

# Build this TAILLESS TOW LINE Glider

By: JAY T. HOLMES

Tips are "washed out" to produce the necessary longitudinal stability.



**Learn why the flying wing is looked upon as the airplane of tomorrow by building this 44-inch all-wing glider. Its performance will amaze you.**

**T**HIS model is the most recent of a series of seven tailless tow line or flying wing glider designs. An ideal project for beginners because of its extreme simplicity of construction and small material cost and maintenance, the model can be built in a few hours spare time.

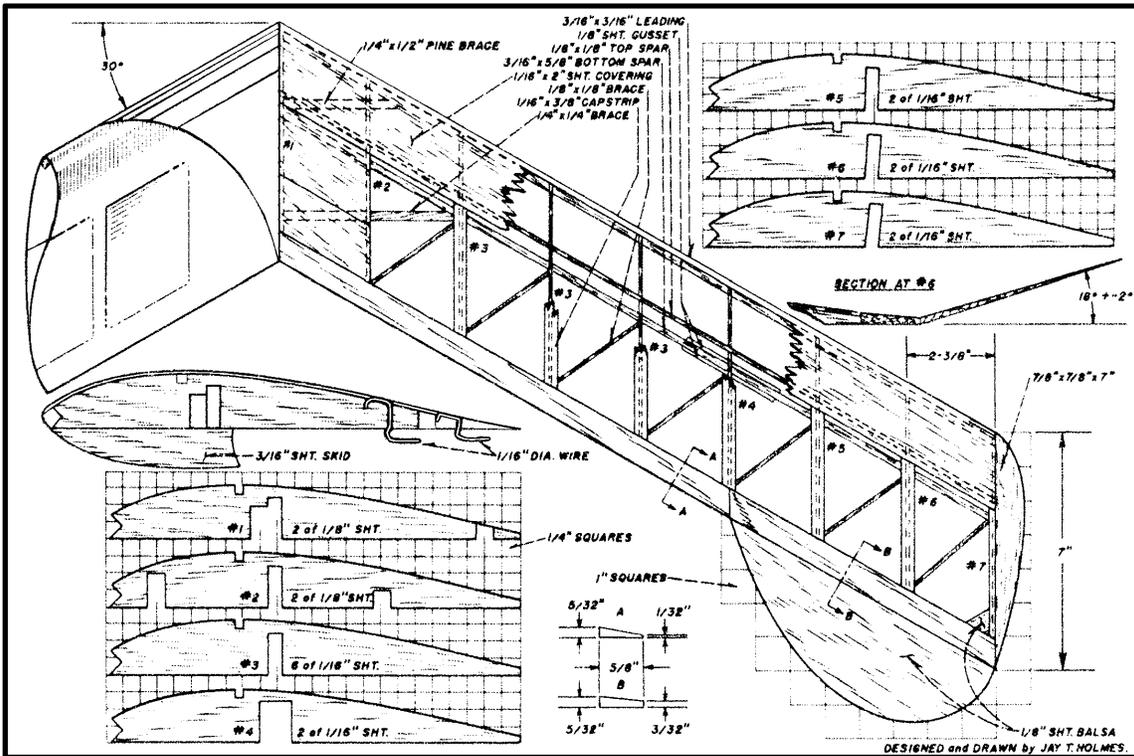
Start construction by scaling up the plans to full size on tracing paper. Rather than draw two separate wing halves, once the right wing panel is complete, turn the plan over and proceed to construct the left panel. The wing outline will show through the tracing paper. In making the separate wing halves, first pin the trailing edge and the main spar in place. Cement the ribs in their respective position and then attach the leading edge and top spar.

Next, cut the trailing edge wing tips from 1/8 in. sheet balsa and cover both sides with Silkspan tissue. Once the framework of both panels is complete, pin the wing halves to a flat board and **raise the trailing edge at rib No. 7 - 23/32 in. (6°)**. Allow the structure to remain pinned to the board and apply additional cement to each joint to soften up the original cement and reset the wing joint so the twist will be permanent. After re-



The glider is inexpensive yet very educational.

*Mechanix Illustrated*

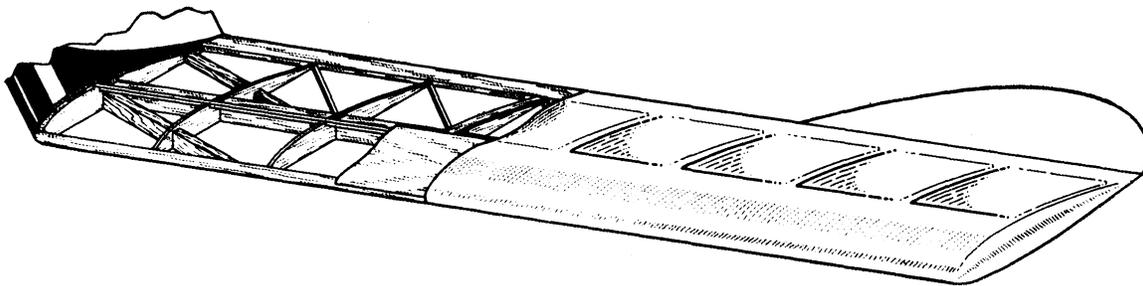


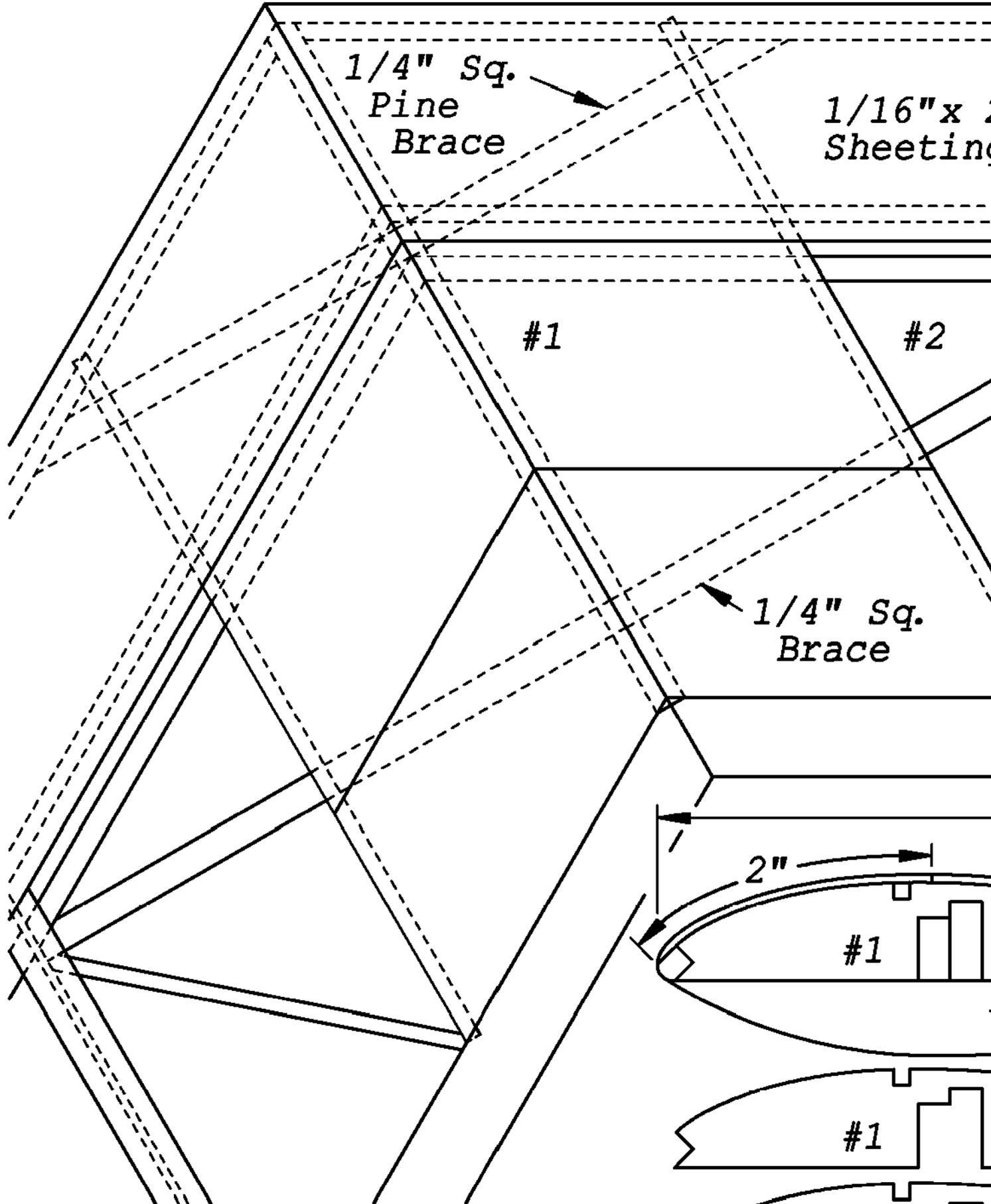
moving the panels from the board, cement the 3/32 in. sheet balsa trailing edge tip in place at an angle of approximately 18 degrees. The twist of the wing plus the flared-up trailing edge sections will provide the necessary longitudinal stability. Join both wing halves together by cementing the pine center section braces in their indicated position. Note the wing does not have any dihedral. After the center section braces are secure, the 1/16 in.

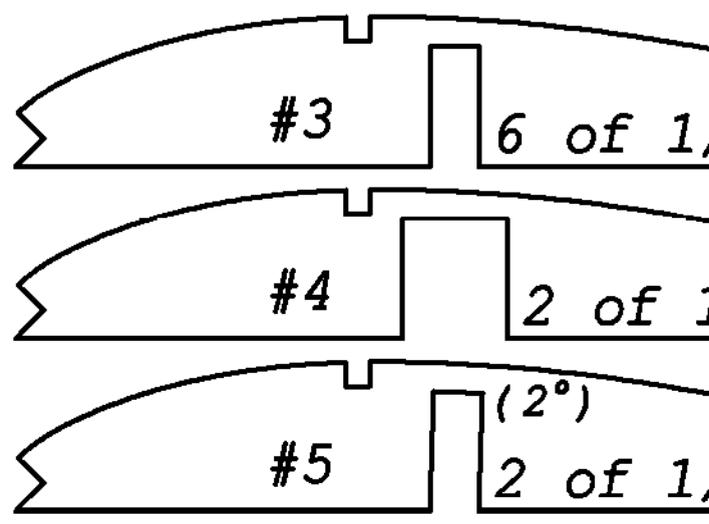
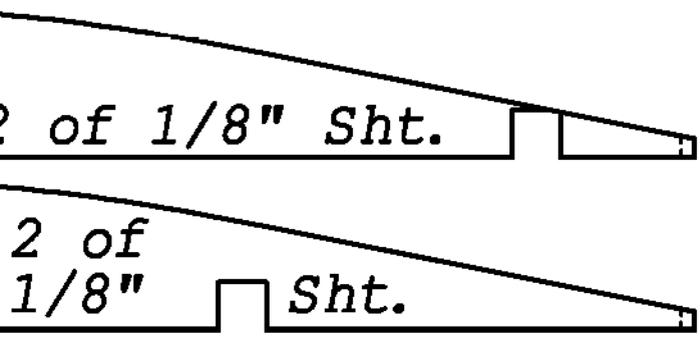
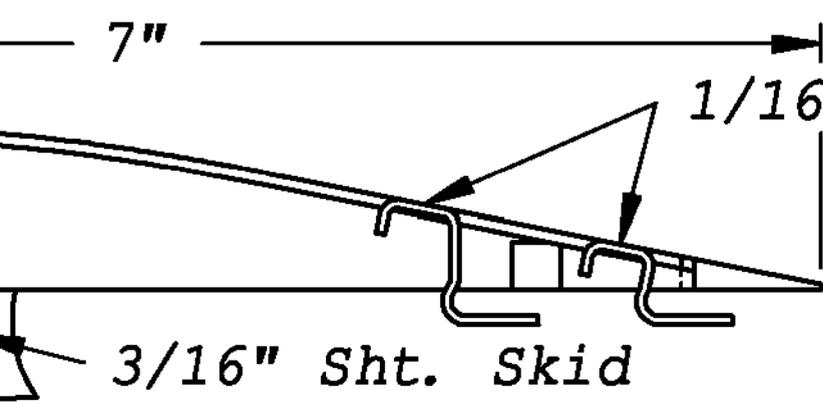
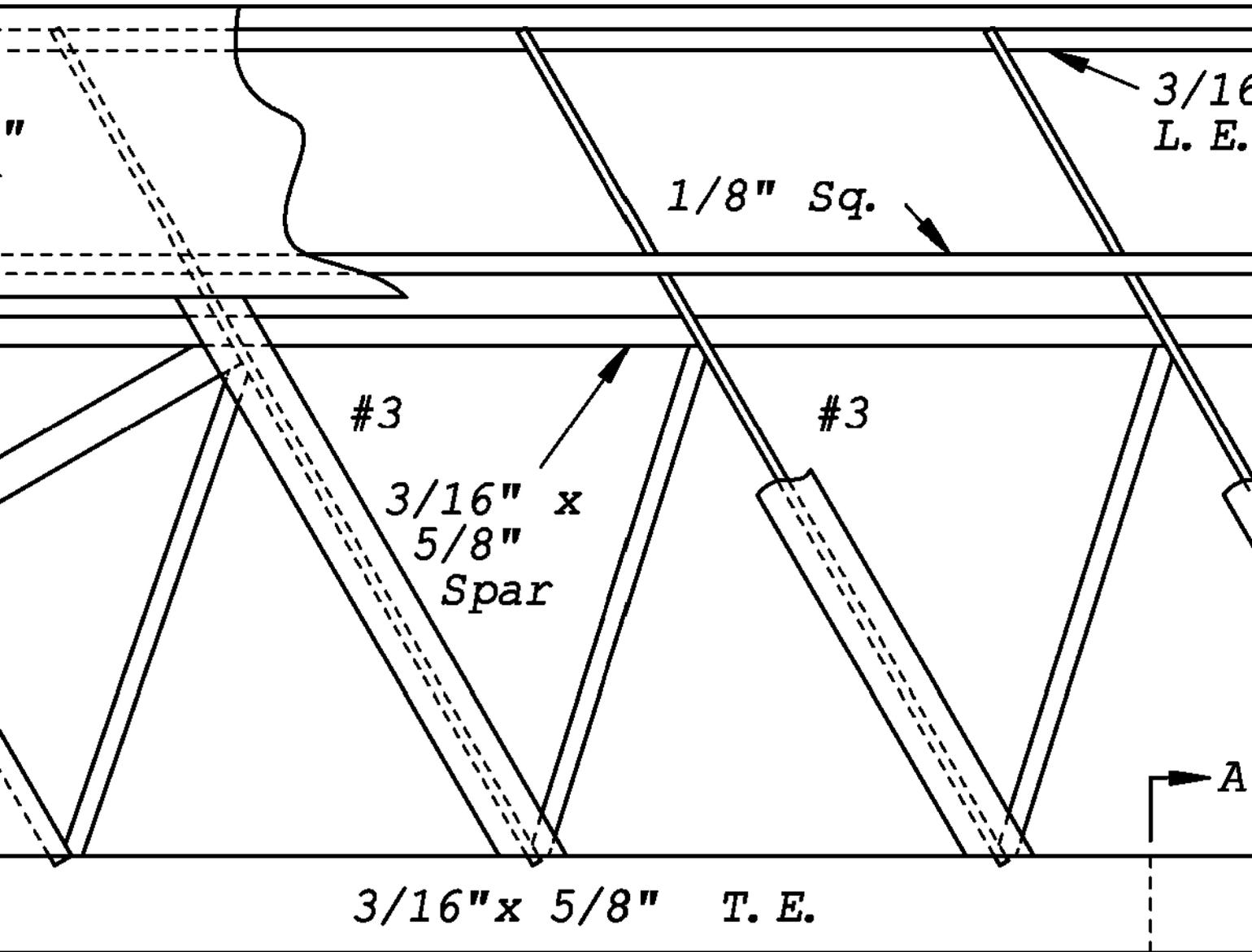
diameter piano wire launching hooks are anchored to the center rib. Now add the 1/16 in. thick flexible sheet covering to the upper and lower leading edge surface and carefully sandpaper the entire wing to smoothen any possible protruding joints. Cover the surface with Silkspan, spray it with water, and after the covering is taut, apply three coats of dope.

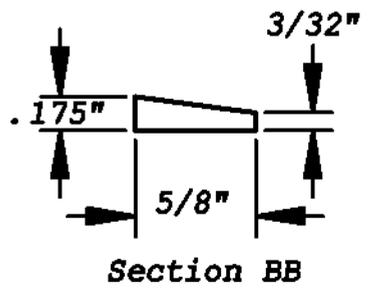
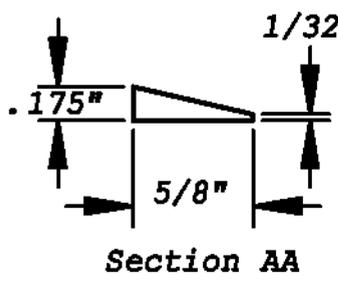
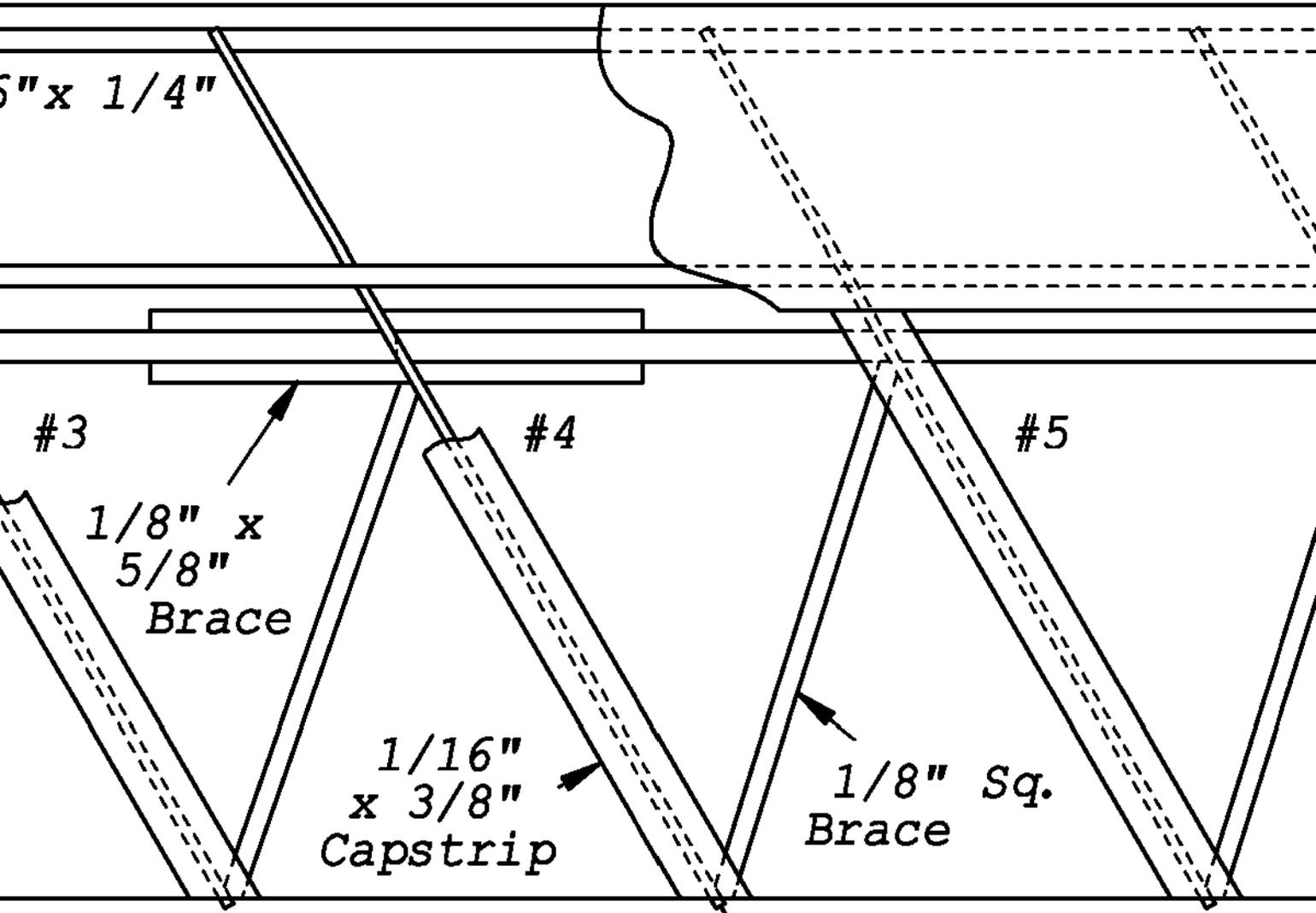
Balance the job by adding clay to the nose until long smooth glide results.

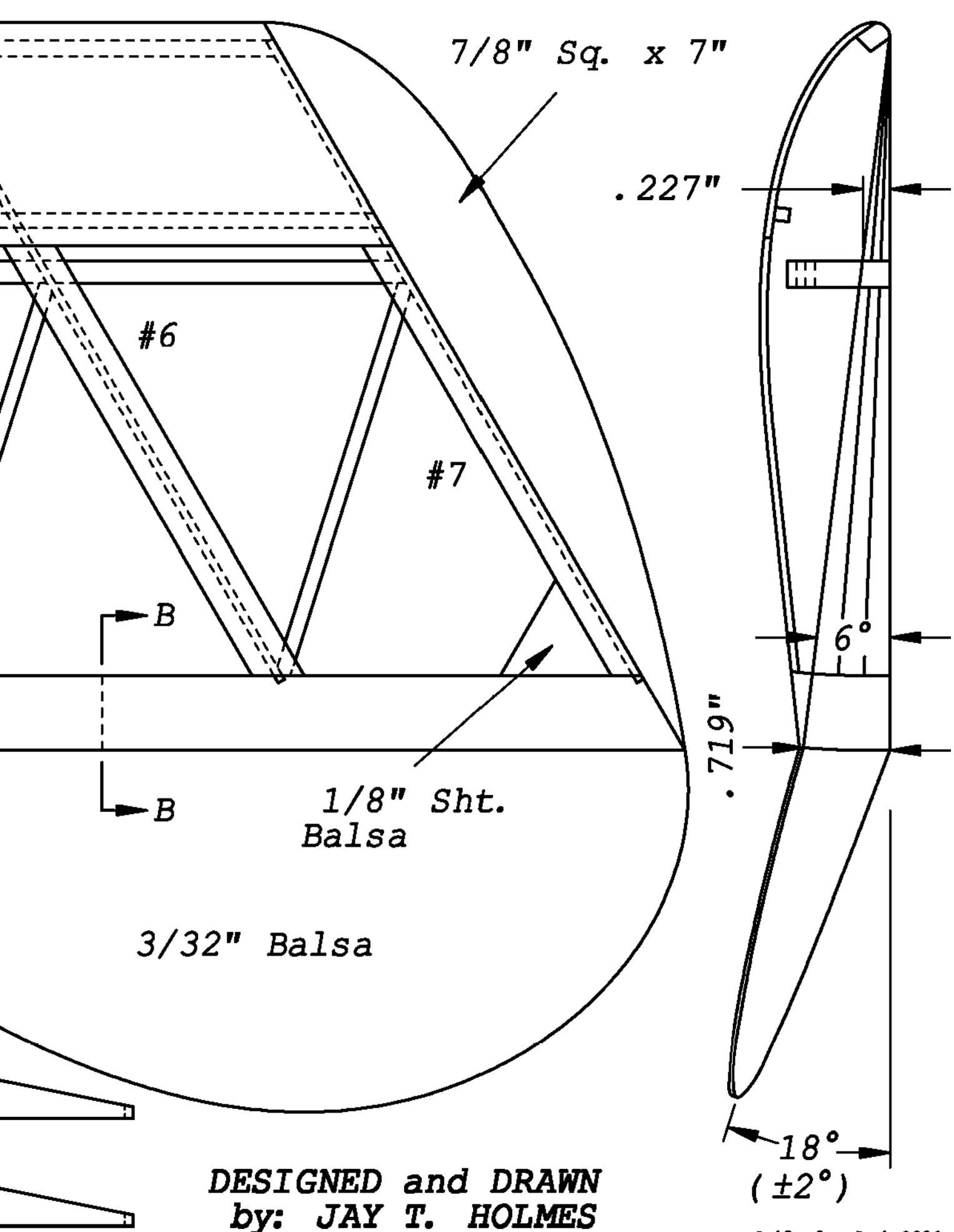
Cutaway drawing shows simple, sturdy construction. Note wing center joint











**DESIGNED and DRAWN**  
**by: JAY T. HOLMES**