

1915 LINCOLN BEACHEY MONOPLANE

By ART REINERS . . . Here's an .020 powered sport free flight that is also semi-scale . . . and different enough to be a real attention-getter at the local flying field. Construction is super-simple.

● For all the .020 engine fans, here is a "Jumbo Peanut" of an Old Timer you can build just for fun.

Pre-WWI aeroplanes have always been my bag, so to speak, and my interest increased by leaps and bounds when I began building some of the Hannan and Mooney Peanuts. This inspired me to go a step farther and double the scale to accommodate the .020 and .010 engines that I had around.

To date I have built 4 of the Lincoln Beachey models with great success. It is very stable and flies with amazing realism. The first L.B. was assembled about 4 years ago and has survived all of the usual testing until recently, when it collided head on with a telephone pole. The damage was not total, but bad enough to warrant a new, revised model. Since the first model was slightly heavy, some changes were made to the wing, tail, and covering to provide a lighter, stronger model. Changes were also made to bring the model closer to scale.

The Beachey Monoplane was a mid-wing aircraft designed and built for Lincoln Beachey, the famous aerobatic pilot of the early 1900's. Begun in 1914 and completed in 1915, the aircraft was built to be used for air show work. The original A/C was equipped with a 7 cylinder Gnome Rotary engine of 84 HP which gave it a top speed of about 105 mph.

Since I like to build fuselages and hate to build wings, I assemble the wings first to get them out of the way.

WINGS

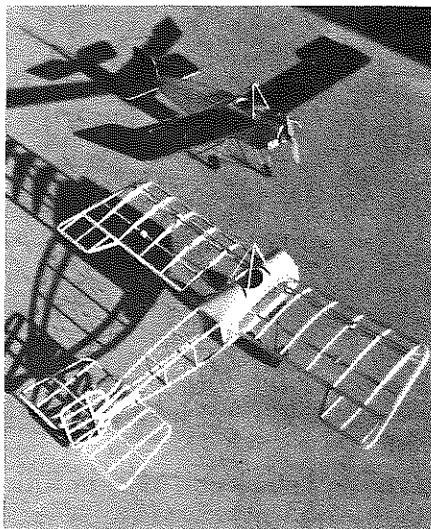
Cut all wing parts and assemble over plan to make the left panel first. When the glue has set, insert the wing spars into the ribs before taking up the panel. Turn the plan over and repeat the process for the right wing panel. I used Titebond glue for all framework and followed it up with one coat of clear dope before covering. When the panels have been sanded, insert the wing wire retainers and glue solidly in place. Be sure to leave at least 1/4 inch of leading edge and rear spar to set into fuselage sides.

TAIL ASSEMBLY

Rudder and elevator are made next and can be built at the same time as the wing panels. Sand the tail parts to streamlined shape and apply one coat of clear dope.

LANDING GEAR

Assemble landing gear from 1/32 inch music wire, using the dimensions shown on the plans. Be sure to wrap the wire joints with 3 or 4 turns of soft iron wire and solder securely. The front



wheel is installed when the front gear is bent. Use Williams Bros. 1-1/2 inch Antique wheels. Set assembly aside to install in the fuselage.

FUSELAGE

The fuselage is easily built from 1/8 sq. hard balsa or 3/32 sq. spruce strips. Make the 2 fuselage sides directly over the plan and join together, starting with bulkhead 1 and working aft. Fill in the areas indicated with 1/8 inch soft balsa and add fuselage formers No. 2 and 3. Cover top and sides with 1/32 inch medium balsa and cut cockpit opening. Install landing gear and cover bottom of fuselage with 1/32 inch medium balsa sheet. Sand the fuselage completely and install the plywood firewall. The cowling is optional and can be made from sheet balsa or the bottom of an aluminum soft drink can. The model will perform equally well with or without the cowl. Complete the rear of the fuselage and give it 2 coats of clear dope. Since the real aeroplane was left uncovered in the

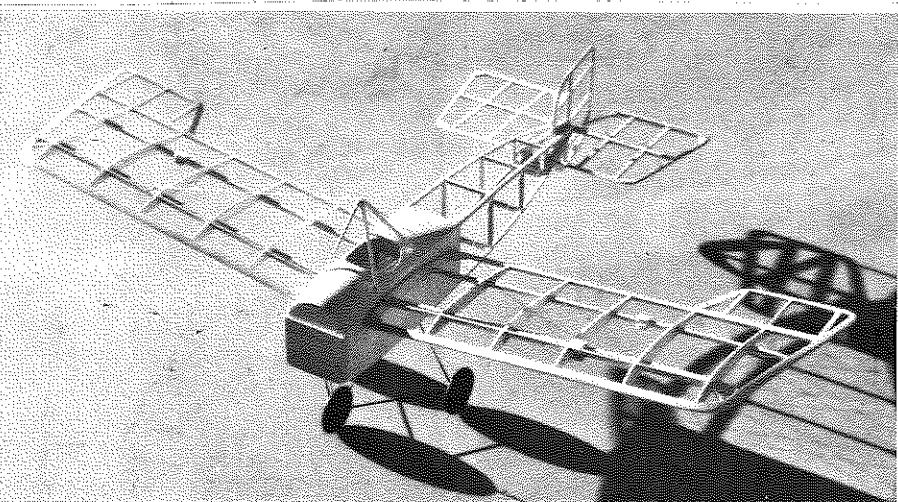
rear sections of the fuselage, you may want to leave your model uncovered to show the rigging. At least one of the aeroplanes did have the fuselage completely covered and I have found that the performance was improved.

COVERING

Cover wings and tail assembly with black tissue in the usual manner; spray lightly with water and pin frames down to prevent warping. The original fuselage was silk covered and has held up much better than tissue. The choice is yours. When the fuselage is covered, install the rigging pylon over the cockpit and give the fuselage at least 3 coats of clear dope. The wing and tail assembly will get 2 coats of thinned clear dope. The fuselage was aluminum from station No. 4 forward, in case you want to apply colored dope to your model.

Install wing panels, rudder, and elevator. Block up the wing panels to give 1-1/2 inch dihedral under each wing tip. When the glue has completely dried, install the rigging on the wing and tail. Complete the model by installing the engine, tail skid, and cowling. Note that the engine has down thrust added. This can be accomplished by the addition of a 1/16 inch washer under the top mounting lugs.

The model should balance 1-3/4 inches back from the leading edge of the wing, or almost directly under the peak of the pylon. Be sure that all rigging is secured before any test gliding or flying. The Lincoln Beachey responds well to all normal adjustments and recovers rapidly from unusual attitudes. The glide is shallow and fast, but very stable. If you experience looping under power flight conditions, increase the down thrust slightly. Pay particular attention to the ailerons at the trailing edge of the wing, any warp here can be a real thrill during a full power flight. ●



#5791

MODEL BUILDER