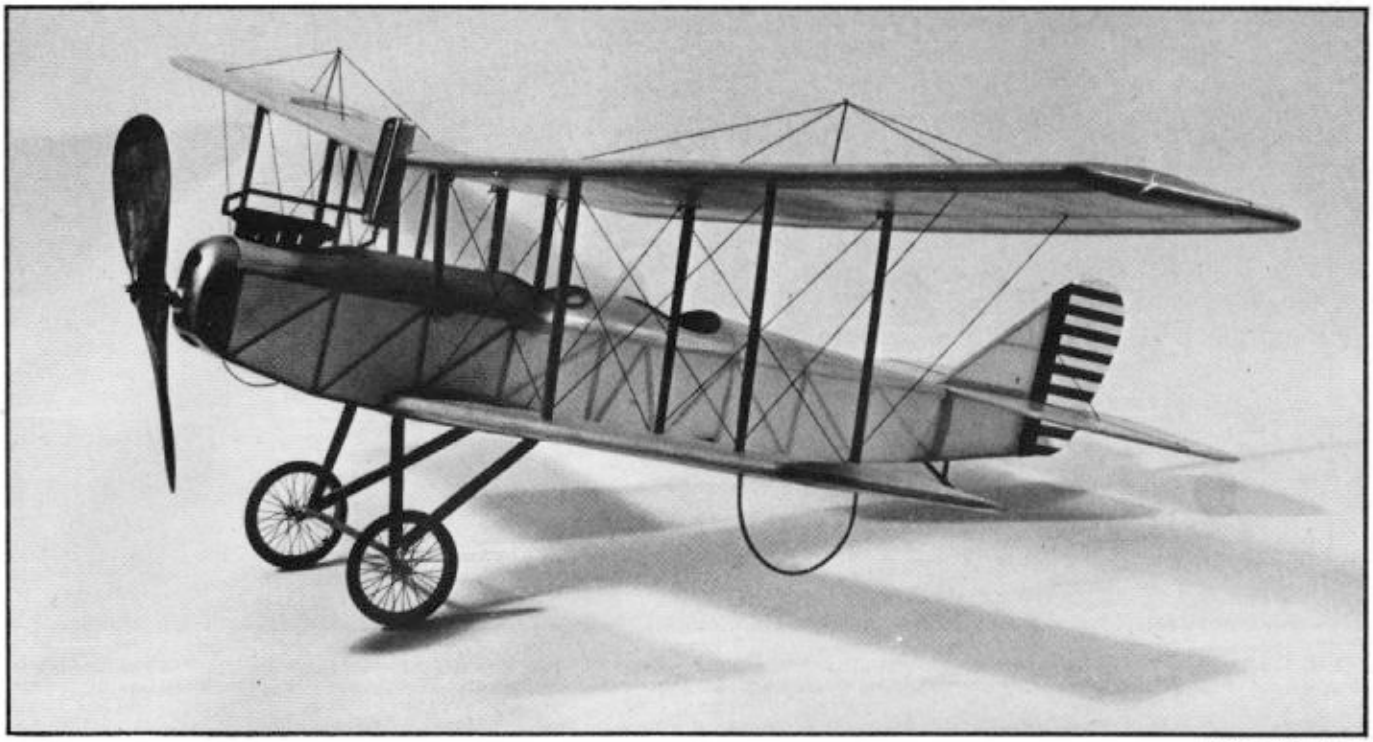


Photos by the Author

A "Standard" of Excellence

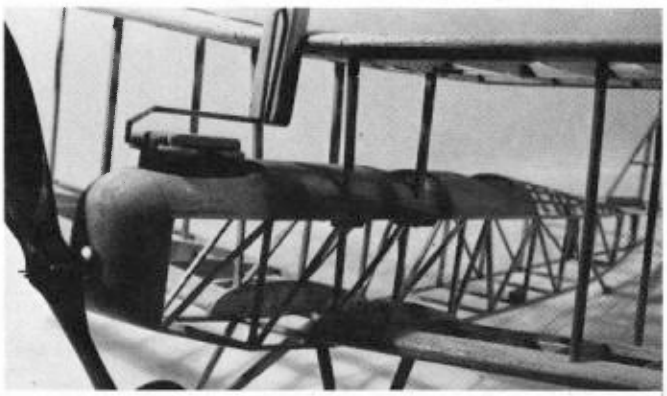
by Hurst G. Bowers

Rubber power or an .020 for free flight or R/C can put this soul stirring ancient bipe into the air for you to enjoy the satisfying beauty of scale.

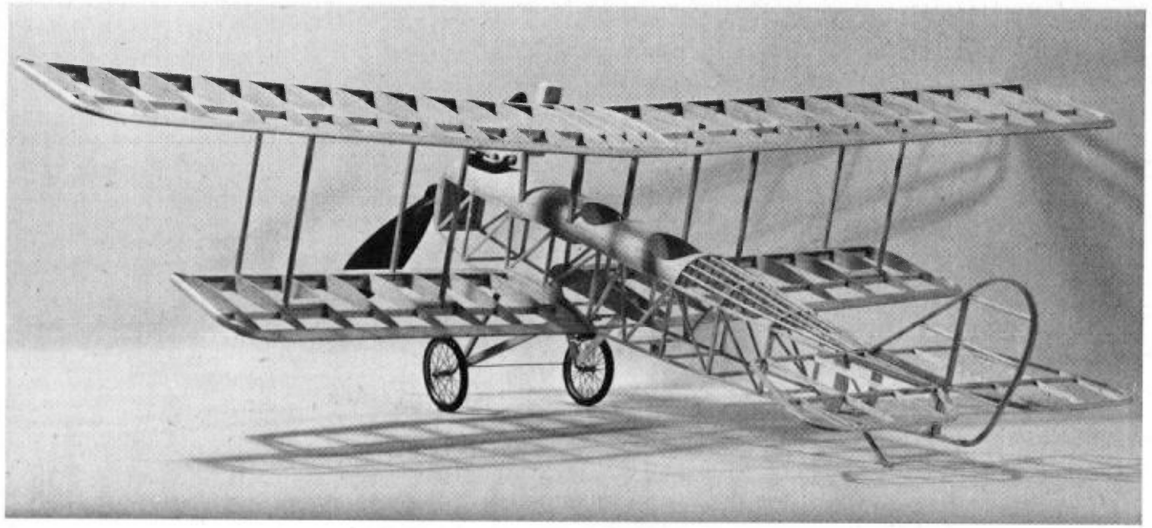
Few airplanes played so important a role during the fledgling years of aviation in this country, or received so little recognition as the *"Standard"* biplane. This neglect was compounded by continuous misidentification, for invariably the *"Standard"* was confused with the Curtiss *"Jenny."* This situation prevails even today in aviation publications, for there is a slight resemblance, and the general tendency is to refer to any World War I period trainer as a *"Jenny,"* just as the non-flying public of recent years referred to any lightplane as a *"Cub."*

The design goes back to 1916, and Charles H. Day. It was produced in quantity by the Standard Aircraft Corporation of Elizabeth, New Jersey, and license built by two other contractors. Over 1,600 of these aircraft were produced as trainers and used during World War I. Production of commercial variants continued well into the 1920's when they became a favorite of barnstormers. An October 4, 1920 issue of Aerial Age Weekly advertised it as the Lincoln Standard *"Tourabout,"* available through Nebraska Aircraft Corporation of Lincoln. The original version, which I have selected for modeling, carried a 10 degree sweepback and was powered with a water cooled Hall-Scott 100 horsepower engine. Subsequent models had a straight wing and were powered with OX-5's and Hispano-Suisas.

A study of the plans makes it quite apparent why this aircraft was selected for

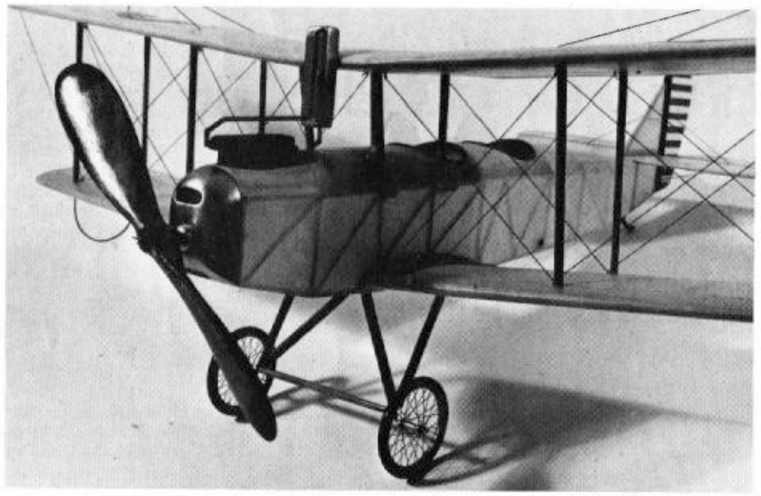


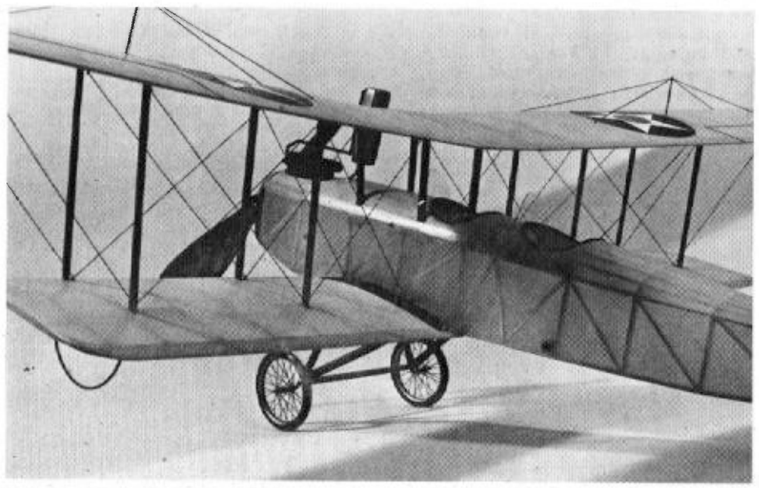
A modern design, once. Time marches on however. It makes a great model. At right: Close in look at the structure, sturdy enough for a Cox .020.



Rigging, the fun part. Slender threads a pilot's hope of holding wings. Easy to build structurally, a conversation starter among the air-minded.

Beneath: The completed framework ready for the tissue and the finished spoke-wheeled "Standard," a rubber sized prop. Pulse-type R/C is fun.





modeling. The wing area is generous and with the sweepback, scale dihedral may be used. There is considerable gap between the wings and the moments are such as to insure maximum stability. The design lends itself beautifully to the lightweight construction necessary for rubber power, yet is sufficiently strong to handle an .020 engine for Free-Flight, and perfect for single channel Pulse Radio Control. Additionally, it is entirely capable of accomodating the new two channel lightweight Cannon Electronics Tini-Twin radio equipment. For a ball field and the small field flier, this design just can't be equalled. The crowning touch for this model is a 2¼" dia. pair of the beautiful Fulton Hungerford scale wire wheels. If you are a biplane fan, and like lots of simple details, wires and rigging, how can you pass up building this *"Standard"* replica? Best of all it's quick and easy, and promises many enjoyable hours of flying.

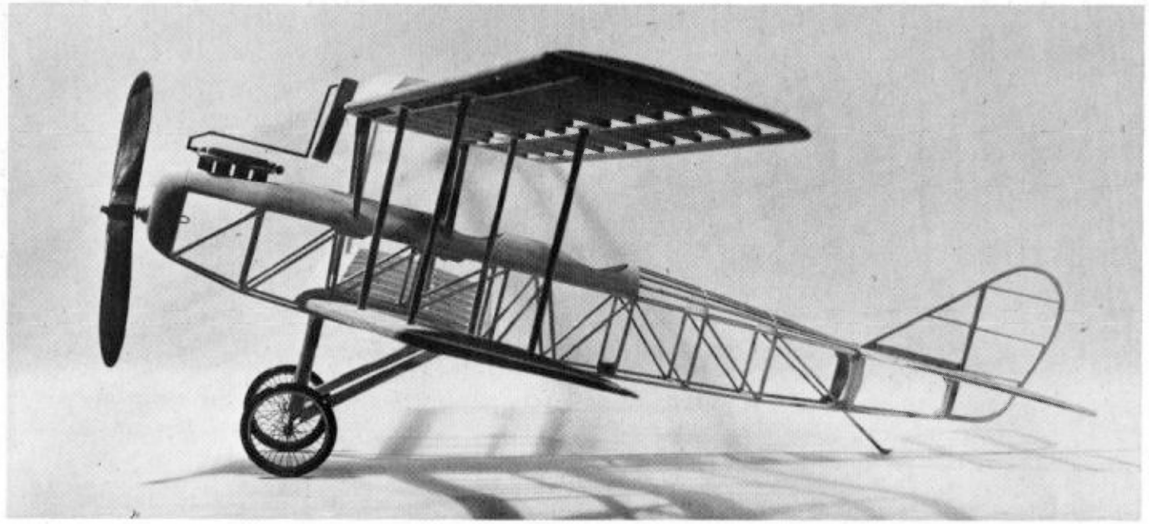
I wish to point out that the model shown in the photographs illustrating this article was built by Charley Roth of McLean, Virginia. Charley is a senior government executive in Washington whose modeling days go back into the 1930's, so naturally he selected the rubber powered version. As is apparent from the pictures, his craftsmanship is impeccable.

Building Notes

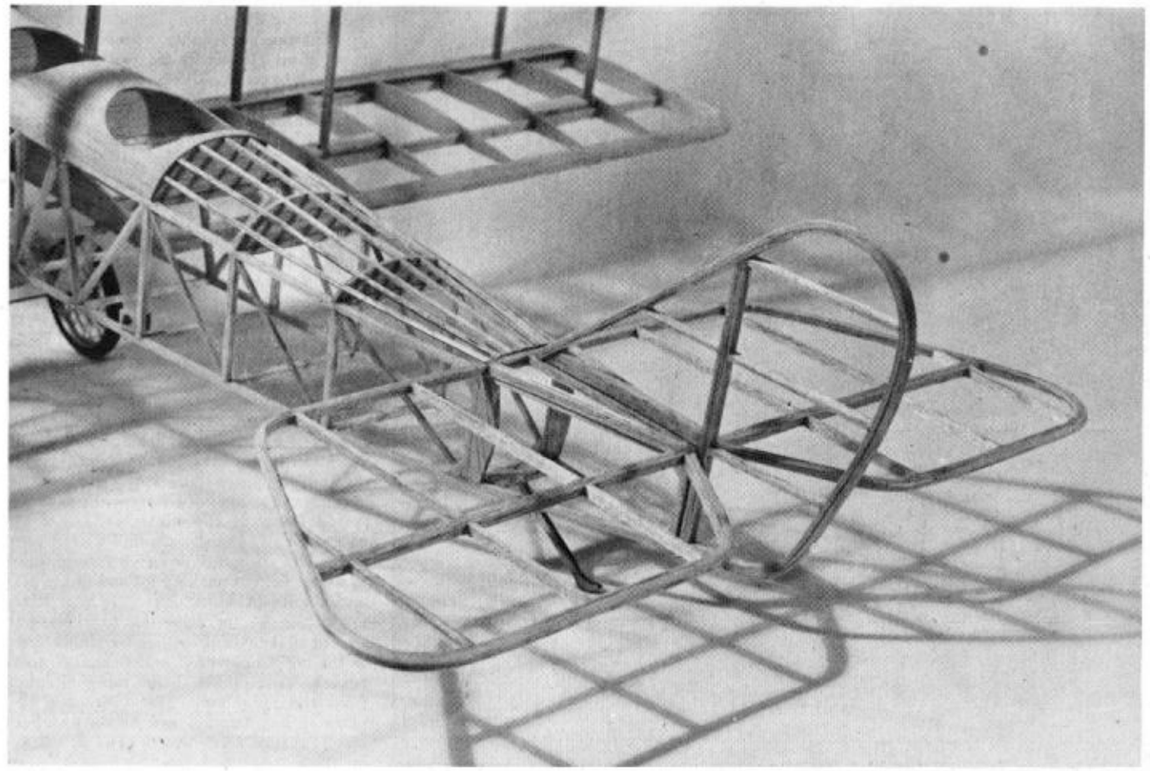
The construction of this model is entirely straight-forward and conventional, and even an inexperienced modeler should encounter no real difficulty with it. I will not go into "stick by stick" details on how to build each part, but will attempt to point out and explain areas where possible difficulties could occur.

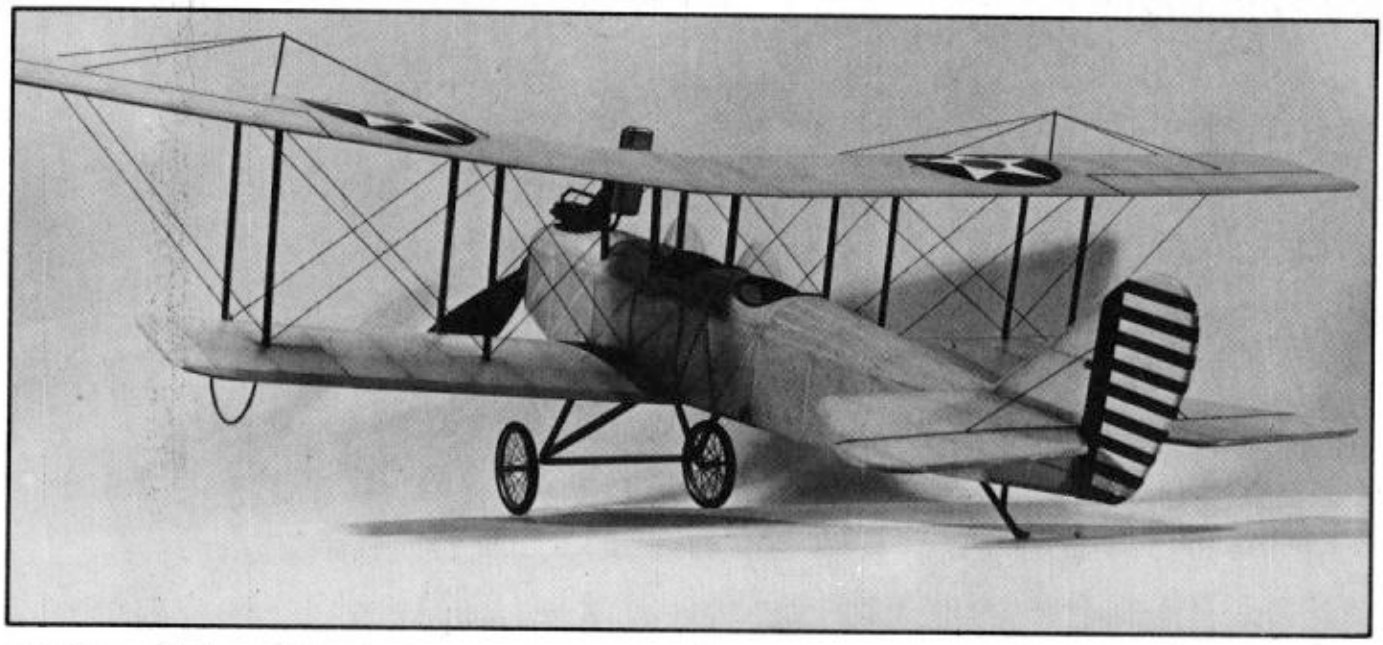
When building the fuselage note that 3/32" square spruce is specified on the drawings for the longerons, however, if you have difficulty obtaining this excellent material you may substitute hard balsa. The 3/32" sheet balsa butt-plate should be traced carefully from the plans and drilled for the lower wing dowels before assembly for it insures accurate incidence in the lower wing. Should you elect to build the two-channel Radio Control version, you may substitute ⅛" square balsa for the fuselage structure, however, it really isn't necessary if the spruce longerons are used and an important point to remember is that in a model of this category where scale performance is sought, weight is critical.

The tail surfaces are built by laminating strips of 1/32"x⅛" balsa or bass wood. The latter may be obtained at model railroad dealers. Either material provides a light and strong outline for any version you select and is well worth the slight added effort. If you have never laminated tips or outlines before, it is much simpler than it appears. The secret is to cut a form from scrap ⅛" sheet balsa and "wax" the edges with either soap or a candle. Pin it over the plan, using waxed paper to prevent sticking and proceed to carefully bend the laminations around it. I use Titebond glue thinned with water and applied with a brush, thoroughly saturating each strip. This eases the bending process and adds considerable strength. The laminations are held in place until dry with pins. I have found that small strips of mylar make excellent hinges, however, ordinary glue



It's not intended to ever win the Wakefield, but she is a flyable ship. Competition minded modelers might reduce weight with balsa substituting for spruce and by minimizing some balsa sizes. Maintain proper balance. **Below:** Laminations create the tail surface outlines, bend around form.



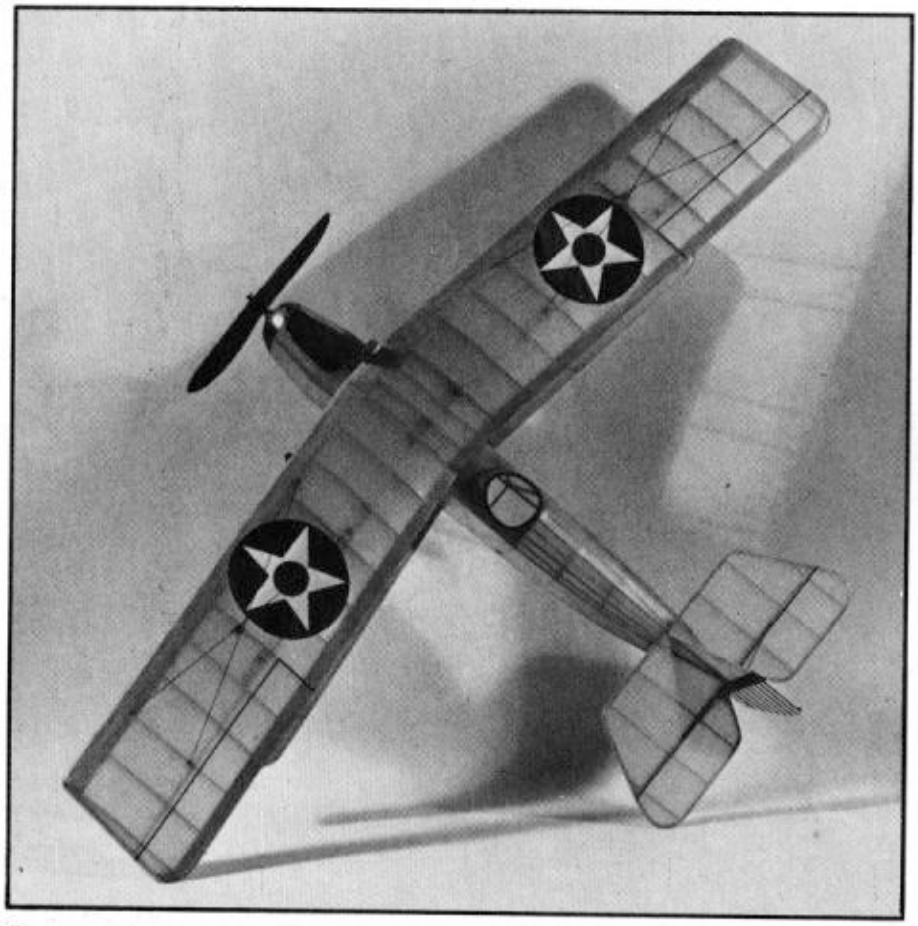


Sometimes we rekindle our enthusiasm and find a new meaning in our sport of modeling by returning to an old airframe. We wonder at our progress.

Below: Temperamental powerplants and newborn pilot-skills demanded area. "Standard" trained many. An ideal Rubber Scale competition project.

will not hold them in place and epoxy must be used. If you have any bamboo, a pin made from a small sliver may be inserted through the rudder and elevator spars to secure the mylar in place. Be sure to sand it flush and place a drop of glue over each end of these pins.

Wing construction is simple, and strong. The major point to make regarding assembly is to insure that butt ribs on the outer panels are slanted at the angle shown, using a gauge made of scrap balsa. Join the top wing panels with the center-section prior to covering and assembly. This insures correct dihedral and sweepback. The 3/32" dia. dowels on the lower wing must be accurately installed so as to mate with the mounting plate on the fuselage sides for correct incidence. The struts are made from either spruce or balsa, sanded to a streamlined shape, accurately done to insure proper rigging and alignment.



Our models are covered with yellow Jap tissue and three coats of thinned "low-shrink" Sig clear dope to resist warping. As with any model, true alignment is of paramount importance on the *"Standard"* and exceptional care must be taken to prevent warping. Trim may be cut from colored tissue and doped on, with India ink used for aileron outlines etc. Decals may be used for insignia if desired.

Detailing this model is simple and really gives it the personality needed. Build up the dummy Hall-Scott engine and radiator from soft balsa block, using 1/16" basket reed and aluminum tubing for hoselines etc. Paint with flat black and dope. Black thread is used for flying wires and adds a touch of realism.

Trimming the *"Standard"* is conventional, however, since the wing is swept back, it should balance at a point approximately 20-25% of the chord at the tip of the top wing. Obtain this balance, and a long, slow, flat glide by using clay on the rubber and Free-Flight versions, and by radio or battery placements on the R/C version. Remember, this airplane flew "low and slow" and the model should simulate this performance in scale. On the Radio replicas, control must be positive, but not erratic.

If you have never built a ball-field scale flier before, it is an experience you should not miss. It puts the fun back into modeling and eliminates those long safaris with a station wagon load of equipment out to the leased fields in the hinterlands. On the peaceful Fall evenings we find we can grab the model and walk or drive five minutes to a local field or parking lot and get in several flights in short order. Try it, it's a marvelous Rx for relieving tensions, and best of all it costs about one fourth as much as the big .60 powered multi channel noisy brutes. There have been no complaints from the neighbors. The *"Standard"* biplane in any version will be an excellent introduction to a new world of enjoyment.