convex surface of the prop with a sharp modelling knife to shave off an even amount of plastic from each blade. Another alternative is to move the rear rubber post one bay further aft. But you need to make this decision before covering, of course!

About 5 degrees downthrust and 2 degrees right sidethrust was required to cure power stalling and draw the model into a right hand flight pattern. The larger prop and short undercarriage legs mean you won't be able to ROG. I'm getting consistent flights of about 40 seconds both indoors and out.

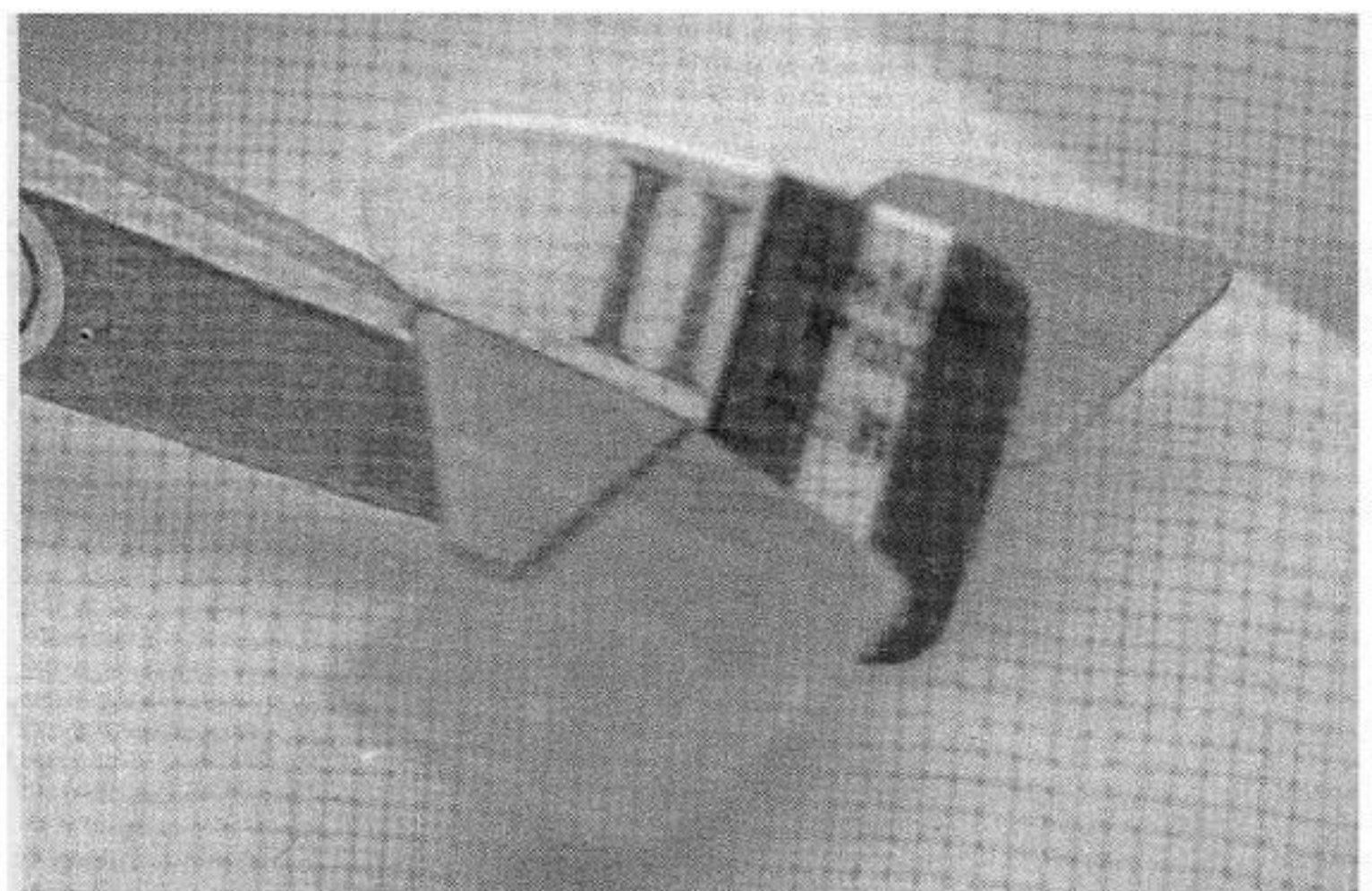
Here in South Australia we have an annual indoor WW I competition in November to commemorate Armistice Day—the end of the Great War. Models can be any size that can fly indoors and can be powered by rubber, electric, CO₂, or compressed air. The duration score is calculated as the best flight time multiplied by the number of wings on the model. So an Armstrong Whitworth quadraplane doing 16 seconds can beat an EIII doing a minute! Scale appearance ranking is decided by votes from the other competitors. The Bre 14 came second in duration at the last competition with a best flight of 47 seconds (score 94). Good luck with yours!



The prop disk and scale gear on the Bre 14 eliminate any chance to ROG. Wing alignment, as with any biplane, is critical. Wing jigs are essential. Undercarriage and wing struts are made from bass wood.



There is nothing unusual about building the fuselage. All versions of the Breguet included a pilot and gunner area (**above left**). Twin guns for the observer were



typical, while a port mounted single gun was provided for the pilot. Referring to the plan, the tail was significantly enlarged for flight stability (**above right**).