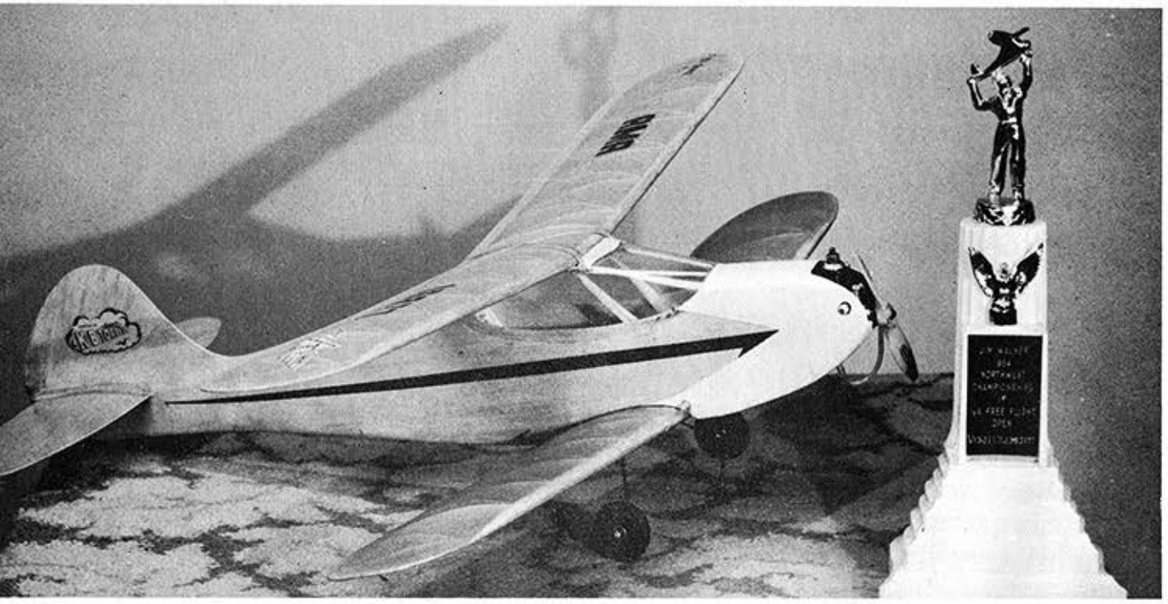
Bi-Gone • • •

It took more than luck for this clever little biplane to beat all the Half-A contest jobs at Jim Walker's Northwest Championships. And we're right proud to publish it.



Positive incidence in lower, forward staggered wing, first stalls out lift forward of CG. This makes plane tremendously stable, stall resistant.

by VERN CLEMENTS

▸ This biplane won first place in Half-A free flight at the Jim Walker Northwest Championships. Contest performance was not in mind when this ship was on the board. It was designed with the intention of being an everyday sport flier. It logged many hours in the air just cruising around in an enjoyable realistic manner powered by a K & B .035. The flying time piled up until the .035 was worn out. An .049 was then installed which resulted in a hot spiral climb indicating that a realistic design is capable of contest performance. After reaching high altitude, Bi-Gone demonstrated numerous times its ability to spiral tightly in a thermal even though non-thermal glide performance is not a floating glide. Idaho modelers were aware of this ship's ability to find thermals at a recent sport flying session where Bi-Gone caught more thermals than any other ship flown during the day, one of these flights being over 45 minutes.

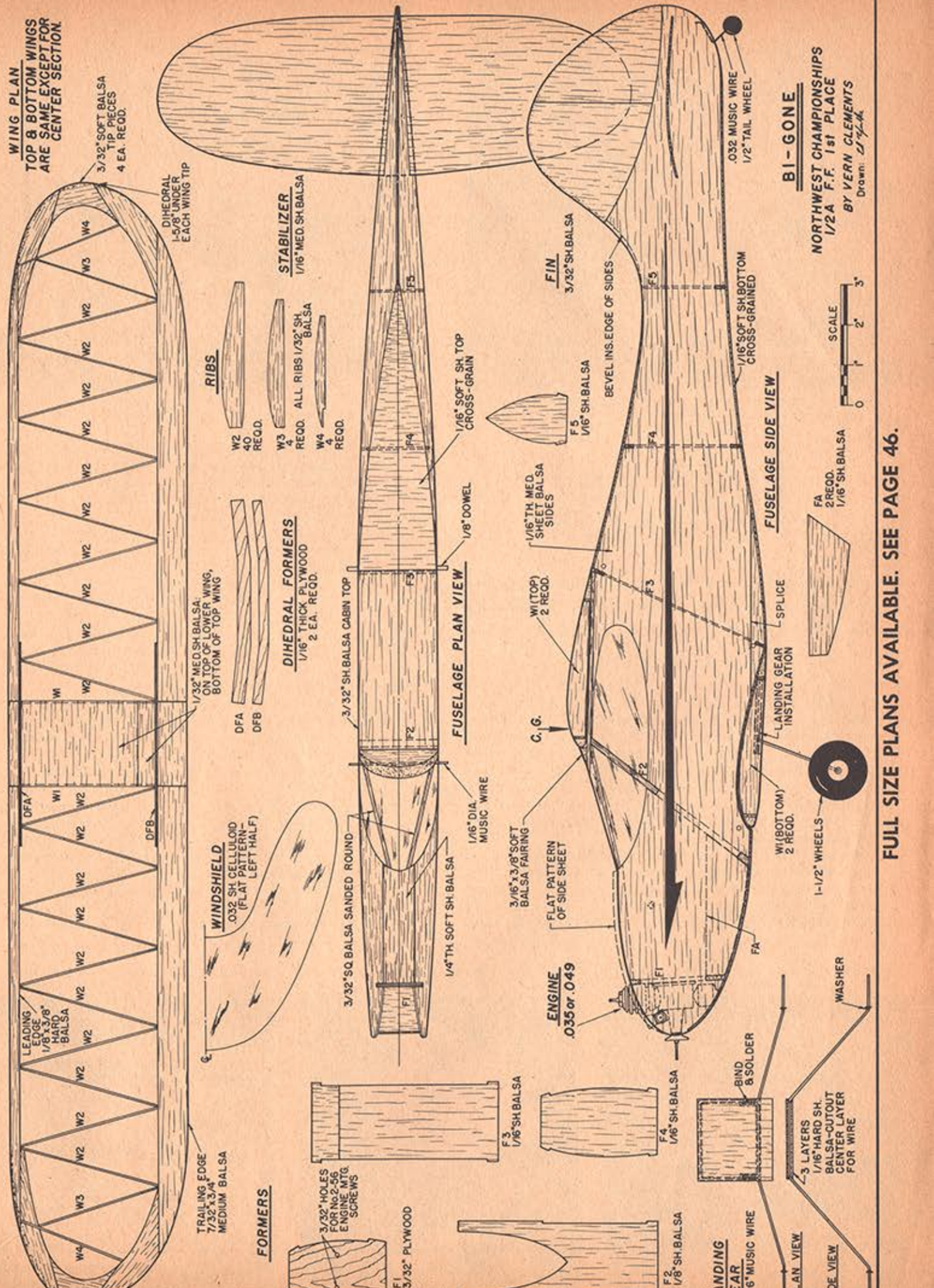
Bi-Gone was quite out of place at the Northwest Championships (with very few bipes seen at contests) and received many looks of astonishment from the modelers as it spiraled up at high speed with a snap recovery into a smooth glide path. Could it be that biplanes are not supposed to perform that well?

The main asset of this model is its consistent performance. Its geodetic wing ribs result in warp-free wing surfaces. The tail is cemented permanently in place so there is no chance of its getting bumped out of adjustment.

Your model should be constructed of lightweight (*Continued on page 36*)

Vern Clements, his thermal riding bipe.

Sheet balsa construction fairs in beautifully to take the fin. Both wings knock off in crack-ups.



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(*Continued from page* 14)

woods if you aim at contest performance. Fuselage sides are cut from medium soft balsa. Pin the sides together while cutting and sanding to outline so they will match and the bulkheads will line up properly in the notches. Bulkheads Nos. 2 and 3 should be cemented in place first. Wet outside of fuselage sides from bulkhead No. 4 to the stabilizer leading edge notch. Cement bulkheads Nos. 4 and 5 in place using a length of rubber wrapped around the fuselage at bulkhead No. 5 position. The rubber should be left in place several hours until the cement has set permanently. The motor mount nuts should be cemented to the back of the firewall so that thrust adjustments can be easily made on the flying field. The fuselage nose doublers and nose top filler sheet can now be cemented in place. A dethermalizer hatch door in the fuselage bottom is recommended. It may be operated by a lightweight Elmic timer or dethermalizer fuse which will allow the hatch door to drop open and release a 'chute attached to the tail with a light cord. A fuse-operated 'chute will add very little weight.

If you plan to carve the wing trailing edges yourself, it will be easier to carve and sand them before building the wings. The leading edges may be carved after the wing panels are built since the geodetic ribs allow carving and sanding without damaging the structure. Let the wing panels dry well before removing from the plans. This will give warp-free surfaces.

The landing gear is cemented in the lower wing center section. The position shown on the plans was proven best after experimenting with several gears mounted on bulkhead No. 2 which resulted in ground looping. The landing gear as shown gives successful take-offs.

The wing covering should be colored Japanese tissue or rubber model Silkspan. Three or four coats of clear Aerogloss will give a lightweight finish. A lightweight finish for the fuselage and tail can be obtained with one coat of Aerogloss clear mixed with talcum powder and sanded with fine sandpaper followed by three coats of Aerogloss Transparent Color dope. If desired the fuselage may be finished by covering with fine colored tissue followed by three coats of clear fuelproof dope. The original Bi-Gone had a heavy finish since it was intended to be a sport model. It was covered with gas model Silkspan and given numerous coats of dope which resulted in a 7-1/2 oz. ship. No doubt your model will give higher flight times than the original if you use the lightweight covering and finish recommended.

Give your Bi-Gone right rudder and *slight* left engine thrust before attempting any test flights. After hand gliding, begin power flights with the prop mounted backward and a very rich needle valve setting. Under low power your ship should cruise in slow left turns. Observe the glide carefully making certain it glides in right-hand turns. Trim the glide angle as flat as possible, adding weight to the nose or tail if necessary. Do not change the glide adjustments once the glide is perfected; the correct power pattern is obtained by engine thrust adjustments. Use more power on each flight, making sure your ship climbs in left-hand spirals (opposite of the glide turn). Any tendency to loop under power can be corrected by more left thrust or downthrust if necessary. The above left-right flight pattern is definitely recommended for successful flights. With this set-up your ship will consistently fly the same way each time. The right rudder adjustment keeps the nose up while climbing in left spirals.

A hot .049 or .051 hauls this little biplane upstairs in a hurry so remember to set the dethermalizer or your Bi-Gone may be gone forever. END