

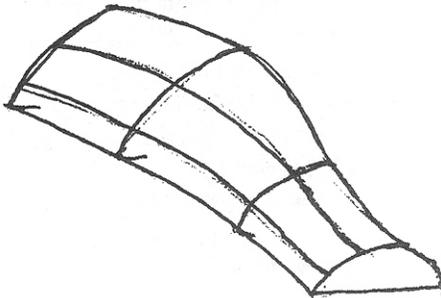
COVERING COMPOUND CURVES

by Jerry Sullivan

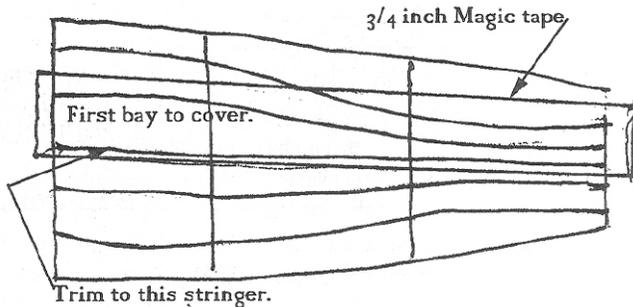
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When working on my P-51 Mustang, the radiator housing on the belly of the fuselage presented a real problem to cover. In geometry class I learned that conical and cylindrical sections can be covered with non-stretching material, but compound curves (parts of a sphere) curve in two directions and require small segments to cover. The same thing goes for boat hulls. There is a special technique used to determine the non-straight shape of a board for planking. The following is a method that can be applied to model airplanes.

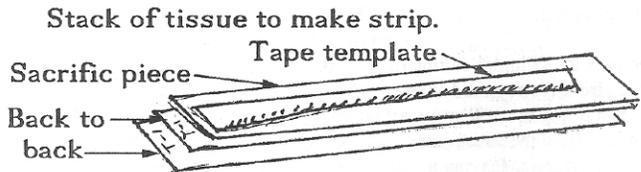
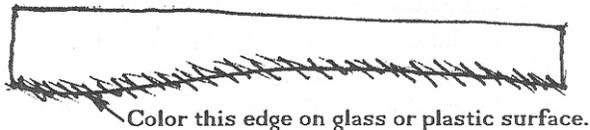
Typical Compound Curve



On your model with all the formers and stringers in place, place a 3/4 inch piece of magic transparent tape on the first open bay. You can work from the center to the edges. If there is an odd number of bays, start with the next one. Then using a sharp blade, trim the tape to the stringer closest to the center of the model. Remove the tape, and putting it on a glass or plastic surface, color that edge with a Sharpie.

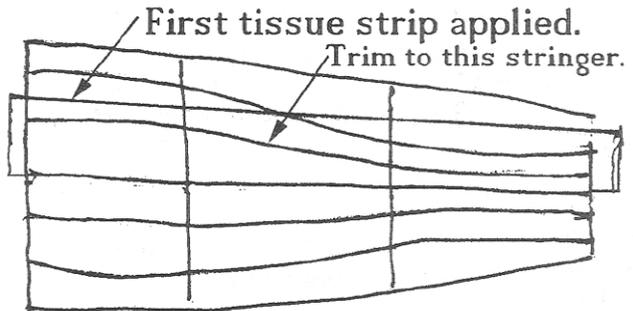


This tape is then put on a special stack of 3 layers of tissue. The two bottom layers must be stacked such that the desired outside are facing each other. This will give you left and right hand pieces. The top layer is a sacrifice upon which the tape is stuck. Now trim along the colored edge, leaving the tissue wide enough to cover the bay. As you take this apart, mark the front end and which bay this goes in (e.g. T-1)



Before you put any tissue to the curved area, repeat the process for each pair of bays. You only need to do this once for each pair of bays. You will notice that the trimmed edge has a really funny curve to it. This curve will lay correctly against the corresponding stringer.

Now you can cover the bays, If there is a center bay (odd number of bays present), cover with a strip and when dry, trim both edges. For even numbers, glue in piece one on each bay next to the center line. When dry, you will need to trim only one edge. Repeat with the next pair of tissue strips, marked T-2. (You did mark them, right?)



While this might be over kill on a plane like a Corsair, the area of the circular (or elliptical) fuselage up to the nose might have a compound curve requiring this special technique