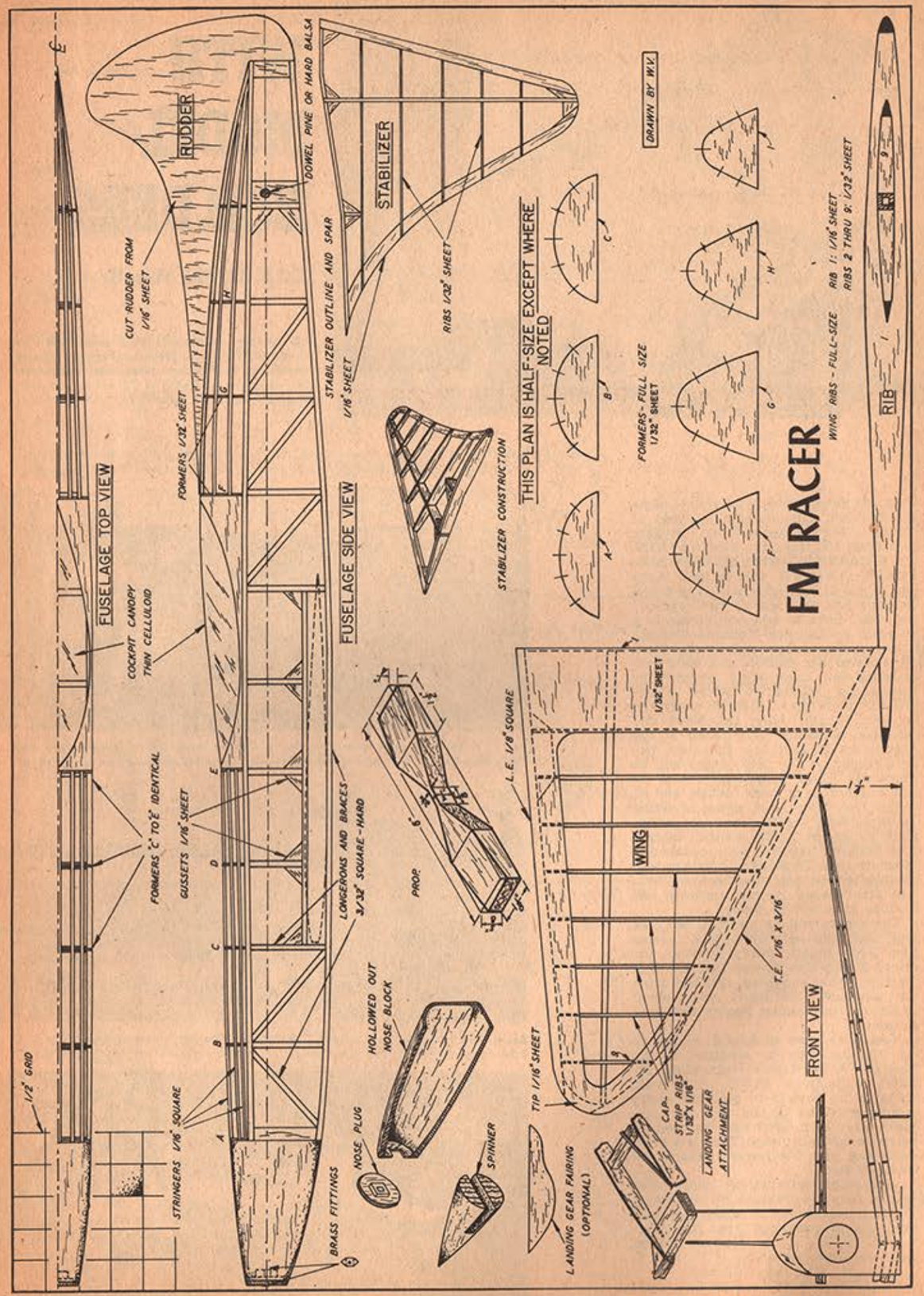
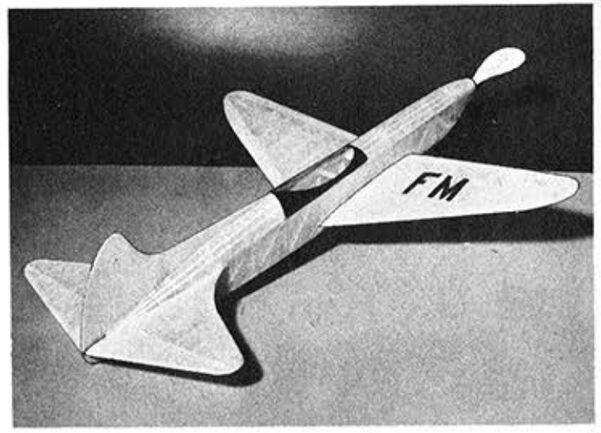




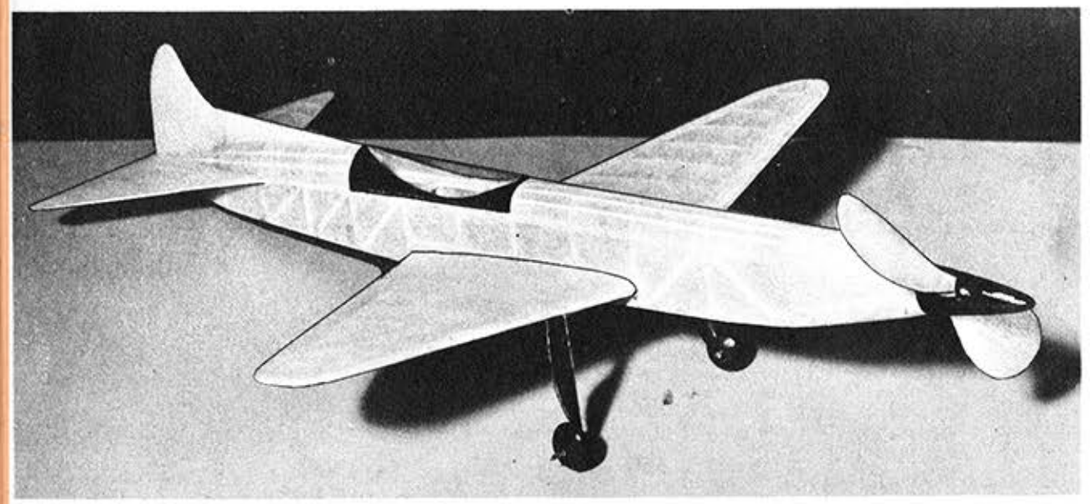

Below: Here's a model that looks like the Thompson Trophy racers of the late 1930's. Its long sweeping lines stretch out to a full twenty-one inches. A whiz-bang speedster that has plenty of elbow room for a powerful rubber motor.




**Tired of building endurance models and wondering what to try? Then now's the time to build an FM Racer!**

## *Rubber-Powered*
# FM RACER

*by William Vassalo*



Above: If you want some real fun, go out and round up the club and challenge them to a contest using FM Racers. It's just the thing to perk up some real excitement. The best way to race 'em is to let them run straightaway—don't try any fast turns!

● Most model builders have meditative moments in which they visualize themselves flying their own personal plane, incorporating all the design features of their imagination. So it was with us until we decided to put some of these fantastic notions into a model that would possess real eye appeal, good performance, and speed. The finished product, as depicted on these pages, shows the net result.

Test flights were conducted over a two-month period, during which time several bugs cropped up, making it necessary for us to change the appearance slightly, but not enough to transform the model into a relatively different design.

With a little patience and ability as a modeler, you too can own a miniature racer of which you can be justly proud. As far as construction goes, it adheres strictly to conventional methods and is within easy scope of the average builder. However, study the plans after enlarging them to full size, to make certain that every detail is fully understood before you start construction. Once this is done, you can start building the fuselage.

FUSELAGE: Obtain four lengths of $\frac{3}{32}$" square medium-hard balsa strips for the longerons. These strips should be of equal strength so that the fuselage will not tend to bend out of shape when putting in the uprights and the diagonals. Cut the desired number of braces to the required lengths and cement them in their respective positions. The brace that holds the dowel in place for the rubber motor is cut from a piece of $\frac{3}{32}$" stock. After this is in place, add gussets of $\frac{1}{16}$" sheet.

When the side frames have dried, take them up and separate them with a razor blade.

After putting the fuselage together, set it aside and cut out the fuselage formers from $\frac{1}{32}$" medium-hard stock. Sand to shape, as shown on the plans. Don't cut the notches for the stringers until the formers are securely cemented in place atop the fuselage. In this manner all notches can be cut out as the work progresses, and the stringers will have a uniform appearance.

The cockpit outline is cut from soft $\frac{1}{32}$" sheet and cemented flush to formers E and F. Cut the dowel from a piece of pine or very hard balsa.

The nose block is carved from a piece of soft balsa measuring $2\frac{3}{16}$" x $1\frac{3}{8}$" x 1". Using the sketches provided in the drawings, whittle and sand the block to shape. When this has been done, cut the block in half. Then gouge out the insides of the blocks to the required thickness, as shown on the plans. The block should measure approximately $\frac{1}{16}$" thick at the rear, and about $\frac{3}{32}$" at the extreme nose. After each shell is sanded to a uniform shape, cement both shells together and set aside to dry.

Cut a balsa disc to the required size, and cement it in its proper place in the nose. Cut a square hole in it to receive the nose plug.

The nose plug is cut and sanded to shape from a piece of medium-hard balsa. With the aid of metal shears, cut out two brass fittings and insert them in their proper places.

PROP: The propeller is carved from a piece of hard balsa. Carve it in the manner you are most familiar with. The carving process should be done fastidiously, inasmuch as the prop is

(*Please turn to Page* 46)