Encouraging all woodworkers in self-expression, craftsmanship and knowledge

Colorado Woodworkers Guild
May 2017

President's Message

Where do you keep your shop safety equipment? A push stick probably lies within easy reach of your table saw blade so you can grab it when needed. Maybe you keep another stick on your band saw fence as well. Good for you!

We are more likely to use shop safety items if they're in plain sight and easily accessible. How accessible is all the other protective equipment in your shop? Do you use it as often as you should? We're less likely to use safety items when they interfere with how we work.

The Guild is organizing some programs this year to delve into the subject of shop safety, with the goal of bringing our members up to speed on working safely in the workshop. June's program will demonstrate how to minimize the risk to health of breathing woodshop air. We'd like to hear about other safety topics important to you, too.

On a different subject, some Guild members would like to take our Show & Tell activities to a higher level. That could take the form of a one board competition (i.e., what you can make from one 8-foot length of 1 x 8). An even more ambitious competition might involve a juried exhibition of members' fine woodwork. If those suggestions make you want to make more sawdust, let us know. When you have ideas about new things you'd like the Guild to undertake, let our Board of Directors know your thoughts. This is your Guild. Help it to continually improve.

What's On My Mind

As the Twig is Bent, So Grows the Tree

The boards we work with are pieces of once living trees. Those trees breathed, drank, grew and swayed. But once they're felled, sliced and dried trees becomes lumber. There is no a tree and boards are not alive. Nevertheless, the sometimes behave as though there were still living.

We're all familiar with boards swelling and shrinking as humidity rises and falls. Dimensional changes are most pronounced across a board's grain. We allow for this when designing and assembling the pieces we make. But there's more to wood movement than swelling and shrinking. You may have had a board grabbing your table saw blade leaving burn marks along a rip cut. Perhaps it even stalled the saw. Or the saw kerf behind the blade become wider levering the board away from the rip fence and into the blade. The board changes shape on its own. This doesn't happen when working with other "dead" materials like plywood or MDF. Is this zombie-like behavior?

No, boards really are dead. What we're seeing is evidence of internal stresses in boards that are relived once we slice into them. We can't see is how wood fibers throughout the thickness of a board attach to each other. Those bonds contribute to a board's rigidity and keep it from falling apart like a fistful of uncooked spaghetti. Fiber-to-fiber attachments within a board create internal tensions. Ripping a board breaks these attachments along the rip line and alters the balance of internal forces that make a board hold its shape. Most of the time, these forces are small and a board retains its size and shape after ripping. Once in a while, ripping so disrupts internal tensions that the board distorts itself and leads to bowing toward or away from the rip a

You can witness a similar behavior after planing a board to final thickness. Inspect it a day later and you may find it's developed a small crook, twist or cup. Planing disrupts some of fiber-to-fiber attachments with corresponding effects on its shape. Recognizing this effect, experienced woodworkers will take a board near to its final thickness then wait a day for internal tensions to reach their new equilibrium before final thicknessing. Some woodworkers deliberately drop boards on the workbench or shop floor a few times to speed up stress equilibrium.

I've never tried the dropping method. What I have done is remove twist from a long board by torqueing and clamping it in the opposite direction in a humid environment. Two weeks later I had a long, thick flat board that remained perfectly straight for many years.

The lesson learned from this is to be mindful that a board can move in reaction to what you do to it. Movement can be insignificant or huge. To paraphrase a familiar expression: As the board is unbent, so grows the furniture.

By Jim McNamee

Membership

Membership Problems? Send an email to programs@coloradowoodworkersguild.org
We are having issues connecting to PayPal from our web site. I'm not sure when this will be fixed. You can easily renew by mailing us a check. To do this go to http://coloradowoodworkersguild.org/index.php/pay-by-check-member-application

Fill in the form and press the **Print Page** button at the bottom of the page. Mail the printed form along with a check for $30.to**:**

Colorado Woodworkers Guild
P.O. Box 100996
Denver, CO 80250

Membership status as of this writing:

115 Members paid through the end of 2016
176 Members paid through the end of 2017

That is a total of 176 ***active*** memberships.
What is an active membership? A membership is valid through the end of the calendar year. If you have not renewed for 2017 your membership was still considered active until April 1st 2017.

I have begun to disable memberships that have not been renewed for 2017. If your membership becomes disabled and you have renewed for 2017, please let me know. We have had some issues with PayPal renewal from our web site.

Now is a great time to renew your membership!
The 2017 member cards look like this (member name/expiration in Red text on a White background). If your member card does not look like this it is expired.

If you believe that you have renewed for 2017 and do not have a current membership card, please let me know. Send an email to programs@coloradowoodworkersguild.org and I'll address the problem.

Thanks
Cary Goltermann – Assistant to the membership chair for CWG.

How can you renew? For me the best way you can renew is on-line. When you fill in one of our on-line forms

I do not have to decipher your handwriting (no offense).The data is machine readable, meaning I do not have to enter it manually!You can renew on-line using PayPal or you can renew on-line, print out the form and mail it with a check or bring the form/check to a meeting.

To renew on-line using PayPal, you do not need a PayPal account go to **http://coloradowoodworkersguild.org/index.php/about/sign-up-for-membership**
To renew on-line and mail the form in with a check go to **http://coloradowoodworkersguild.org/index.php/pay-by-check-member-application**
If you log in first your name address etc will automatically be filled in! If you don't know how to log in OR are unable to log in drop me an email at programs@coloradowoodworkersguild.org and I'll help you out!

Cary Goltermann - Assistant to the Membership Chair

Presentation

Bowled Over

Frank Livingston doesn't own a lathe. He isn't interested in using one. Frank has learned a way to make beautiful bowls and vases using a scroll saw. His bowls were so well received at a recent Show and Tell that Frank was named the winner that evening. He graciously agreed to reveal his methods by being the featured speaker at last month's Guild meeting.

Livingston builds hollow vessels by stacking and gluing together concentric beveled wood rings. Frank starts with an inch-thick board about one foot square. He lays out the overall shape of the bowl; round, oval, or a more intricate pattern, and draws a parallel contour to define the bowl's wall thickness. Three-eighths of an inch thick gives the best balance between ease of construction and visual appeal.

Frank then cuts out this ring from the board. The ring needs to have a slanted edge so that it will exactly fit on top of the next ring he cuts from the remaining blank. The angle of that slant is important. The angle should equal $\tan^{-1}$ (bowl wall thickness÷ board thickness). For a 1"- thick board and a wall thickness of 3/8", the angle would be $\tan^{-1}(0.375) = 20.6°$. Don't feel bad if you can't do the math. There's an angle calculator on the web (http://www.scrollmania.com/AngleCalc.html) that determines the answer for you.

Frank cuts a scrap block at this angle on his table saw. He uses this gage block to set the slant of his scroll saw table. Then he uses the gage block again to drill a pilot hole through the board at the same angle on the inside and outside of the contour line. Make that hole big enough so the scroll saw blade fits through it. Then saw along the pattern line. Repeat this process until all the rings have been cut. The piece of board remaining in the middle becomes the bowl's bottom.

Glue up the rings, a few at a time. Before attaching the base, sand the bowl walls smooth inside and out. A belt sander and spindle sander work well for those tasks.

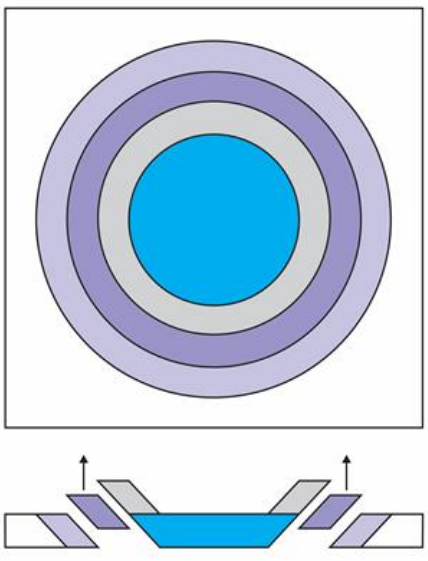
Frank offered a number of tips that you may not see described elsewhere. He often starts with a board made from glue ups of several different species of wood much like a cutting board would be made. By rotating the rings before gluing them together, he achieves some striking designs. Rather than drilling pilot holes in the same location for each ring, Frank spaces them around the pattern so they don't line up once the rings are assembled. Instead of drilling a pilot hole, Frank's been experimenting with making a grazing cut into the side of each ring, akin to the process of making the outer shell of a band saw box. This eliminates the need to drill a pilot hole and reduces the amount of sanding needed to get a smooth bowl surface.

Paper patterns have every concentric ring drawn on it. Frank only uses the pattern for the outermost ring. To make subsequent rings, he places the last ring onto the remaining board and uses its inside as the pattern for the next ring to be cut. Frank prefers this latter method because any imperfections in cutting the previous ring are carried to the next smaller ring making gluing and sanding easier.

A picture is worth a thousand words and a video is worth many more. Take a few minutes to look at some excellent visual resources. *Wooden Bowls from the Scroll Saw: 28 Useful and Surprisingly Easy-to-Make Projects* by Carole Rothman is a thorough reference on this subject. You'll find a great step-by-step treatment by Rothman on the web: http://www.rockler.com/how-to/scroll-sawn-flared-bowl/. YouTube is another good resource to see each step in action.

By Jim McNamee

Click here to view Presentation video



Sponsor's Corner

New Sponsor

Bear Woods
Supply Company ▪ Since 1987

Earlier this year, Bear Woods Supply Company contacted the Guild's President inquiring about an affiliation with the Guild. Since then we have had communication with Bear Woods President Stephen Dinesen and have mutually agreed to have Bear Woods join the Guild's group of Sponsors.

Bear Woods is headquartered in Canada near Vancouver, British Columbia. The company ships products worldwide from there, with half of their shipments going to the USA. They also rely on three mills and several independent manufacturers in the USA to produce their products.

Bear Woods Supply has been serving woodworkers and clock makers of all types and skill levels for 30 years. They focus on USA-made products, be they clock movements, dowel pins, or wood mushroom buttons. Their emphasis is on quality. Bear's inventory list includes custom made dowels and wood plugs/buttons in a variety of popular wood species. They also offer Swiss-made Pegas scroll saw blades, the finest quality blades available.

Bear Woods actively supports woodworkers who are doing work in the community with a special focus on supporting the production of wooden toys for children in need. They provide aggressive discounts and often donations to support such generosity. It is the company's way of participating and giving to areas where their customers live.

Pricing is designed to make wholesale pricing available to everyone. They give deep discounts for increased quantities. Orders vary in quantities to support the woodworker making a few toys or the scroller who wants to make hundreds of items for the craft fair season.

Bear Woods will offer the Guild gift certificates for use at their web store during the year as well as a minimum 5-percent discount on all orders over $15.

Bear Woods Company:
6099 228 Street, Langley, BC, V2Y 2L3
Telephone: 800 565-5066
Fax: 888 599-1118
Website: www.bearwood.com
Contact: Britany Braun, Customer Service
Email: britany@bearwood.com

The Guild Liaison for Bear Woods Company is Charlie Kuechenmeister. Contact Charlie at liaison-bearwood@coloradowoodworkersguild.org

Jack Brock—Publicity and Public Relations

Frank Paxton Lumber Wood of the Month

The featured Wood of the Month for May from Frank Paxton Lumber is four-quarter (4Q), S3S **Cherry** in widths greater than 8 inches and lengths 8 to 10 feet.

Flash special is four-quarter (4Q) Quarter Sawn White Oak in widths 7 inches and wider and about 10 feet long.

As always, call 303-399-6047 for pricing.

Show and Tell

Like the March meeting, the April meeting was well attended, however, there were only a few submissions into the Show and Tell. Nonetheless, the demonstration of member interests was still very good.

First off was Dennis Machlica with a dog bowl stand that he made for his furry friend. Dennis admitted that it was about time that he brought in a piece for the Show and Tell after years of being a member.

Next was Bob Humberson and a free-standing coat rack that he made from new "old" skis. More specifically, Bob was on an outing with his wife when he saw an antique store that carried lots of old Scandinavian items, including a bunch of skis. Bob started experimenting with various techniques and eventually landed on a means of bending the oak and not having it split apart in the process, which really helps anyone's chances for success. With some contouring of the pieces, routed detail grooves, and antique hardware, Bob's new old skis coat rack is a good addition to the house and should perhaps be worked into a Norse saga.

The winner of the night was Bill Knoll with his hand-cut dovetail vise and a beetle kill pine box that he made using said dovetail vise. Bill took the design and made some of his own finishing touches, including turned walnut handles with brushed copper ferrules. The vise is an excellent addition to Bill's shop, with its combination of function and beauty. For those who are interested about the vise, this was actually Kevin Loyd's design and the guild has plans available on its website to assist you in making your own vise.

Thanks to everyone who brought their work to be seen by the rest of the group. Remember that each month, show and tell is one of the staples of the meeting, so please continue to bring your pieces and tell the rest of us what you've been doing.

Kevin Loyd Shows & Exhibits

About Wood

This month we consider **Balsa**. **Balsa** (**Ochroma pyramidale**), is a medium to large size tree from the family Bombacaceae, the bombax family (recent taxonomy work has now placed the tree in the Malvaceae family—the mallow family—still some controversy here). **Balsa** is also known as corcho, enea, lana, pau de balsa, and tami.

Recall that in previous columns, we have defined the Modulus of Rupture (MOR), the Modulus of Elasticity (MOE), Crush Strength, and Janka Hardness. We will continue to use those terms. Most of the other terms are generally well understood and will not be defined further. If you have questions about other terms or questions about a specific wood, contact wood@coloradowoodworkersguild.org.

The following summarizes the characteristics of **Balsa**:

Distribution: Originally native from Southern Mexico to Brazil, West Indies, Ecuador, Bolivia and Peru; now also found in Papua New Guinea, Indonesia, Thailand, and the Solomon Islands

Tree size: 60-90 ft (18-28 m) tall; 3-4 ft (1.0-1.2 m) trunk diameter

Average Dried Weight: 9 lbs/ft3 (150 kg/m3)

Specific Gravity: (Basic, 12% MC): 0.12, 0.15

Modulus of Rupture (MOR): 2,840 lbf/in2 (19.6 MPa)

Modulus of Elasticity (MOE): 538,000 lbf/in2 (3.71 GPa)

Crush Strength: 1,690 lbf/in2 (11.6 MPa)

Janka Hardness: 67 lbf (300 N)

Shrinkage: Radial, 2.3%; Tangential, 6.0%; Volumetric, 8.5%; T/R Ratio, 2.6

Heartwood Appearance: pale reddish brown; not commonly seen in commercial lumber

Sapwood Appearance: white to off-white to tan; sometimes with a pink or yellow hue

Grain/Texture: straight grain; medium to coarse texture; low natural luster

Stability: dimensionally stable after seasoning; easy to dry; should be kiln dried; subject to blue stain, checking, and warping before dry

Relative strength: in relation to its weight, it is very strong; about twice as strong as spruce in resisting compression parallel to the grain

Decay Resistance: not durable; subject to termites and borers; low resistance to blue stain and decay

Workability: easiest of all woods to cut, shape, and sand; easily carved; because it is so crushable, tools must be kept sharp; does not hold nails or screws well; best joined with glue

Odor: no characteristic odor

Toxicity: has been reported to cause skin irritation; severe reactions uncommon

Potency: low

Toxicity Source: wood dust

Reaction: rash (uncommon)

Sustainability: with large natural range and rapid growth, the lumber is readily available

Uses: model making, surf boards, insulation for heat, sound, and vibration; floatation; core stock; rafts; some musical instrument applicationsTypical Cost: expensive by board foot at hobby stores; less so if purchased in larger pieces from hardwood dealers

Comments: fast growing; plantation grown and harvestable in seven years; the lightest of commercial timbers; considered the lightest and softest hardwood; easiest to cut of commercial woods;

"**Balsa**" is the Spanish word for "raft;" Ecuador supplies 95% of commercial balsa

If you have questions about a specific wood, don't hesitate to send a note to wood@coloradowoodworkersguild.org.

2017 Guild Officers


Jim McNamee– President
president@coloradowoodworkersguild.org


Clifford Whitehouse—Vice President
vice-president@coloradowoodworkersguild.org


Laura Peterson – Treasurer
treasurer@coloradowoodworkersguild.org


Gary Glatthar – Secretary
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Bob Kleinfeldt – Board Member at Large
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Guild Committee Chairs


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Stan Wolpert—Classes Chair
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Wilbur Goltermann—Webmaster –
webmaster@coloradowoodworkersguild.org

CWG Sponsors

The Colorado Woodworkers Guild is fortunate to have several companies as Sponsors. Our Sponsors help the Guild with programs, materials, supplies, facilities, display space, financial, and other means. In many cases, Guild members are able to obtain discounts from our Sponsors (except for power tools and sale items). Please note: the Guild discounts only apply to in-person purchases in the store (except where noted) and are not available at any sponsor's online store. You must show a current membership card to obtain the discount

A Cut Above 16512 Arminta Street Van Nuys, CA 91406 Phone: 800-444-2999
Website: www.acutabove.com

Austin Hardwoods of Denver, Inc. 975 W. Mississippi Denver, CO 80223 Phone: 303-733-1292
Website: www.austinhardwoods.com

B & B Rare Woods 871 Brickyard Circle, Unit C4, Golden, CO 80403 Phone: 303-986-2585
Website: www.wood-veneers.com

Bear Woods Company: 6099 228 Street, Langley, BC, V2Y 2L3 Phone: 800 565-5066
Fax: 888 599-1118 Website: www.bearwood.com

Charlie's 2nd Hand Store, Inc. 2227 Larimer Street Denver, CO 80205 Phone: 303-295-1781
Website: www.usedtoolsplus.com

Collector's Specialty Woods 4355 Monaco Street, Unit A, Denver, CO 80216 (this is their Denver showroom and warehouse) and 8055 County Road 570 Gardner, CO 81040 (this is their southern Colorado wood yard, kiln drying facility, woodshop, and another show-room) Phone: 800-746-2413

Denver Woodworking Company 2062 S. Bannock Street Denver, CO 80223 Phone: 303-733-3130 Website: www.denverwoodworking.com

Mile High Tree Care, Inc. 6010 W. 56th Avenue, Arvada, CO 80002 Phone: 303-292-9393
Website: www.milehightreecare.com

Frank Paxton Lumber Company 4837 Jackson Street Denver, CO 80216 Phone: 303-399-6047
Website: www.paxtonwood.com/denver.aspx

Reclaimed Boxcar Flooring Phone: 303-913-6373
Website: www.reclaimedboxcarflooring.com

Rockler Woodworking and Hardware 2553 S. Colorado Blvd Denver, CO 80222 Phone: 303-782-0588
Website: www.rockler.com/retail/denver-colorado-hardware-store.cfm

Signature Medallions 4218 Ponce De Leon Drive La Mesa, CA 91941 Phone: 619-303-2876
Website: www.signaturemedallions.com

TC Woods 5406 County Road 23 Ft. Lupton, CO 80621 Phone: 3-666-8989
Website: www.tcwoods.com

Tool Zone, Inc. 8651 Grant Street, Unit 1A Thornton, CO 80229 Phone: 303-252-8500
Website: www.toolzone.com

Woodcraft of Denver 6770 S. Peoria Street Centennial, CO 80112 Phone: 303-290-0007
Website: http://www.woodcraft.com/stores/store.aspx?id=305

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