WRIGHT FLYER NO. 3

A Peanut Design by Thomas Wielecki

NOTE: ALL CONSTRUCTION IS 1/32 LIGHT BALSA EXCEPT AS NOTED

POSITIONS OF 1/32x1/20 INTERPLANE STRUTS (TOTAL OF 12)

POSITION OF RUBBER HOOKS

DUMMY ENGINE

1/32 SQ. HARD BALSA

1/16" DIA. BALSA

1/16x1/8 MEDIUM HARD BALSA

1/32 LIGHT BALSA FILLETS, TOP AND BOTTOM WINGS

WHEN VIEWED FROM REAR, LEFT-HAND PROP ROTATES COUNTERCLOCKWISE, RIGHT-HAND PROP ROTATES CLOCKWISE

TRUE PROP BLADE SHAPE

1/32 SHEET BALSA SANDED DOWN TO "ALMOST NOTHING," FORMED OVER A BEVERAGE CAN AT 30° OFF VERTICAL; 4 REQUIRED, 2 LEFT-HAND, 2 RIGHT-HAND ROTATION

THRUSTLINE ADJUSTER DETAIL

1/16" I.D. ALUM. TUBE, 1/4" LG.

1/16" O.D. ALUM. TUBE, 1/16" LG.

CA PARTS TOGETHER AT 90°

RUBBER HOOK

+2°

DUMMY ENGINE

CG

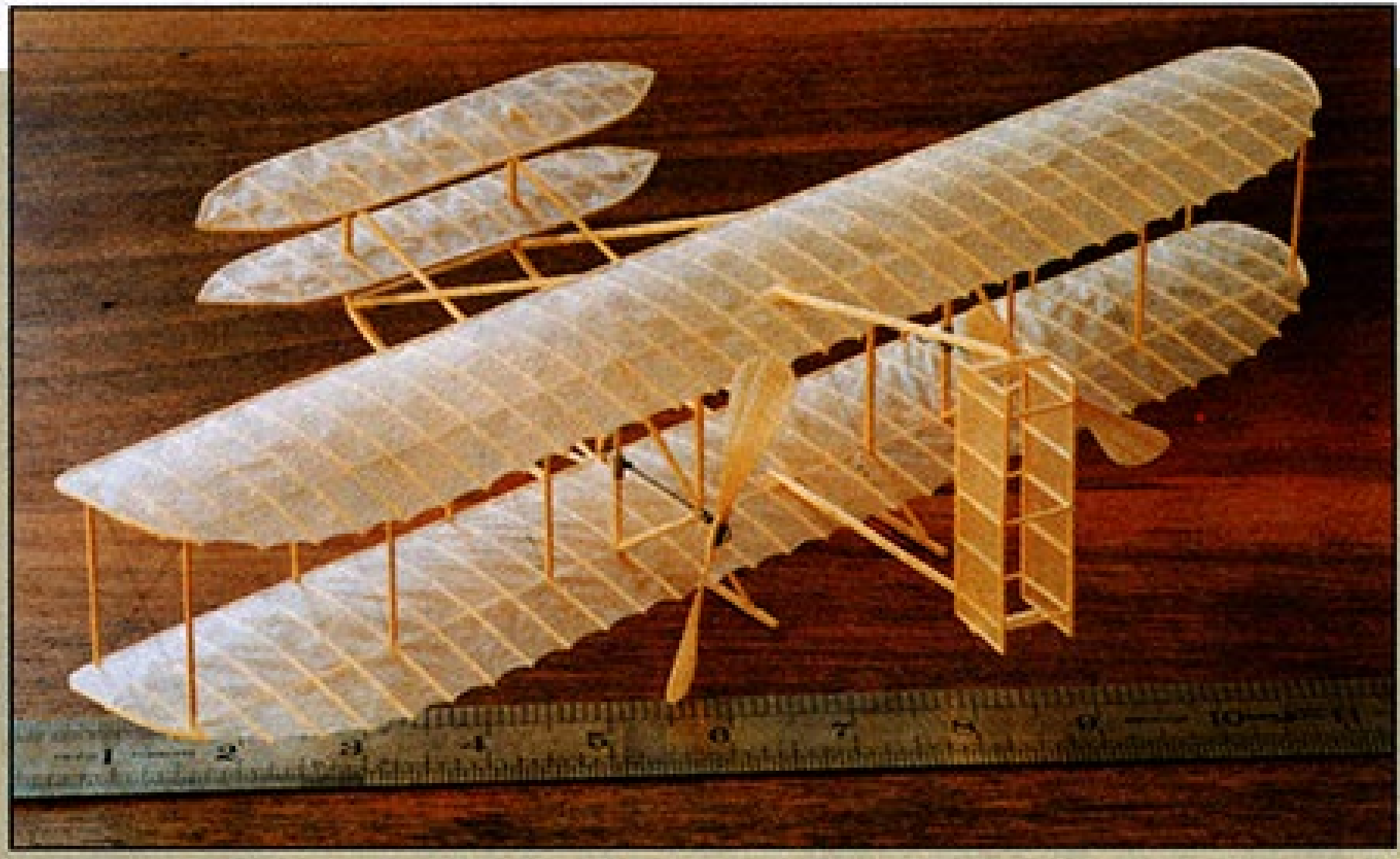
THRUSTLINE ADJUSTER

1/16" DIA. BALSA

SKIDS LAMINATED FROM 2 PIECES 1/32x1/16

POSITIONS OF 1/32 SQ. CROSS-MEMBERS (TOTAL OF 6)

CROSS-PIECES (A) ARE 1/32 SQUARE; DIAGONALS (B), (C) AND (D) ARE 1/32x1/16

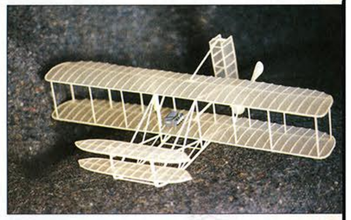


We'd bet that Australian modeler Thomas Wielecki never fails to draw a crowd whenever he brings out his Peanut scale Wright Flyer II, an unlikely subject for a successful FF model but which has turned in a very creditable best time to date of 22 seconds indoors. According to Thomas, "Although the model looks complicated, it is very simple to build. Details such as scale rib spacing, functional rigging, twin pusher props and biplane canards make the model stand out from conventional designs." Stay tuned—we've asked Thomas for a construction article. *Thomas Wielecki, 4 Princess Ave., Rosebery N.S.W. 2018, Australia.*

THE WRIGHT FLYER NO. 3

Ready for a *real* challenge? Tackle this Peanut replica of the Wrights' 1905 flying machine. Structure is actually quite simple, but requires a delicate touch in both building and flight trimming.

BY THOMAS WIELECKI



On December 17, 1903, world history was made when the Wright brothers' Flyer took to the air for a brief and erratic 12 seconds. Away from the prying eyes of the press and mobs of onlookers, the first controlled powered flight was made over the sands of Kitty Hawk, North Carolina.

Although only four brief flights were made that day, it was enough for the Wrights to conclude that they could improve on their design. Flyer No. 2 featured a more powerful engine and slightly longer moments to improve stability.

Still showing a tendency to stall when turned sharply, there was room for improvement. Thus was born Flyer No. 3. With more efficient propellers, a more powerful engine (17 horsepower instead of the original 12) and lengthened moments, it is generally regarded as the world's first completely practical airplane. This aircraft achieved a record flight time of 38 minutes 3 seconds before being retired to make room for the further improved Flyer Model A, which was a stepping stone into the world of popular aviation.

I've always been fascinated by the Wright Flyer, and discovered that a flying model was possible only when I actually began construction. Of all the Flyers, I chose No. 3 because of its long moments and also its historic significance.

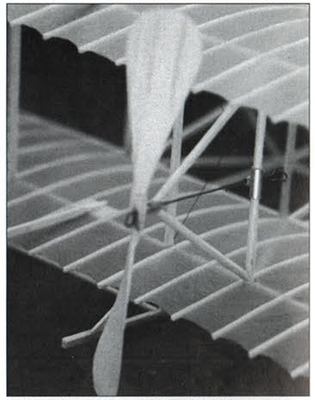
CONSTRUCTION

I always begin by cutting out the wing ribs. It's simply a case of getting over the monotonous stuff first, and into the fun bit second.

Luckily enough, all of the 68 (!) ribs are just sliced out of light 1/32 balsa, using a plywood template. With the pile of ribs on hand, take two lengths of 1/32 square for the leading edge and main spar and tape them down over the plans at either end. With both strips held in position, glue on the ribs. The wingtips can either be laminated or the rounded corners cut from 1/32 sheet.

Now that you've got your wings, set them aside and use the same procedure for the stabilizers. With the rounded tips, simply trim the two outer ribs to length and bend

continued on page 79



Thrustline adjuster details. Each prop shaft is supported both at the prop and at the vertical member of the prop shaft A-frame, the latter by means of a right-angle bracket made of aluminum tubing. This bracket is a snug fit on the round balsa strut and can be moved up and down to fine-tune the thrust angle. Neat idea, eh?