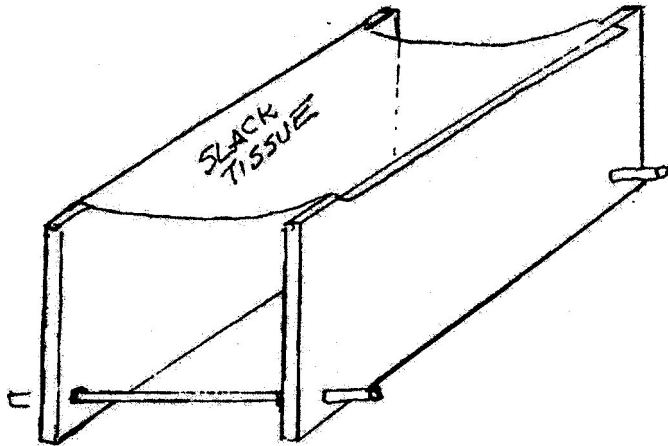


Tissue Covering With A Frame

by Don Lang

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Most of us have shrunk tissue on a four-sided frame to cover flat surfaces such as rudders, stabs, and even flat bottom wings. This works well but what about the cambered surface of wings? The open ended frame that I will describe is not a new idea. I first read about it in the April 1993 issue of INAV. Roger Schroeder used such a frame as an aid for covering Pennyplane and EZB surfaces with Ultrafilm. You might consider using it with tissue.



My frame is made from two pieces of 1/4 x 3 x 14 hard balsa. Drill two undersize 1/8 inch holes in the lower corner of each piece. Cut two pieces of 1/8 diameter wire about 10 inches long and slip them through the holes as shown in the drawing. I glued a piece of balsa on each side of the holes to reinforce them. You may be able to use larger dowels in place of the wires. The wires or dowels need to be a snug fit so the position of the sheets can be adjusted. The sheets must stay in position as the frame is handled.

Cut a piece of tissue about 2 inches wider and a bit longer than the cambered surface that you wish to cover. Tape the tissue to a flat surface with tape at each corner. Adjust the frame so that the sheets are parallel and separated by a distance somewhat smaller than the tissue sheet.

Apply glue stick adhesive to the top of each balsa sheet about as long as the tissue. Turn the frame upside down and place it on the tissue and let it dry for a while.

Turn the frame right side up and push the sides together so that the tissue sags a bit. Place the upper cambered surface of your dry uncovered wing in this sling and see how it fits. You may have to adjust the sides till the fit is right. Remember that tapered wings have more camber at the root than at the tips so the sides may not be parallel to get a good fit.

Using your favorite covering adhesive, coat the leading and trailing edges and the root rib and the

rib nearest the tip. Then place the surface down onto the tissue until it sticks. Let it dry and then cut the surface free from the frame, you can then trim the edges.

You may coat the surface with glue stick or dope and let it dry before you place it on the frame. Place it on the frame and then use a brush to apply alcohol around the edges to activate the glue stick or thinner if you have pre-coated the surface with dope.

Give it a try. It may work well for you!