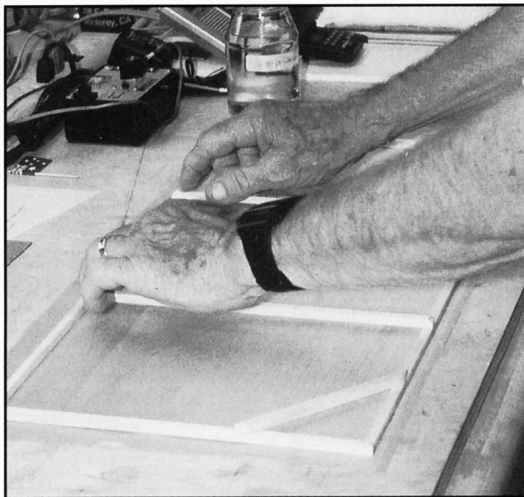


Covering With Silk The Easy Way

By Jack Jellá

My first memories of silk as a model airplane covering were those little Japanese rubber models made mostly of wire. The fuselage was an open structure but the wing and empennage were covered with lightly doped silk. They were available at the local five and dime store during the 1930s, didn't fly very well, probably were the first ARFs.



Place the frame, doped side down, on the silk.

so right—but it was expensive at 45 cents a yard in 1941, and it only came in white.

It was after W.W.II when I resumed modeling that I first started covering with silk. Colors were now available which eliminated the need for colored dope, but the finished job was not always what I had hoped for. I kept trying and with time and experience my covering jobs got better, but it was still a lot of work.

Some 20 years ago I got to thinking about an easier way to cover with silk, a procedure that would produce a super covering job every time without the frustration of sags and warps caused by uneven shrinkage of the silk. I'm sure there are others who have after long experience found a technique that works best for them. My method is significantly different from any others that I know of, because I dope the silk before I cover the model.

Here's what I do. I make a frame slightly larger, about one inch all around, than what I want to cover, wing panel, stabilizer, whatever. For the frame I use 1/4 sq. balsa sticks; I seem to always have some that are either too hard or too soft to use for model construction. I use my small disc sander to cut the end of each piece at a 45° angle like a picture frame. For a better glue joint, medium CA

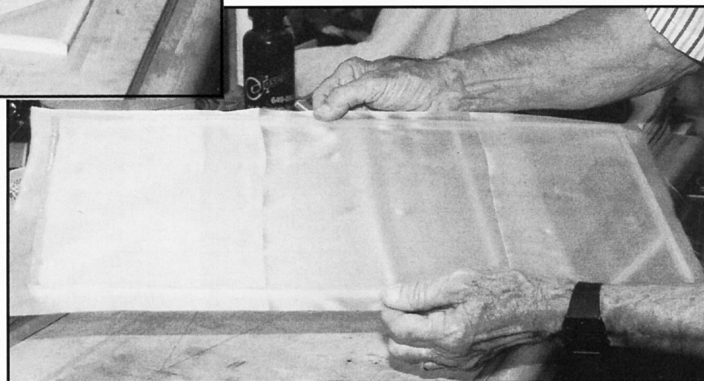
Later when I started building my own models I tried all the conventional covering materials, Japanese tissue, bamboo paper (terrible stuff), and silkspan. I always thought that silk covering was the best—it just looks

works well and speeds up the process. With larger frames several spacers placed across the frame will add rigidity and maintain the proper width. Glue them on top of the frame so they don't touch the silk. They also make convenient handles when your ready to pick-up the silk after attaching it to the frame.

Cut a piece of silk about 1" larger all around than your frame. I usually iron it to remove any major wrinkles. Not absolutely necessary, but it does make it easier to get the silk to lay flat on your work surface. Smooth it out as best you can, paying particular attention that the weave is as straight as possible. Silk applied with the weave on the bias is much more likely to cause warps.

Now we need to dope the frame to seal the wood that will come in contact with the silk. Two or three coats is sufficient, 50-50 dope/thinner is OK, or it can be a little thicker. When you have enough dope on the frame so that it is not soaking in and stays wet all around, place it doped side down on the silk. The silk will adhere to the frame, and you can now use those cross piece handles to pick it up, turn it over and smooth any (significant) wrinkles while the dope is still wet.

Being sure that the silk is attached to the frame all the way

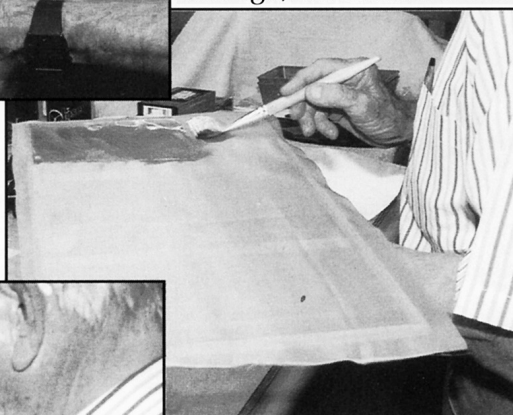


Smooth out the wrinkles

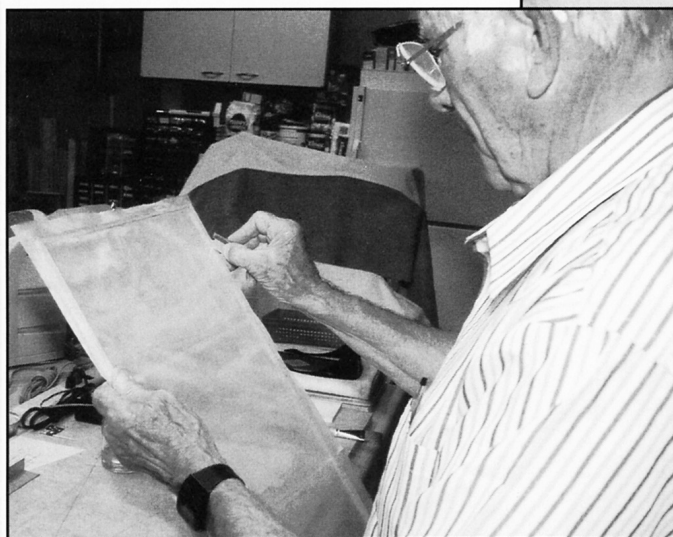
around, we are ready to pre-dope the silk. The fact that we are using the same material makes it easy, 1 part dope, 2 parts thinner. It should drip from the brush and if it doesn't, add more thinner. I have never used anything other than a regular inexpensive camel hair brush, about 1", but I do use the side of the brush in easy strokes. Don't worry about the dope running through, that's what it's supposed to do; thin

dope will not make an unsightly blob on the underside.

Dope the silk with thinned dope



One coat is all we need for sizing, and when dry use a razor blade to cut around the inside



Remove silk from frame with razor blade.

of the frame and remove. You now have a piece of silk that's ready to cover your model that behaves like no silk that you have ever used. You can cut straight lines or irregular shapes as easily as you can with tissue or silkspan. If you haven't waited too long, it's easy to remove the silk still on the frame by just pulling it off. If it's really stuck, a little acetone on your brush will release it. Now you can repeat the process in pre-doping the next panel. Assuming that you have already doped and sanded all of the model structure that the covering will touch you are now ready to begin covering.

Just lay the piece of silk over the area that you wish to cover, spray lightly with water and lightly pull to remove any wrinkles. Because you have pre-doped the structure and the silk, all it takes to bond the two is a little thinner brushed around the edges where the covering touches the structure. Undercambered wings require heavy dope or thinned glue applied to the bottom of each wing



rib and at dihedral breaks to adhere the silk. Acetone works best here because it's a better solvent and will form a faster bond. Compound curved surfaces like wing tips can be easily covered by simply brushing thinner over the area to release the sizing and let the silk conform as it normally does. As the silk dries you will see that although it has been doped it will still shrink to produce a nice wrinkle-free finish—taut, but not enough to cause warps.

I hope I haven't confused you too badly, at first it sounds like a lot of extra work, but in reality I am convinced that it saves time. Applying the silk really goes fast and the results are totally predictable with a smooth covering job every time and with much less warping tendency. Try it, I think you will be pleased with the result.

One more thought. Your model may require more than one frame for all the different size parts to be covered. Start with the largest frame first and then downsize the frame to match the size of the smaller components, saves both wood and silk.

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