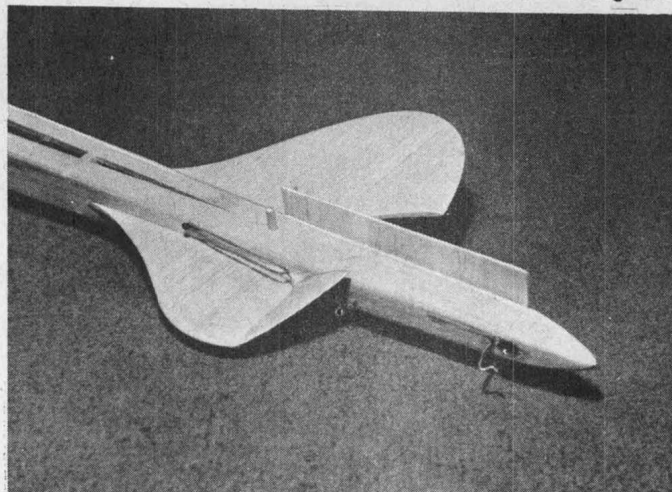


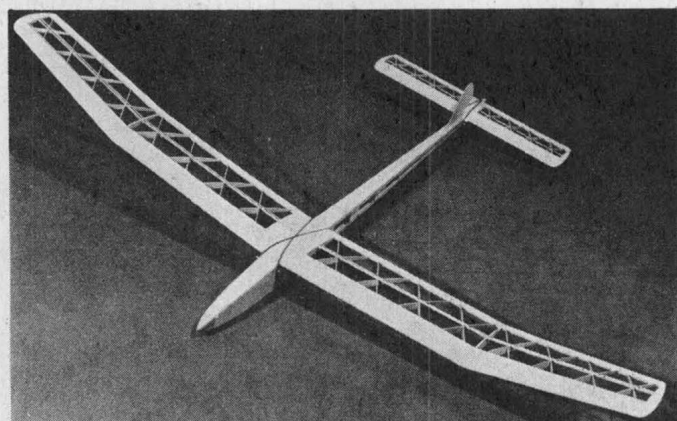
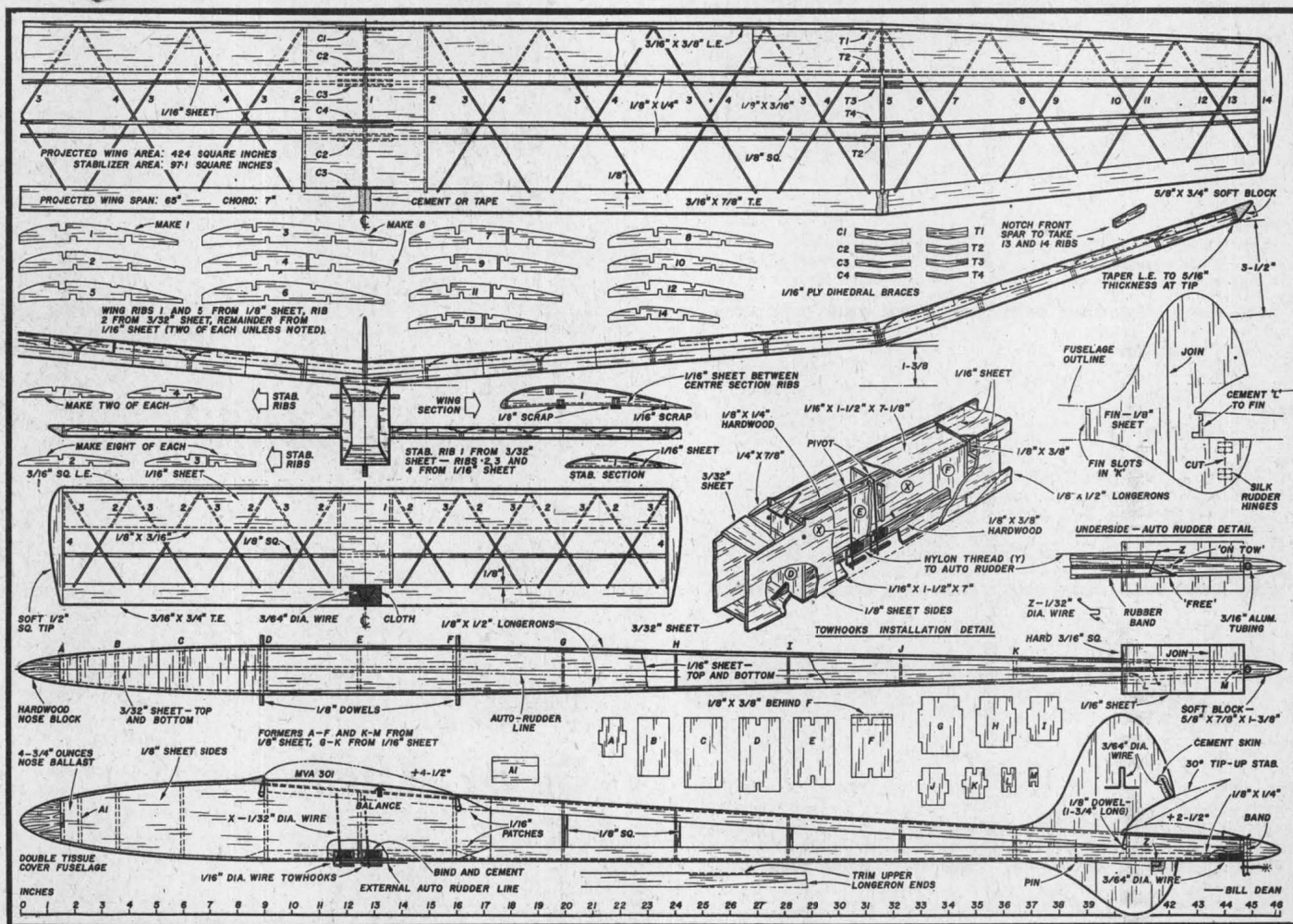
OVERSEAS GLIDER DESIGN

"EAGLE"
TOWLINER

By
BILL
DEAN



Underslung "auto-rudder" and the dethermalizer's rubber band tube show up well here. Rudder is flat on table in this photograph.



Uncovered framework weighs but 8½ oz.! Nose ballast of 4¼ ounces and tissue covering of 1¼ bring flying weight to 14½.

■ Latest in a series which started with the writer's *Chief* (S. African Nats winner and New Zealand record holder), the *Eagle* design was finalized after an extensive study of trends and field techniques, which culminated in a visit to the World Championships at Bled in Yugoslavia.

A rugged "all-weather" layout was considered essential, since the flimsy long-fuselage/small-stab types often come "unstuck" in anything but ideal conditions. Geodetic surfaces were used to eliminate trim changes occurring in damp or very hot weather—as well as for this structure's unbeatable strength/weight properties. The well-proved MVA 301 section was chosen for the wing, from both constructional and aerodynamic viewpoints. An ultra-simple fuse-



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| 11 | 3", 4", 5", 6" | | .35 |
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| 16 | 3", 4", 5", 6" | | .65 |
| 18 | 3", 4", 5", 6" | | .85 |
| 20 | 3", 4", 5", 6" | | 1.25 |
| 22 | 3", 4", 5", 6" | | 1.80 |
| 24 | 3", 4", 5", 6" | | 2.50 |

If you need a special "pitch" R.C. prop not shown on this chart or carried by your dealer, write me. Include name and address of your dealer — Tony Grish.

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• ↘ For engines up to 2-4 H. P.

• ↘ Made of the finest select hard wood.

Tornado
Propellers

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almost out of sight overhead *before* leaving the 164 ft. towline. Time was 3:35 and the only adjustments needed after this were a little stab L.E. packing and more rudder movement. Subsequent tests have shown that 2¼ minutes is an average figure for dawn or dusk flying, which makes this job a contest threat.

Even in near-calm conditions, a dead overhead cast-off is standard procedure —using the rear hook, close to the C.G. The climb is very steep, fast and arrow straight. There is no special technique to master, apart from taking care in casting off smoothly. In a good breeze, we tie the towline to our car, release the model as if it were a kite, then stroll back to twitch the line free.

Factors which contribute to the 100% towline stability are correct relationship of hook to C.G., adequate underslung fin area, *short* nose and that essential feature, a positive acting auto-rudder.

Bill of Materials

Hard Balsa: 2 pcs. 3/16" x 3/8" x 36" (wing L.E.), 4 pcs. 1/8" x 1/4" x 36" (wing spars).
Med. Hard Balsa: 3 pcs. 1/8" x 3/16" x 36" (wing and stab spars), 2 pcs. 3/16" x 1/8" x 36" (wing T.E.), 4 pcs. 1/8" x 1/2" x 36" (longerons), 3 pcs. 3/8" x 3/8" x 36" (wing and stab spars), 1 pc. 3/16" x 3/16" x 36" (stab L.E.)
Med. Balsa: 1 pc. 3/16" x 3/4" x 36" (stab T.E.), 4 pcs. 1/16" x 3" x 36" (L.E. sheeting, fuselage sheeting, ribs, bulkheads and stab mount), 1 pc. 3/32" x 3" x 36" (fuselage sheeting and ribs), 2 pcs. 1/8" x 3" x 36" (fuselage sides, bulkheads, ribs and fin).
Med. Soft Balsa: 1 pc. 3/8" x 3/4" x 12" (wing tips), 1 pc. 1/2" x 1/2" x 9" (stab tips), 1 pc. 3/8" x 3/4" x 2" (tail fairing).

Remainders: 1 pc. 1/16" x 3" x 3" ply (dihedral braces), 1 pc. 1/8" x 1/4" x 12" hardwood (auto-rudder part), 1 pc. 1/8" x 1 5/8" hardwood (nose block), 1 pc. 1/8" dia. x 12" dowel (wing and stab. fixing), 1 pc. 3/16" dia. x 1" alum. tube (D/T detail), 1 pc. .048 x 12" piano wire, 1 pc. 1/16" x 12" piano wire, 4 sheets medium weight tissue, 1/2 pint clear dope, cement, thread, nose weight.

"Eagle" Towliner

lage was worked out and the frontal area kept to a minimum. Main data was: span 65", length 46", tail moment 3½ wing chords, total projected area 521 sq. in. (22.9% stab) and the weight is 14 5/8 ounces.

The first towed flight was made in heavy early morning mist with the model

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