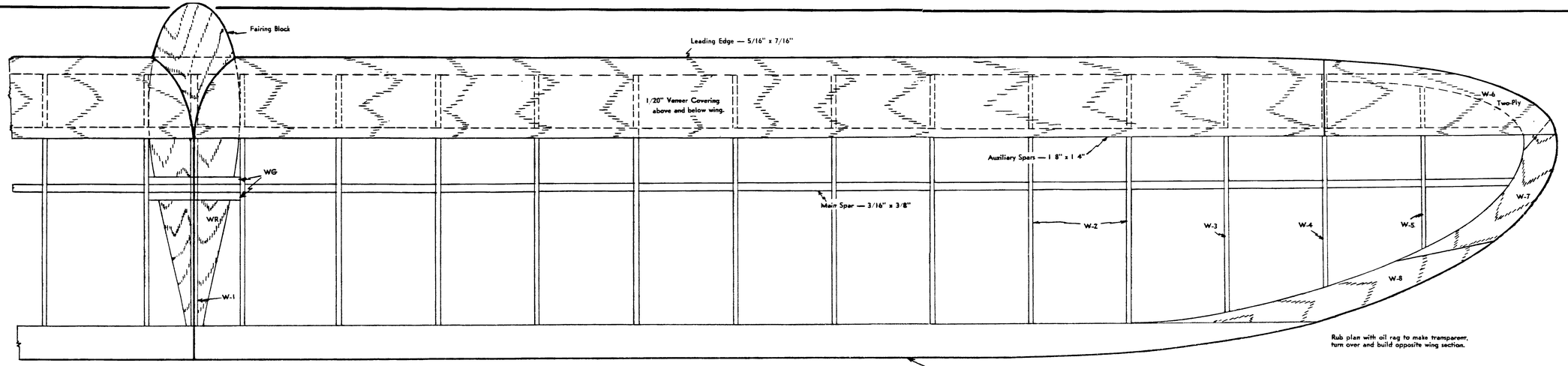
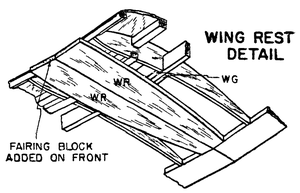
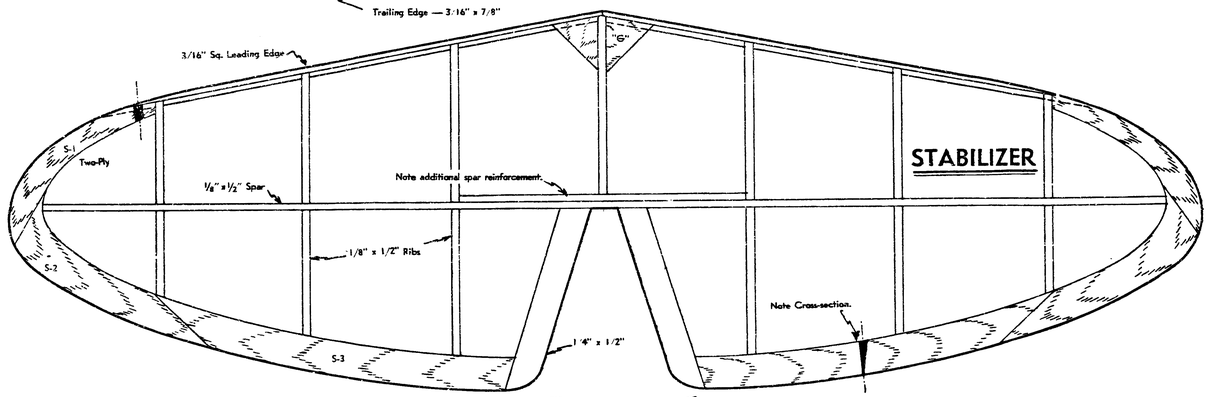


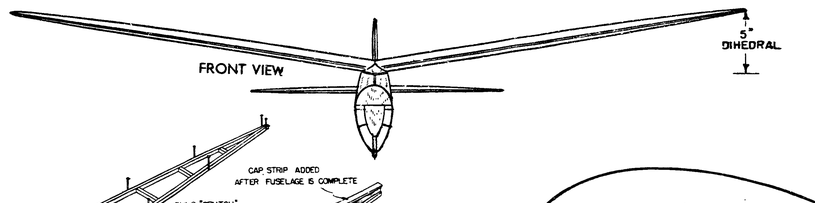


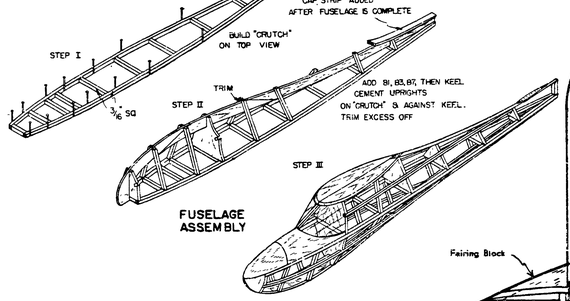
WING

Right Wing Panel Layout.

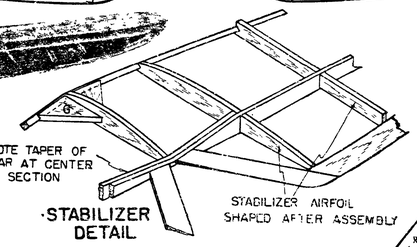


STABILIZER

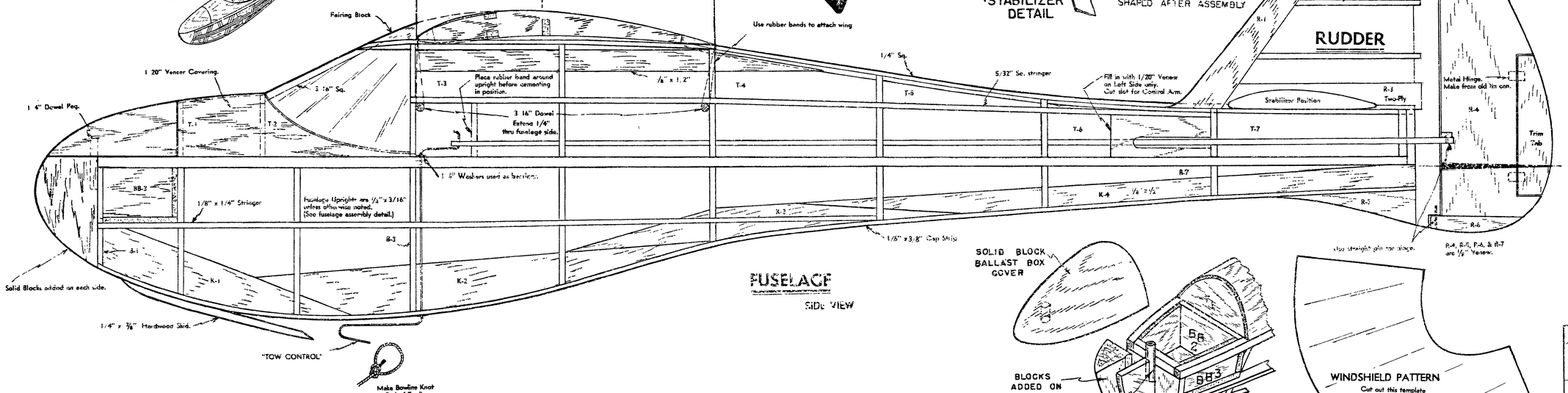




FUSELAGE ASSEMBLY

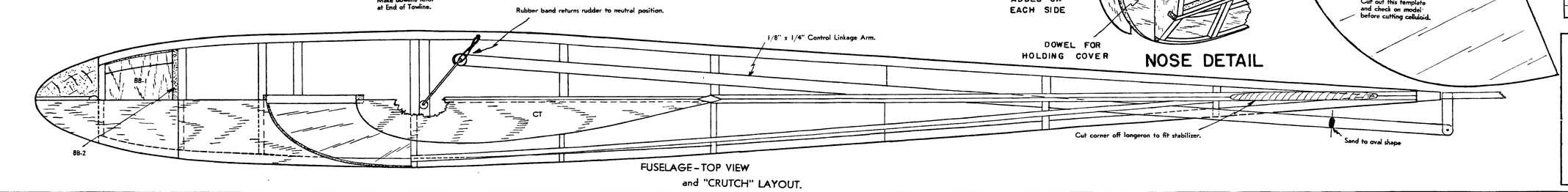


STABILIZER DETAIL



FUSELAGE
SIDE VIEW

NOSE DETAIL



FUSELAGE – TOP VIEW and "CRUTCH" LAYOUT.

DIRECTIONS FOR BUILDING AND FLYING

DIRECTIONS FOR BUILDING AND FLYING

The "Super-Sinbad" has all the characteristics that are desireable in a towline glider. By using the "Tow-Control", maximum altitude can be safely and easily attained without sacrificing the soaring abilities of the glider. "Tow-Control" permits you to steer the model into position for maximum duration before freeing the model.

FUSELAGE

The basic frame or "crutch" of the fuselage is built up of 1/4" squares. Pin the longerons to the top view of the plans and insert the crosspieces. (Step 1). The keel pieces are then cut from the printed sheet and cemented together using the side view plan as a guide.

It is not necessary to remove the crutch to proceed with the fuselage construction. Add formers B1, B3, and B7 to the crutch. Now remove the keel from the side view and cement it in place on the crutch. The 1/8" x 3/16" uprights are cut to approximate lengths and are cemented to the crutch and against the keel. When the cement has dried, the uprights are trimmed to the correct size. A 1/8" x 3/8" cap strip is added to the keel after the rest of the fuselage has been completed. (Step 2).

After removing the crutch from the plan form "Tow Control" mechanism from .040 Music Wire. Note that the wire runs thru the cap strip and alongside of K-2. An additional 1/8" x 1/4" cross-brace is used at the crutch to hold the "Tow-Control" in position. Use 1/4" O.D. washers as bearings. (Note: It is best not to cement the 1/8" x 1/4" cross-brace in position until the "Tow Control" is completely formed. This will facilitate bending of the wire form.) Note angle at which wire form is bent inside fuselage. Use a small round nose pliers for all bending. Add the remaining fuselage formers. The cabin top (CT) and then the 1/4" sq. top stringer are cemented in place.

Cement the remaining stringers in place and cover T-1 and T-2 with sheet veneer. The ballast box pieces are cemented in place in the order that they are numbered. The cover block is cemented lightly to the frame so that after it has been shaped it can be removed. The other blocks are cemented permanently to the fuselage, shaped roughly with a knife, and sanded. Cement dowels across T3 and T4 on which rubber bands for holding the wing can be attached.

WINGS AND TAIL

Remove the ribs and wing tips from the die cut sheet. Cement the tip sections together and to the trailing edges. The trailing edges are shaped with a knife to a triangular cross section and then pinned in place. The front of the trailing edge is propped up, when assembling, with 1/32" scraps or cardboard slivers to obtain the proper airfoil sections. Insert the tip and center ribs and pin the leading edge against them. Then add the remaining ribs and spars. When the right half of the wing has been completed and removed from the plan, the left half is built on the opposite side of the plan. By rubbing the plan with an oil rag, it will make it more transparent.

The two completed halves are then cemented together with the proper amount of dihedral. The gussets, veneer covering on the top and bottom of the wing, and the wing rest (WR) are added in that order. Check the alignment of the surfaces carefully to avoid warps. Finish the frames with successively finer grades of sandpaper.

The elevator construction is similar to the wing except that the ribs are shaped with a knife and sandpaper after the stabilizer has been assembled.

RUDDER

The rudder outline is cut from the printed sheet and cemented together on the plan. The veneer section of the rudder is sanded to a cross section as indicated. The trim tab is cut out after R-4 has been sanded to the proper cross-section.

"TOW-CONTROL"

The control linkage arm is connected to the wire form and the rudder as shown. Small holes are punched in each of the top bulkheads for the control arm. The moveable rudder is attached with straight pins as hinges.

COVERING AND ASSEMBLY

Sandpaper the framework carefully to remove any bumps that might spoil the finished appearance. Don't permit the silkspan to stick to any of the uprights on the fuselage if a sleek appearance is desired. Cover the bottom of the wing before the top and dope the silkspan to the bottom of each rib or the airfoil will be spoiled. When covering, allow a little margin for overlapping. Spray the silkspan lightly with water and give it several coats of dope when dry. The stabilizer is cemented to the fuselage before the rudder. Cut away the top longeron to fit the elevator rib.

FLYING

Fill the ballast box with clay or any other suitable weight until the model balances and is horizontal when supported on each side of the wing at approximately the main spar. Check all control and flying surfaces for proper alignment.

Hand glide the model a few times until you adjust it for straight flight, using the trim tab.

Hand gliding a model is best done over tall grass. If the ship stalls badly, add more weight to the ballast box. If the model dives remove weight. If the diving tendency is severe, add small blocks of wood under the leading edge of the wing, 1/16" at a time.

Use only a 25-foot tow line on your first attempts.

Use a good grade of kite cord or heavy silk thread for towing. Tie a bowline knot in the end of the thread that slips over the tow-control. This type of knot will not tighten around the hook and will slide off easily, when the cord is slack.

With tow-control, a helper is not necessary. Simply let the model rest on the ground facing into the wind.

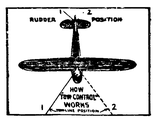
In most cases, only a short run will be necessary before the model will take off and begin to climb at an angle of about 30 degrees. During the take off, the tow-control will steer the model in a straight course. However, once the model is in the air, it is best pulled back on its course by releasing the tension on the tow-line momentarily and then jerking the line slightly. If the model gets too far off its course and approaches a vertical bank, let go of the tow line entirely. The chances are that the model will right itself. Before the next flight, check the wings for warp and twist them slightly to overcome the banking.

Once the model is vertically above you, release all tension on the line and it will fall from the hook. After a few flights, you can increase the length of the towline. A 100 foot towline is the maximum allowed in A.M.A. competition. However, Sinbads have been successfully flown using as much as 1500 feet of line. The length of line to use is determined by common sense, the size of the field, the wind and whether you want a long chase or not.

Remember, -- Successful model building is a fifty-fifty proposition. Building the model is only half the story. Flying it is the other half. Adjusting the model for maximum performance is an art that comes only with experience. The Super-Sinbad's rugged construction can withstand a few mistakes while you are learning.

SPECIFICATIONS

Wingspan....62 inches
Chord.....6-7/8 inches
Wing Area....600 sq. in
6 oz. minimum
Weight.....16 oz. maximum



SUPER-SINBAD

Towline Launched Glider with "Taw Contral".

Designed and Engineered by BILL EFFINGER

Mfg. by
BERKELEY MODELS, INC.
Brooklyn, New York U.S.A.