



STRAIGHT AND LEVEL



One of the oldest and most revered forms of modeling is rubber-powered scale. What is its attraction?

IS the rubber-powered flying-scale model dead? Why is it important to ask such a question? The immediate answer, if you think in terms of kit models and kids, is that the you-wind-up-the-prop scalers have been hanging right in there for years. But we are thinking of the magazines, and that is something else again.

The rare contribution of an "old-fashioned" flying scale model is a startling experience. Once in a blue moon an editor will see fit to publish plans for such a model. Of course, we mean a real scale job, not some quickie scale-like sport design. For years we all seem conditioned to a philosophy that, if it hasn't got a gas engine, no one but a stone-age hermit will take the project seriously. There is something rotten in Denmark.

Why, for heaven's sake, does it have to use a gas engine? Because real planes have internal combustion powerplants? Well, whoever heard of a real engine with one monstrous cylinder, which turned, perhaps more than 20,000 rpm with some ridiculous tiny prop which hardly sticks out beyond a pot cow! Do real planes sound like angry hornets? OK, a rubber motor doesn't sound like an engine either, but at least the sound is left to your imagination. And what about speed? If you take the scale speed—that is, so many body lengths passing a point in an interval of time—you'd have a trans-sonic Curtiss Jenny, and jet-like Piper Cubs. Part of scale is how the model looks. An equally big, if not bigger part, is how the darn thing flies. If it doesn't fly scale-like why build it?

That rubber power might be the ideal flying scale activator, at least in free flight, no one would dare claim. Why not? The good rubber job trundles along just like the real thing when released, raises its tail, lifts off realistically, then putters down field for a lovely landing. You can get a gassie to do something like that, but by the time you knock down the thrust with a little, screaming prop, you have an audible monstrosity.

Not too many years ago the name of Earl Stahl was a modeler's household word. Earl had many dozens of small little crates published in all the magazines. They were remarkable for their simple structure, realistic looks, and flying ability. You could build one for 1/500th the cost of some model airplanes we have flying today.

Another old-timer once internationally famous was Joe Ott. Before he became a leading manufacturer, he, too, published a series of fine flying scale ships in the old *Popular Aviation*—today's *Flying* magazine. Equipped with celluloid wheels his Fokker Universal weighed 1 7/8 oz. His 24-in. SE-5 and Nieuport 17 were great favorites of ours. We scaled them up to all sizes, as we did his Camel, Halberstadt, Spad, Boeing P-12,

etc. On a quiet evening you could walk, yes walk, beneath the SE-5 as it sailed across a ball field. Scaled to 45 inches, the Nieuport and Boeing were fabulous. One thing we did learn was that you cannot put too much ballast in the nose of any scaler, up to the point of achieving a proper center-of-gravity location. Take the Camel.

The Camel obviously is a poor selection. So we think. But trim it out and it climbs and flies like mad. Nothing the matter with it. Inspired by Ott we tried endless originals, scaled up to include six-foot Bellancas and even a seven-foot Cessna. We can still see some guy's nine-foot Fokker soaring over the berry patch. The Fairchild 71 is one of the most fabulous fliers imaginable, with its 7/8-in. thick wing on a 36-in. span. The Curtiss Robin. Travelaires. Just about anything.

Light construction did not prove weak. Lightly built crates have sensational endurance. Recall six-foot Bellancas with 1/8 x 3/8 longerons! Speed and weight being low, kinetic energy is minimized—how hard you hit, buster! Jap tissue on six-footers and, outside of twig and weed poke-holes in the covering, damage was seldom suffered.

There was one problem, though. It wasn't a problem before machine-made and plastic-cast props became taken for granted. Yes, you guessed it. The prop had to be carved. An 18- to 24-in. prop for some of those giants had to be hacked from a balsa 2 x 4. But no one protested. The results were worth it.

At 20 to, say, 30 inches of span, a simplified, somewhat off-scale rubber job is a fine free-flight project even today. You'd enjoy the art of putting together a light framework and covering it with paper—or maybe light silk in the bigger sizes. Adjust the ship to fly in circles to stay within the confines of a small field, and many a rewarding flight will be had. Maybe such a model won't shine in a wind. But if it is windy go back to your trans-sonic flying brick. Drag out the lightweight on a calm morn or evening and let the swallows chase it. Install R/C if you must!

The most exciting flight for any type of model we ever had was a rubber job, a Nieuport 17. This 45-incher was winder-wound in the twilight and released from an ROG. It disappeared into the dusk. Funny prop and rubber-unwinding noises were wafted more and more weakly to the ear. Finally, across a huge orange disc of an autumn moon, passed the silhouetted WW 1 pursuit, just like a friendly witch riding her broom.

It's a shame, really, that the sophisticated modeler writes off the wonderful rubber scale jobs. They have got personality, and don't you forget it!