

# DIMENSIONS

## Newsletter of the Pacific Woodworkers Guild

### At a Glance:

- Next meeting is Tuesday April 16th. This meeting features the 2002 2x4 Challenge.

### My Memories as a Pattern Maker

By Marco Berera

The Pattern Maker ranks at the top of the list of skilled craftsmen in the foundry industry. A Pattern Maker has to be both a Pattern Maker and a foundry man and must be able to adapt to every new technological advance made in the foundry.

Edward Lestie writes : " A pattern maker is an exalted craftsman, the greatest common denominator as well as the least common multiple of all industrial production. A pattern maker must have the creative conception of a draughtsman designer, the practical ability of a molder, the precise skill of a machinist, the analytical judgment of a metallurgist and the specific exactness of a mathematician. He must create a plan, or design, with vision and ingenuity and build the idea from trade to trade with practical knowledge, thinking and forming inside and out with length, breadth and thickness adjusting accurately all values and dimensions and producing with dexterous finality any conceivable form to be cast in metal. The products of the pattern maker's skill are truly surrounded by an aura of greatness which dignifies his right to assume a place of confidence, trust, and honor in all industrial advance and national progress"

No wonder it takes 10 –15 years to produce a good Pattern Maker. A skilled Pattern Maker must be able to look at a straight line drawing and be able to see it as a 3 dimensional object. Pattern drawings often list both English and Metric units.

I apprenticed as a Pattern Maker in Brugg, Switzerland at the age of 16 and studied for 4 years, apprenticing and attending Technical School at the same time. We learned to interpret blueprints and drawings, to build core boxes and patterns to 0.005–0.010 inches, to adapt to the shrinkage of metal. For the first year I was making patterns for practice only. We had to carve fillets by hand (not routing) in a deep pocket of a pattern, which had 1.5 degrees tapered sides. I was so proud of my carving and went to my "Meister". He looked at it and said "Oh, slight undercut" and went to the band saw and cut it in half, exclaiming, "Do it again!". This way they taught us to perform quality work. I had to work in that foundry for 3 months where we learned to assemble cores and check casting thicknesses.

Modeling clay is placed on critical sections, the mold is assembled and the clay compressed. When the mold is opened, one can immediately see if changes need to be made in the thickness of certain sections. We also worked on the molding tables (small castings) where we were allowed to mould and cast small objects, e.g. Patternmaker's vice, anvils, ashtrays, etc.

In 1965, I immigrated to Whidbey, Ontario where I worked as a Pattern Maker in a small Tool and Die Shop. We produced parts for General Motors. In 1968 I moved to Vancouver, married and continued in my trade until 1978 when I started with Canadian Airlines in the Composite Shop. I miss my Pattern Making days, but thoroughly love my woodworking hobbies.

### When Last We Met

By Paul Townsend

The last meeting of the Pacific Woodworkers Guild was held on Tuesday March 19th. Due to the surprise snowfall, the scheduled speaker was unable to attend — he will be re-scheduled for a future meeting. **Bill Ophoff**, our pre-meeting demo, stepped up and presented his learning's on sharpening and using scrapers as the main presentation.



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The Pacific Woodworkers Guild is a non-profit association of British Columbia Craftspeople dedicated to excellence in woodworking. Guild members meet on the third Tuesday of each month (except July and August) in Richmond, B.C.

The newsletter is published monthly, ten times per year, and distributed free to members and associate members. Membership is available to anyone interested in any form of fine woodworking. Membership fees are \$25 for twelve months; Associate membership fees (newsletter only) are \$15 for ten issues.

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## Guild Executive

### Elected Officers

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<i>Vice-President</i>	Dan Lemire
<i>Treasurer</i>	Lou Hafer
<i>Secretary</i>	Paulin Laberge
<i>Members-at-Large</i>	Paul Townsend Bill Fox Art Liestman Bob Bedier

### Committees

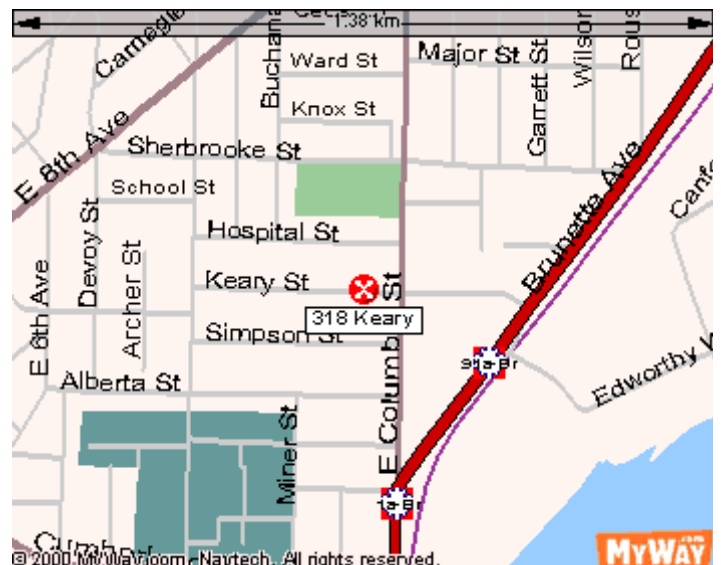
<i>Newsletter -</i>	
<i>Publisher</i>	Paul Townsend
<i>Editor</i>	Murray Mackinnon
<i>Labels</i>	Murray Mackinnon
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<i>Webmaster</i>	Steve Fairbairn
<i>Entertainment/Workshops</i>	Bill Ophoff Jack Wagner
<i>2x4 Challenge</i>	Paulin Laberge
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<i>Richmond Carvers' Show</i>	Ted Fromson
<i>BC Woodworking Show -</i>	
<i>Delta Workshop</i>	Denis Reid
<i>Assistant</i>	Art Eberwein
<i>PWG Booth</i>	Bill Fox
<i>Assistant</i>	Harry Taylor
<i>Christmas Toy Workshop</i>	Denis Reid
<i>Fundraising/Charity Raffle</i>	Jan Dicks
<i>Assistant</i>	Klaas Focker
<i>Library</i>	Bob Bedier

## Next Meeting

The next meeting of the Pacific Woodworkers Guild will be held on Tuesday April 16th, starting at 7:30 pm. This meeting features the presentation and judging of the 2002 2x4 Challenge.

The guild heartily encourages you to bring along your friends, neighbours and family to join in on the fun of this year's 2x4 Challenge. The venue is Sapperton Pensioners Hall, 318 Keary Street, New Westminster (see map at right). Keary runs between Royal Columbian Hospital and Labatts Brewery. The Hall is across the street from RCH and the brewery, just a few paces up Keary. Parking is available mostly along Columbia street and some on Keary. Be mindful of the residents only parking restrictions on Keary. Meters stop at 6 p.m. so that's good. Hope to see you all there with a handful of buddies.

**Note: If you are bringing a project to display or enter, please be at the hall by 6:30 p.m.**



## Getting with the Grain—Part Two

By Paul Harell et al

### Grain Design for Doors

*This is the second in a series of three articles by Paul Harell originally published in the Spring 1996 issue of Home Furniture, which is now out of print.*

When I'm building frame-and-panel doors, I want wood for the stiles and rails that will frame the panel, not compete with it. I try to keep the pieces as uniform as possible, never mixing flat and quartersawn pieces.

Just as with curved aprons and stretchers (see following page), doors that curve inward or outward across their faces will benefit from having rails whose grain accentuates the curve.

After cutting out pieces for a door or doors, I always experiment with different arrangements of the parts. The same pieces turned a different way will often have very different appearances.

### Sawing wood for Aprons and Stretchers

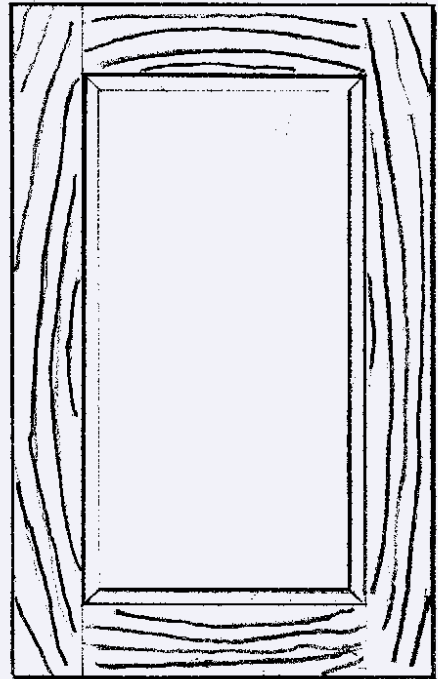
I look for mild, fairly straight-grained stock for straight aprons and stretchers. The various pieces don't have to be identical, but I avoid mixing widely different grain patterns. If the wood has a strong pattern of bands or streaks of color running through it, it's worth the effort to match the aprons end-to-end so that the pattern is continuous.

For curved aprons and stretchers, it's important that the face grain accentuate the shape. On a concave apron, face grain that curves upward in the middle like a frown will reinforce the curve of the piece; face grain that runs perfectly horizontal will reduce the apparent curve; face grain that curves downward in the middle like a smile will fight the curve.

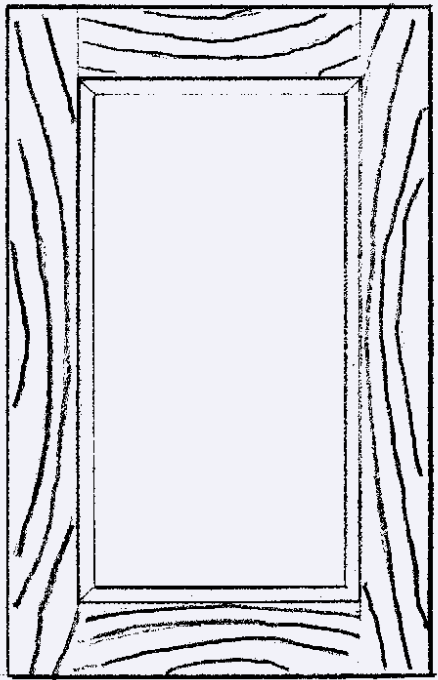
When sawing a curved part, pick a blank with diagonal end grain. If you cut it with the end grain running up from front to back, the face grain will accentuate the sweep of the curve, whether convex or concave. If the end grain slopes the wrong way, the face grain will work against the curve.

The amount of curve in the face grain can be predicted by the amount of slope in the end grain. A steep upward slope in the end grain will yield an exaggerated curve in the face grain.

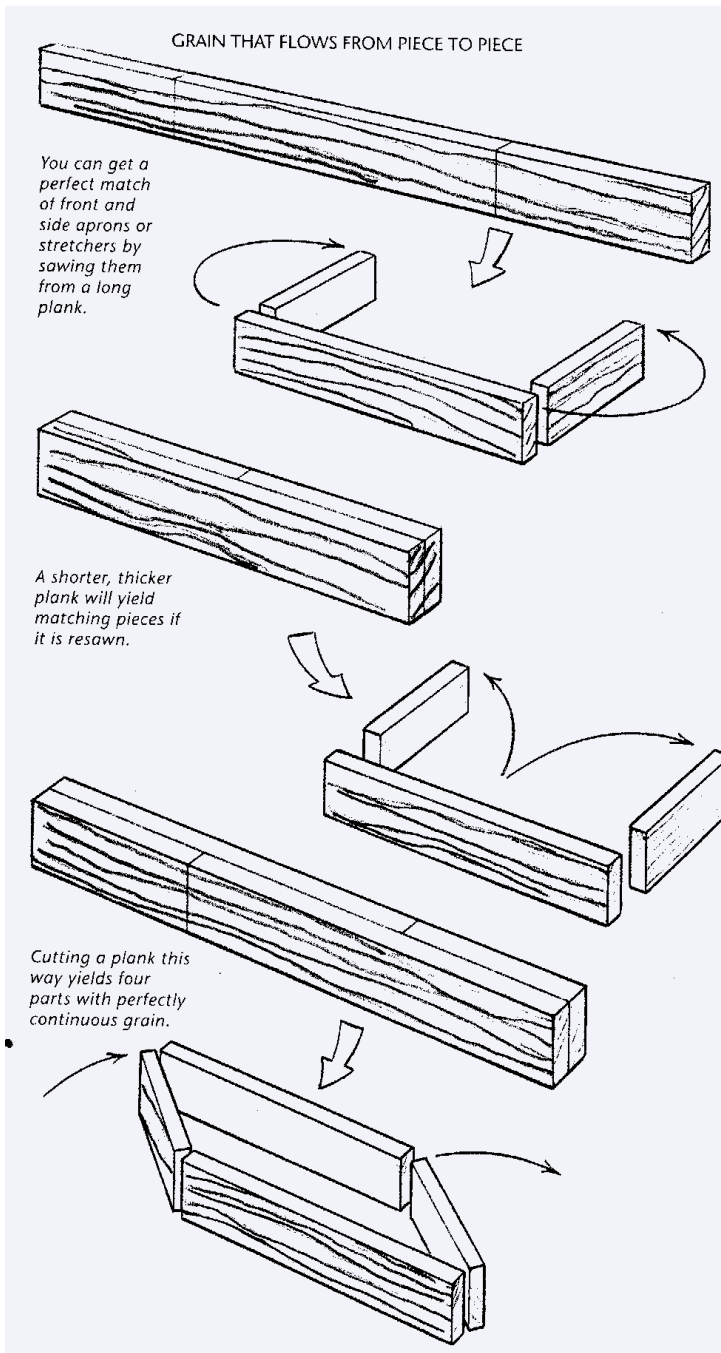
### FRAMING GRAIN



*Turned outward, curved grain fights a frame's shape.*

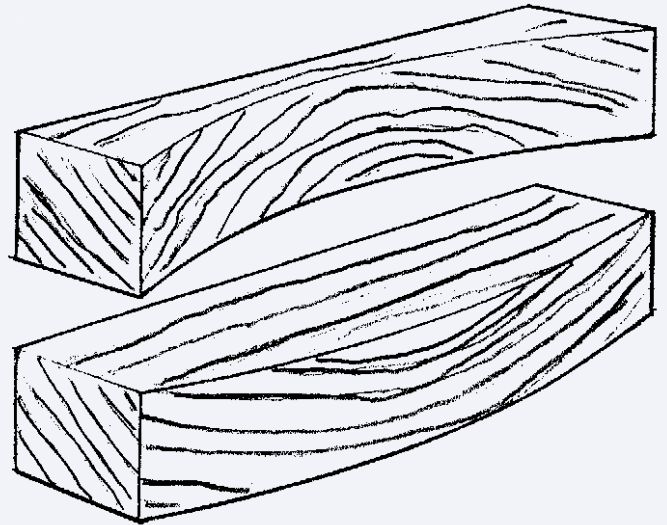


*Curved grain creating a circular pattern gives a frame unity.*



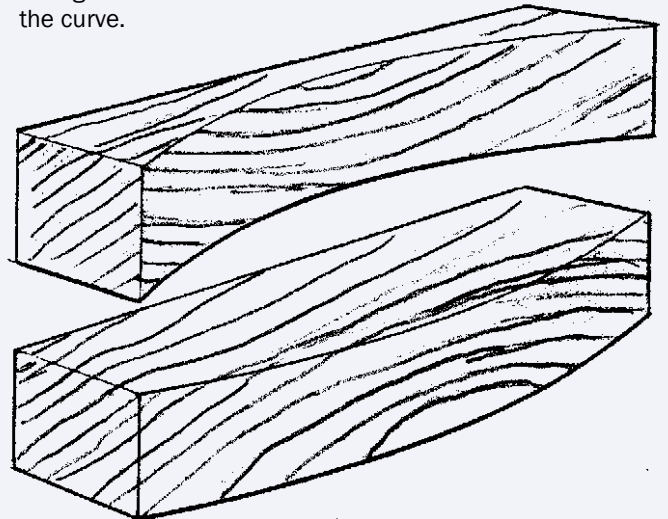
**Strengthening a Curve**

To reinforce a concave or convex curve take a plank with diagonal end grain and orient it so that the end grain slopes up from front to back. The face grain will accentuate the curve of the cut.



**Undermining a Bow**

The same part oriented with other way produces face grain that runs counter to the curve.



**Next Month's Competition - Win a Free Membership**

In May we are featuring another competition with a reward of \$25. You will be presented with the outlines of 41 plane blades, many no longer in existence today. The winner will be the Guild member identifying as many as possible of the corresponding planes - ties will be resolved by those with the best descriptions of the planes (max 10 words per blade) and/or by a draw.