

Miniature Saws and Ship's Grating

Gus Agustin and Frank Pearsall were the speakers for the second part of our program on Preac saws.

One of the most common applications for these remarkable little machines is the fabrication of ship's grating. Although Gus and Frank had slightly different approaches, there were still common factors in both presentations.

Broken down into its simplest terms, the basic keys are stock cut to the correct dimensions, a fine tooth saw blade of the same thickness as the stock, and a means of accurately indexing the stock the correct increment after each cut.



At the scale Frank is currently working in, .028" is the primary dimension for the thickness of the stock; saw blade, and grating hole. Gus' requirements are obviously much smaller. While cutting your stock, it is recommended that you keep the pieces in the order that they are cut

from the main block. Once that is complete, the strips should be clamped together, and glued at the ends. Merely dipping the ends in some CA, or fastening them with some scrap strips can accomplish this.

The most common technique for cutting the slots in the strips, is to build a board, which will keep the glued strips square to the saw blade, and allow you to index the stock after each cut.



blade is .028", then the gap and index strip must also be .028" each.

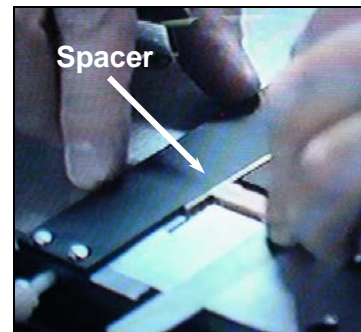
This can be accomplished by taking an extra strip, covering it with wax, and using it as a spacer placed

next to the blade while the indexing strip is glued to the board. It then becomes a matter of just making a cut, placing the kerf over the index strip, and making another pass. Once all the slots are cut, soaking the block in some acetone will dissolve the CA. As you separate the strips, be sure to keep them in the same



sequence. This point can be critical when you start to assemble the grating.

Frank then demonstrated a technique, which bypasses the need to fabricate the index board. After gluing the strips into a block as described earlier, cut a spacer exactly twice as wide as your saw blade. If the saw measures .028", then you need a strip .056" wide.



Start by making an arbitrary cut near the end of the block. Without moving the block, place the spacer strip next to it, and slide your rip-fence over so it's snug against the spacer.

Tighten the rip-fence screw, remove the spacer, move the stock up against the rip-fence, and make another cut. Repeat the whole process again. This may seem complicated, but Frank says it's quite easy, once you get the hang of it. He says he even keeps the blade running while he makes the next adjustment! (Did you know Frank has three short fingers?)

Anyway, the key to this technique is making sure you don't move the stock after the cut has been made. One way to do this is to leave the stock over the blade, while you make the needed adjustments. Pearsall made two other recommendations, which will help insure accuracy. Make sure the stock is firmly down on the saw table, and you may want to move the rip-fence away before making the cut. Otherwise, the stock may bind up as you make your pass.

