

EQUALLY important to a nation at war as the actual production of war planes is the training of crews to operate and maintain them. Throughout the British Empire a pilot force and other aviation specialists are being trained to sinew the air arm for the knockout blow against the Axis.

Many Royal Air Force cadets are now receiving their initial flying in Miles "Magister" trainers, our subject for this month's flying scale model. Strikingly similar to planes now being used by our own Army Air Corps, notably the Fairchild PT-19, the "Magister" has been engineered for the required trainer qualities of stability and strength.

Structurally the Miles Magister is all wood, following a practice popular in England for some years. The fuselage is a box structure of spruce with plywood stressed covering. Wings are in three sections, also plywood covered, and can be folded to conserve space. Instructor and student are seated in tandem; open cockpits each with a full set of instruments.

Power from a 130 hp. de Haviland Gypsy inverted, air-cooled engine gives maximum speed of 145 m.p.h.; cruising speed of 125 m.p.h. and with flaps extended lands at 45. This trainer climbs 1,200 ft. per min. to a service ceiling of 18,000 ft. Normal range is 400 miles.

A model Miles Magister is interesting to build and fly. Extreme structural simplicity and efficient aerodynamic design combine to produce a low-wing model with flight capacity comparable to many high-wings, flying steadily with plenty of power and the appearance of a full size plane.

Before actual construction of the model, study the plans carefully to become familiar with the details. With a clear picture of each detail in mind, gather all necessary material and begin.

Fuselage

The fuselage underframe is constructed first, shown lightly shaded on the plan. Work directly over the magazine pages and make two side frames, one atop the other. Longerons and uprights are 3/32" sq. balsa. When dry, the side frames are inverted over the top view of the fuselage and the 3/32" sq. cross-pieces cemented to place. Check frequently for alignment.

Formers are cut from medium grade 1/16" sheet balsa. Notice that several formers do not have notches for the stringers and where this is true, the stringers are attached directly to the sides, as shown. Cement the formers to the positions indicated and then add the 1/16" sq. stringers. Stringers which run back the sides are attached directly to the underframe. Because of high thrust line, remove the middle section of the 3/32" sq. cross-pieces, once the top formers are in place, to prevent interference with the rubber motor.

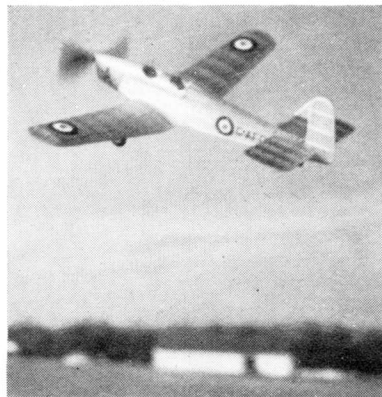
The shaded area of the nose is covered with soft 1/32" sheet balsa. Use the widest stock available and cement the covering to the entire adjacent frame. Pins and rubber bands are helpful to hold the sheet in place until dry. The top section from No. 3 to No. 6 is covered also. Cut this piece to fit accurately, then cut out the cockpits; a pattern indicating the shape is given. Cement to place as with the nose covering.

(Continued on page 46)

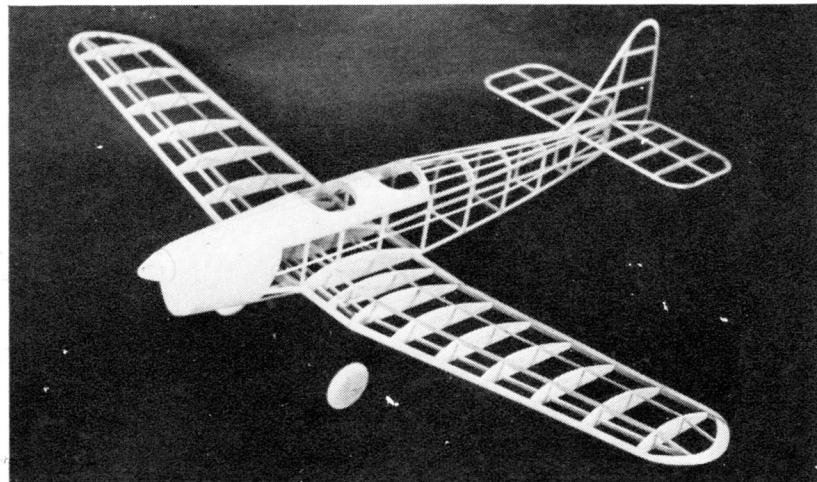
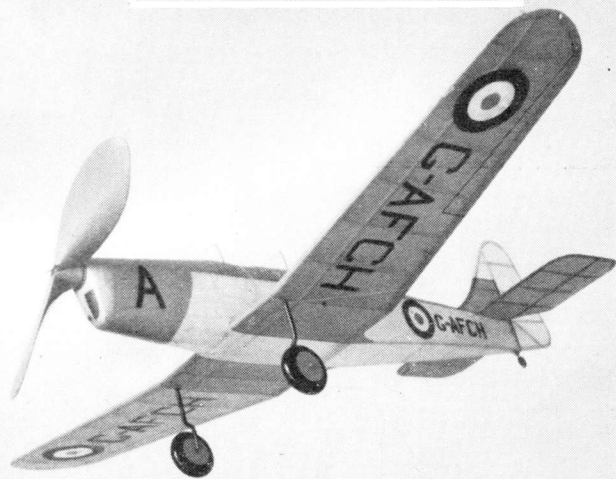
BUILD AND FLY THE MILES MAGISTER

**A low-wing scale model with
superior flying qualities**

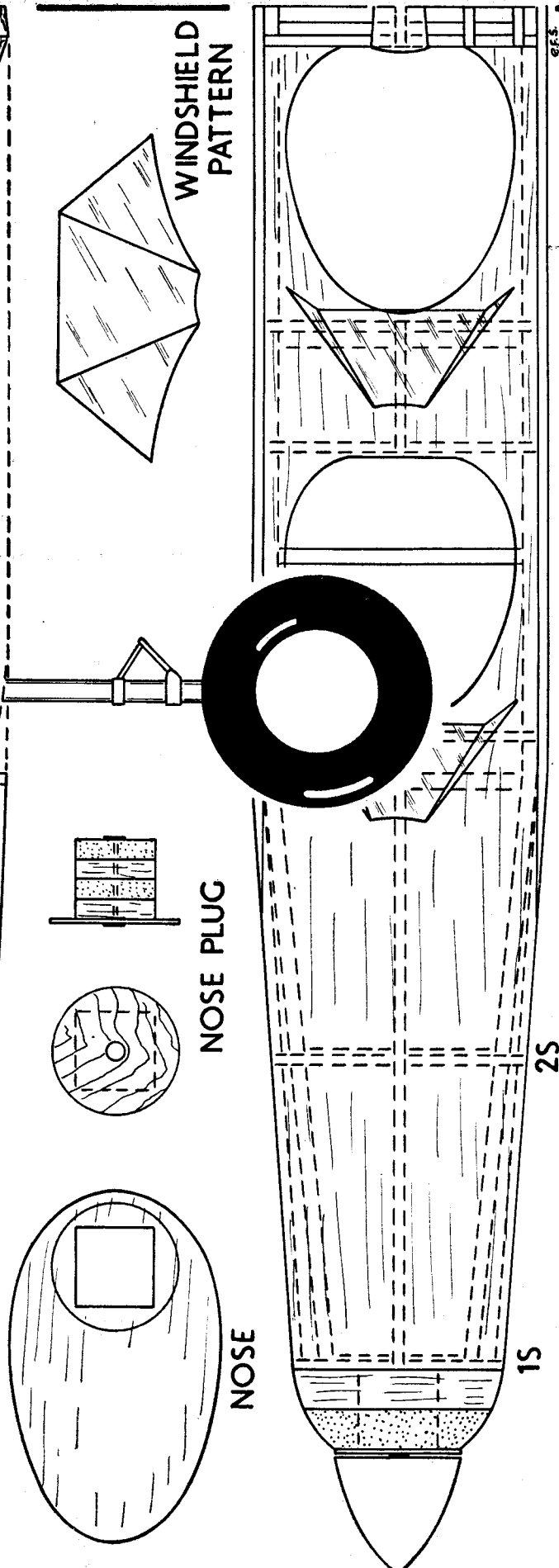
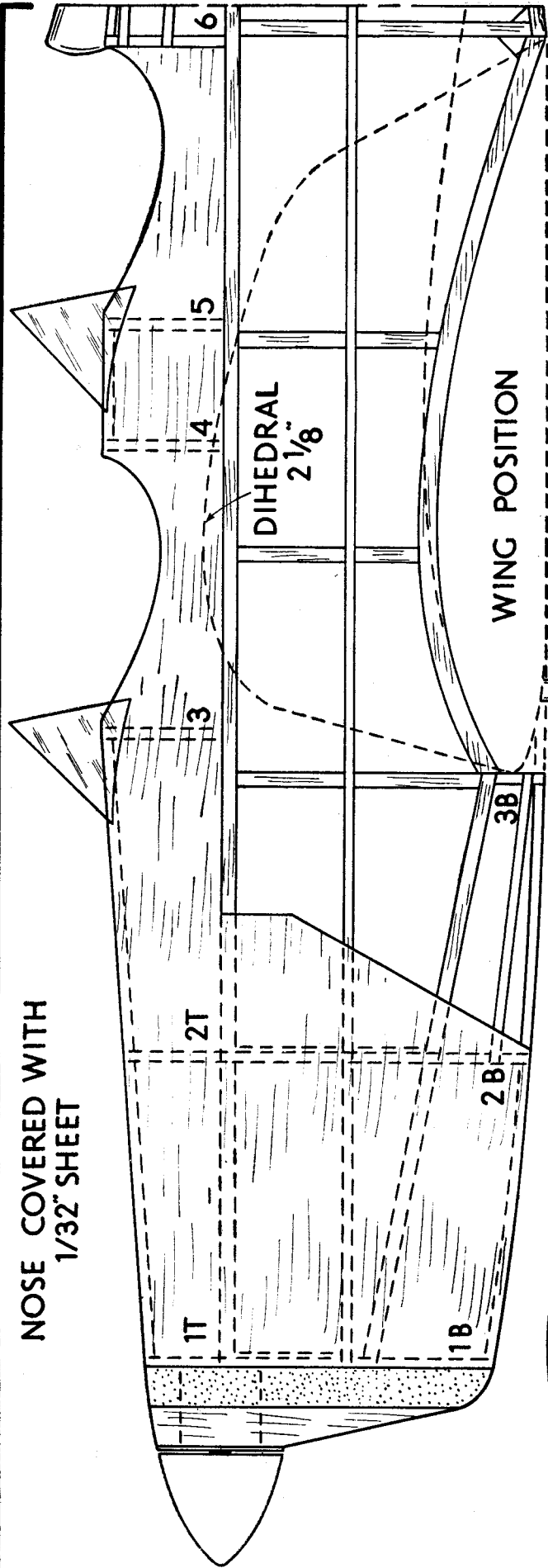
by **EARL STAHL**



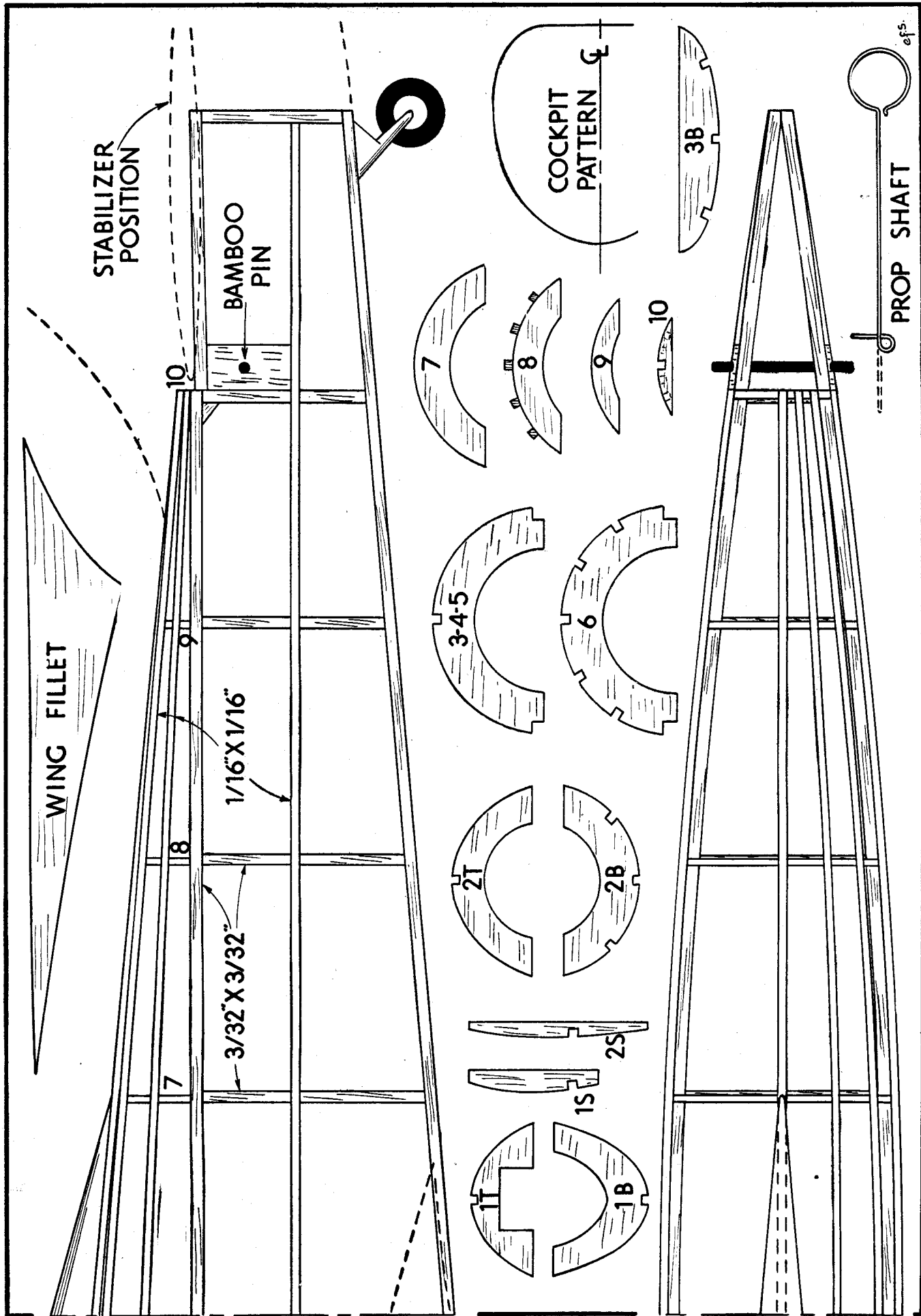
Realistic and graceful in flight as well as design, with neat super-light construction



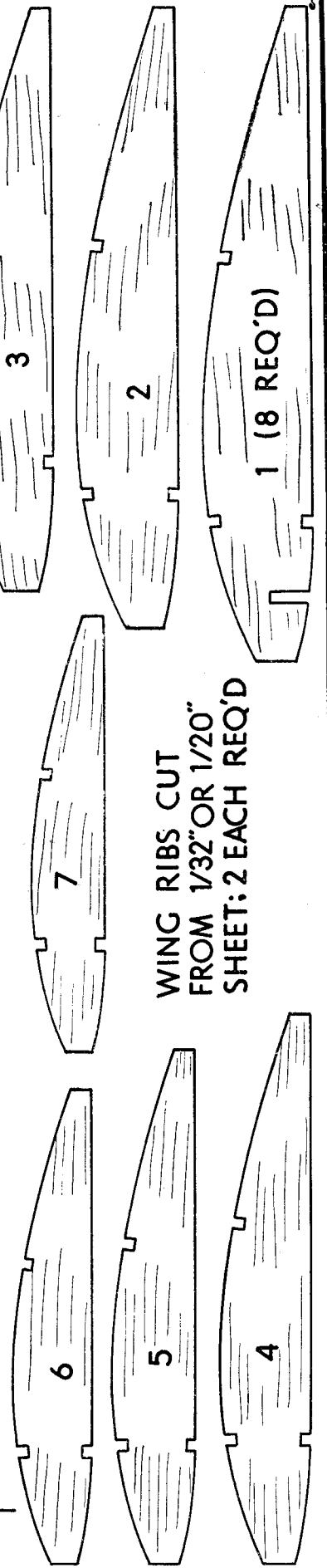
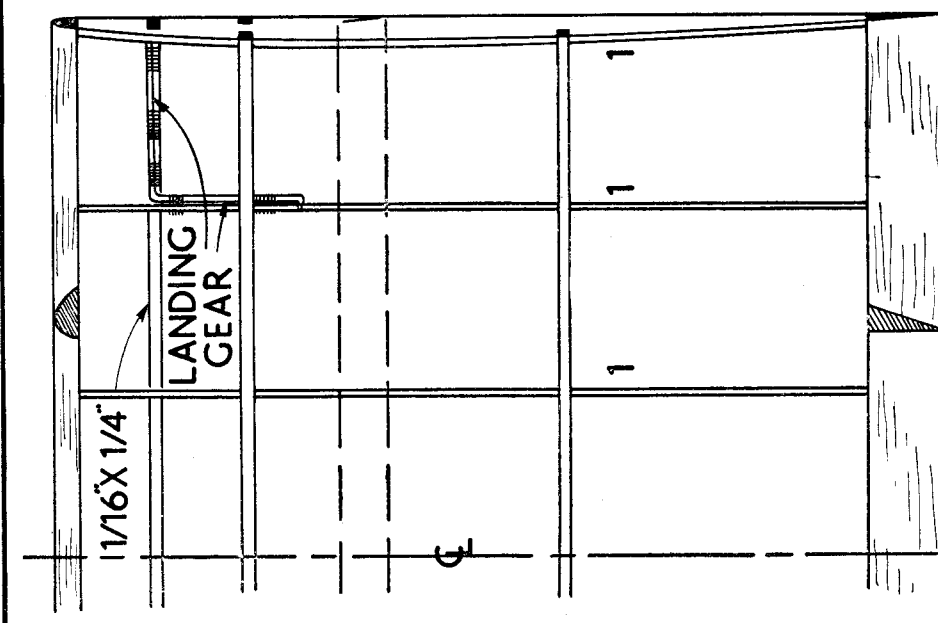
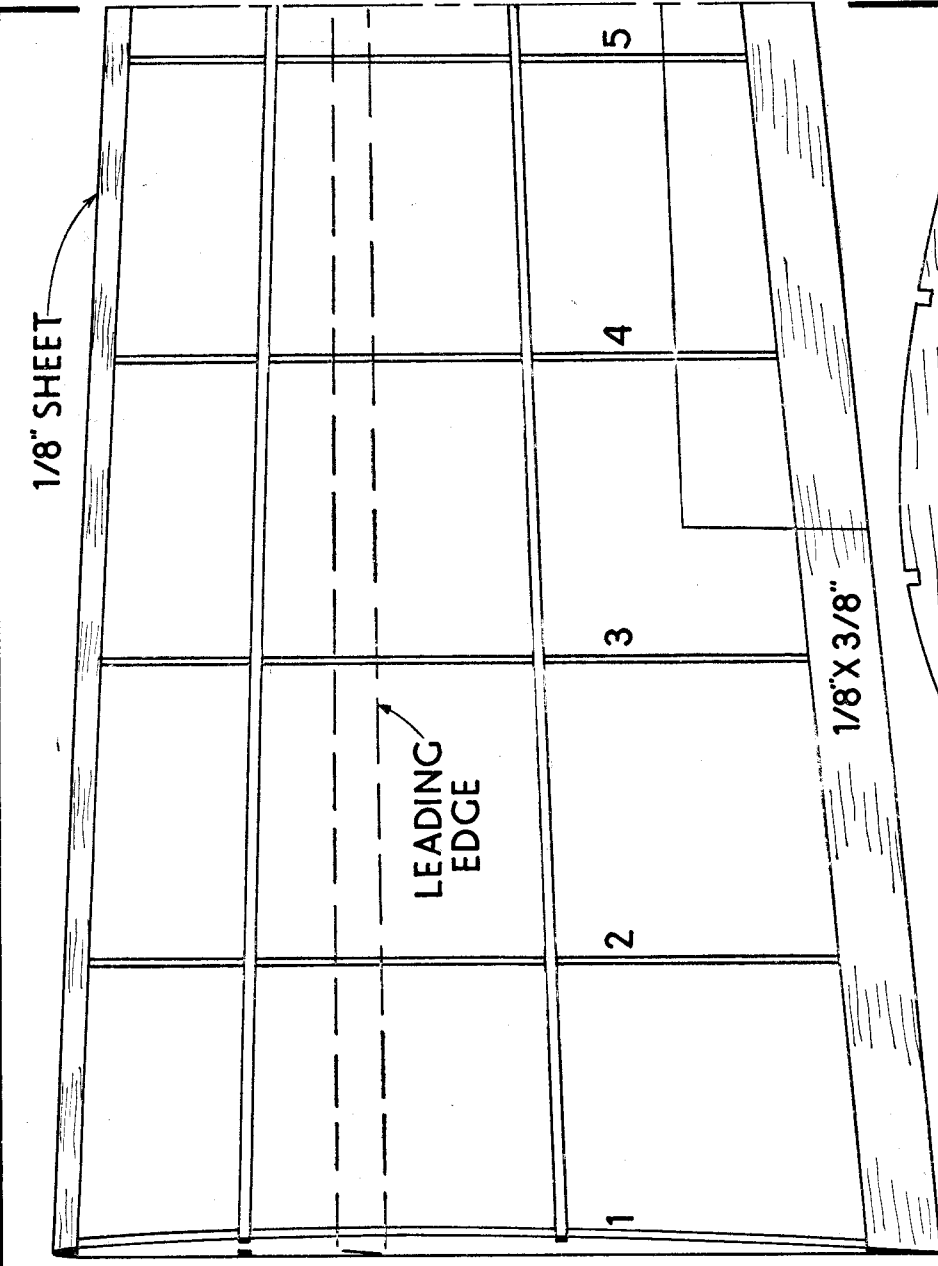
NOSE COVERED WITH
1/32" SHEET



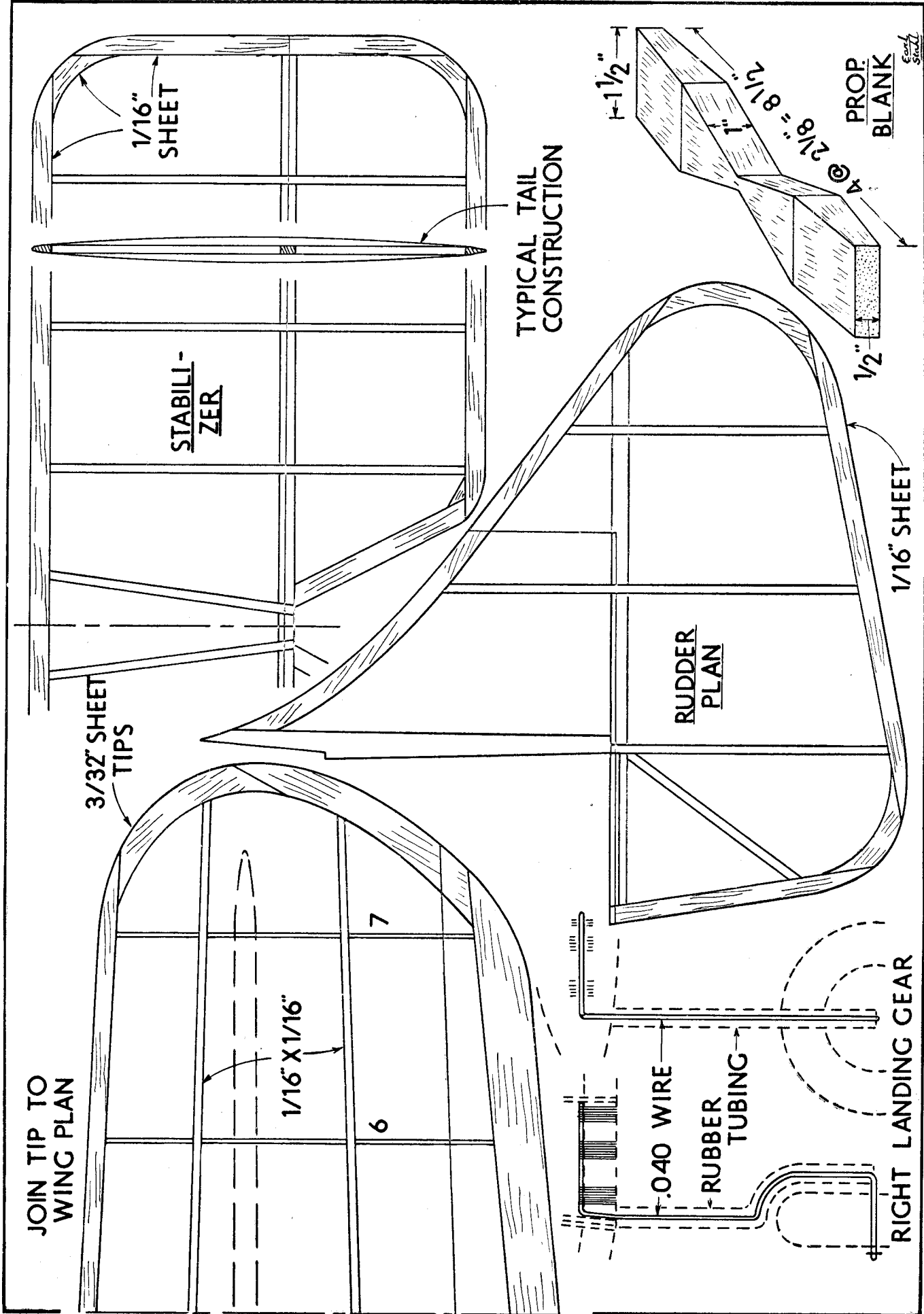
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PROP SHAFT



WING RIBS CUT
FROM 1/32" OR 1/20"
SHEET: 2 EACH REQ'D



Each Sheet