ONE GOOD RACK

I'm not claiming any originality to any aspect thing of the device whose description follows. The concept is just too simple not to have been invented, or published, or used before. Having said all this, it's darn handy. I haven't completed a model without it since being cobbled together several years ago. I hope it serves you as well.

I converted to the synthetic coverings a long time ago because of the advantages they offer. For what I build and fly, covering with Polyspan and Mylar is just a better way. Many feel the same. However, getting the heat-shrinking done efficiently for wings and stabs was always a pain at first, doing it one side at a time, pinned down to your basic cork or similar surface. I also grew to suspect that both Mylar and Polyspan have a first-shrink memory that you run afoul of if your first try isn't per your plans. Wrestling a recalcitrant wing or stab, heat gun in hand, the night before a contest was never fun. There had to be a better way.

The solution came to me while driving down I-16 on the way to Savannah one afternoon. The mind does wander, 150 miles of flat land and pine trees. All Georgians can sympathize. Two photos of my solution follow. The first shows the basic device and the second, in action. No great explanation is required. It's that simple. My rack allows you to pin down any wing or stab and heat-shrink both sides at once. Done with care, all surfaces can be reached with a heat gun or iron, whichever is your preference.

The rack also works with traditional tissue and nitrate covering. Wings and stabs can be pinned down and both top and bottom surfaces dry as the same time, whether during water shrinking or nitrate application, if the rack is propped up vertically. Both surfaces are thereby stressed during drying simultaneously.

It works particularly well over a piping, hot steam kettle for torturing out really stubborn warps. You'll always win!

The rack shown is what artists call a stretching frame, which is used in normal life to prepare canvases for painting, and the smaller sticks are called braces. All can be found at any good art supply store. The braces are screwed to the frame and can be moved

around and spaced as required to pin down the LE's and TE's of your wings and stabs. You can also use washers under the braces to build in whatever precise "slope" you want to warp in whatever wash-in or wash-out you desire. Simple balsa shims work, too, as shown. The one caution I'd add is to make sure the frame you buy is warp-free. A simple but judicious eyeballing works just fine for me.

These frames can be made from just about anything lying around the workshop, as long as the wood dimensions are slim enough not to be too cumbersome to move around inside and about your workshop. This can be very acrobatic and aerial at times, so keep everything light. Soft wood like pine or poplar is recommended to allow regular pushpins to a used as keepers at the LE's and TE's. Check the rack periodically for warps because it's wood, too, and will move when it wants to and not on your schedule.

These racks are also helpful in another way. I prefer to build my stabs and wings first, and then pin them down as long as possible while they dry and cure completely. If you've several of these frames sitting around, you can pin wings and stabs down and just hang the racks on your workshop wall on a hook safely out of harm's way while you finish the rest of the model.

It couldn't be easier. Good luck.