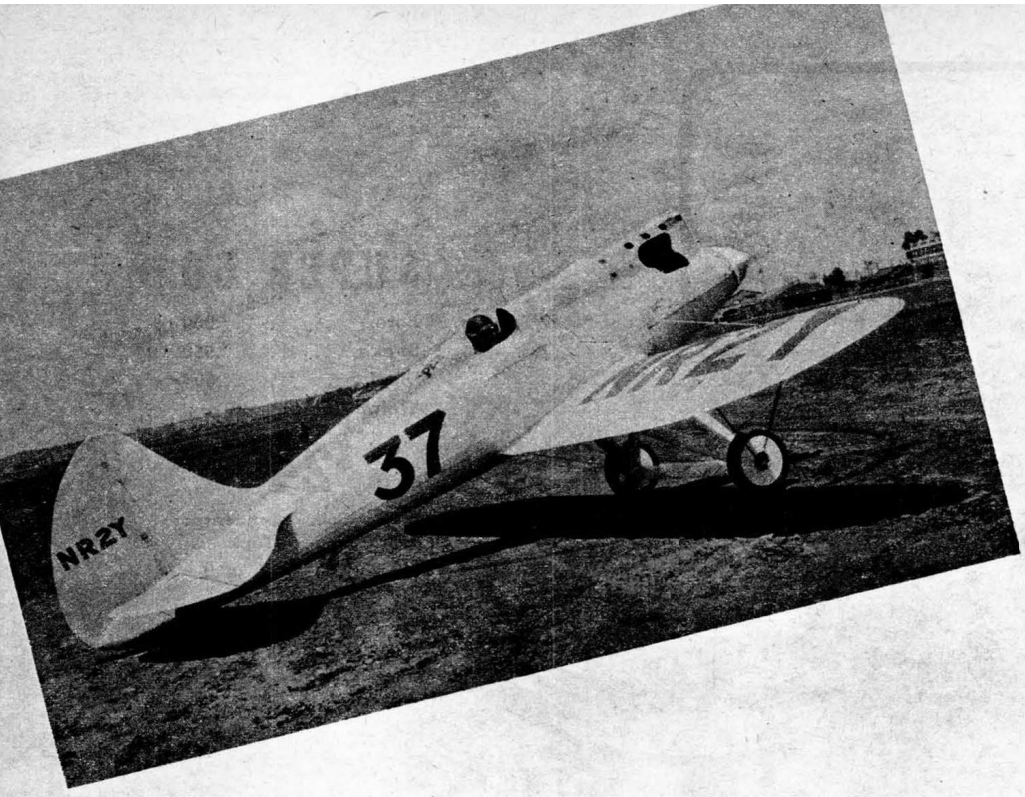


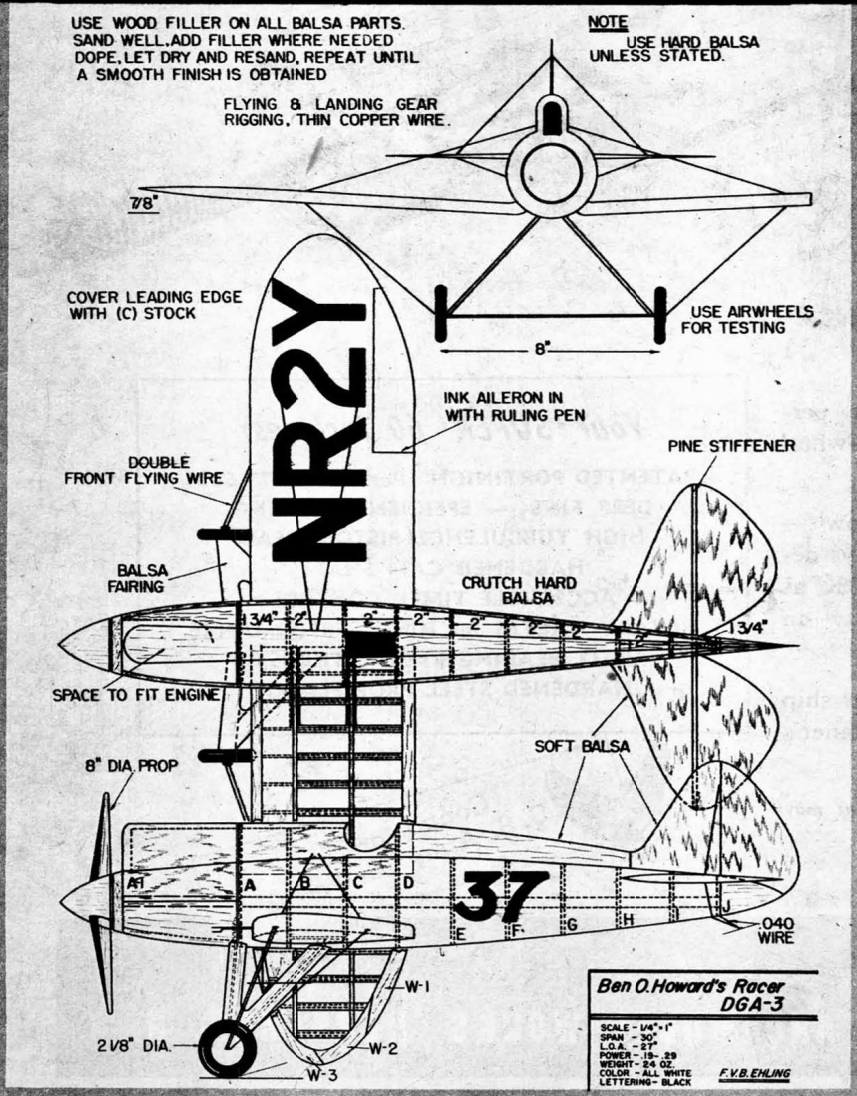
WE TAKE you back fifteen years to the National Air Races of 1930. Many of us remember the Races but few can recall the sensation of that year's meet. While the pre-race crowds were looking over the Laird *Solution*, the Travelair *Mystery S* and the Curtiss XF6C-6 speed entries and making their choice between them, few observed a tiny pure white ship sitting in a far corner of the hangar. Those who did notice it hardly gave it a tumble after they heard from the lips of its owner and builder, Ben Howard, that it was powered with a Wright *Gypsy* engine of 90 hp.

"What chance has this low powered job against the *Wasp* and *Whirlwind* engined Lairds and Wedells?", they thought.

Well, Benny Howard showed them and removed all traces of doubt by placing third in the Thompson Trophy Race, and collecting a lion's share of the prize money by winning two other 3rd places and four 1sts. By the time the Races were over Howard and *Pete* were famous, and in the succeeding years *Pete* was replaced by *Ike*, *Mike* and *Mr. Mulligan* and they too showed their exhaust to many high powered racers. It was *Pete*, however, that opened a new era in small

A control line model of Howard's famous racer—easy to build and a swell flier

PETE



fast racers and it will be many years before another plane stirs up as much interest.

Many of our readers and builders have been asking for a model of *Pete* so we thought we would commission Frank Ehling, one of America's foremost Control Line model builders to work out a simple yet realistic model of *Pete*. Frank has more than lived up to our expectations and reports that *Pete* even surpassed his fondest hopes; he says it handles with ease and affords all the thrills not achieved with a super speed job. There are several engines that fit this design nicely.

The ship is of crutch design, this makes for easy construction. A built up wing affords all the necessary strength for this type of flying. The solid tail group is used to an advantage, as the thin section would warp out of shape if built up. This ship is not difficult to build; however, a little more time than on the usual run of the mill ship will be required.

To construct the fuselage, cut out the bulkheads. The crutch is then cut to size and cemented together at the end. When dry, cement bulkheads in place, starting from the rear and working forward. The engine mount is now cut out and cemented in place between the crutch members. This engine mount will have to be cut to fit the particular engine used. The wing should be assembled now because after it is attached to the fuselage bulkheads the fuselage will be completed.

To build the wing enlarge the wing plan to proper size and cut the ribs, leading and trailing edges along with the wing tips all from hard balsa. Lay out

the wing in the usual manner making sure to cement all joints well. The wing gussets are cut from plywood and the two wing halves are joined together. The leading edge is now covered with sheet and the ribs capped. The wing should be sanded smooth and cemented in place securely to the fuselage bulkheads. Landing gear is then bent to shape and bolted in position. Cut gear fairings to size and cement to the wire gear remembering that the landing gear, being subject to constant strain, will have to be cemented well. It is wise to silk the fairings as this bonds the entire gear.

Install the ignition making sure all wiring connections are soldered well to insure complete success in engine operation.

Complete the fuselage by adding stringers. Assemble the lower cowling. Carve the headrest from soft balsa and cement to fuselage. The upper engine cowl is carved to the plan and hollowed to accommodate the engine used. Install the control system and see that it works free.

The stabilizer is cut to outline and sanded to shape, making sure that the section is carried out the entire length. Cut in half to construct elevator and

by **FRANK EHLING**

stabilizer. Cement the silk hinges in place and attach to the fuselage. The rudder is made in the same manner and cemented directly to the fuselage.

The ship may now be covered and in order to obtain perfect results sand the entire structure smooth. Cover the fuselage with as many small pieces as possible. To ease this tedious job apply the covering wet for greater pliability.

Doping the ship should be done in a dry room. To allow the dope to flow rather than streak, thin it 50%. The lettering is best applied with flat black. Add the flying wires and the ship is complete.

Test flights are made with the least possible wind. Be sure to have the rudder offset as this tends to have the ship fly away from the operator thus keeping the lines tight and insuring complete control of the ship at all times.

MATERIALS USED

Bulkhead A	1/8 Plywood
Bulkhead A-1	3/8 Pine
Bulkheads B to J	1/8 Balsa
Spinner	Pine
Stabilizer	1/4 Soft sheet balsa
Rudder	1/2 Soft sheet balsa
Wings Tips W-1, 2 & 3	1/4 Sheet balsa
Wing Ribs	1/16 Sheet balsa
Wing Gussets	1/16 Plywood
Wing Spars	1/8 Square Hard Balsa
Leading Edge	1/4 x 1/2 Hard Balsa
Trailing Edge	3/16 x 1/2 Hard Balsa
Headrest	Soft balsa
Cowling	Soft balsa, hollowed
Covering	Paper, silk can be used
Wheels	Hardwood for flying but use airwheels for preliminary tests