

Meeting Notice:

Feb: Tuesday the 27th at 5:00 PM

Location: Bldg 131 Ash Conf Rm

Subject: More on Bandsaws

Project: Food Serving ware

Knot News

COLLINS WOODWORKERS GUILD NEWSLETTER

Next month:

We will be visiting Ron Kositzky's shop. If you wish to bring a comfortable chair please feel

Ron's shop!

welcome! His shop is at [3711 Blue Mound Dr NE, Cedar Rapids](http://www.rockler.com/how-to/solving-band-saw-blade-wander/)

This month's subject:

Bandsaw Blades

A bandsaw is an amazing machine. It's capable of making extremely precise cuts; from slicing sheets of thin veneer to cutting intricate curves. Yet many of us think of our bandsaws as being for rough work only. Why? Probably because our first attempts at precision work, like resawing, were thwarted by ordinary blades. It's probably not your saw or your technique, it's your blade that's the problem. Take a premium bandsaw blade for a spin and you'll be amazed at the difference.

Most bandsaws come with ordinary carbon-steel or spring-steel blades. These blades are okay for general bandsaw work but the untreated metal is not designed to withstand the rigors of resawing. Resawing wood is essentially rip cutting a board across its width (Photo 1). There's a tremendous amount of wood to remove and the heat and abrasion caused by resawing will quickly wear out an ordinary blade. Premium blades have hardened teeth, and they far outlast ordinary blades. There are three basic types of premium blades; flex-back, hard-back and bi-metal (see Fig. A, below). Shopping for bandsaw blades is like trying to pick a long distance phone company. There are so many variations and confusing terminology its hard to know what you're getting. For starters, you've got silicon steel, tungsten steel, carbon manganese spring steel, or, my personal favorite, cobalt/molybdenum high-speed steel.

The real question is "How do the blades perform?" That's what we looked at in this test.

If you only resaw on occasion and want a blade primarily for general-purpose work, a flex-back or hard-back blade is your best choice. For hard-core resawing, the hard-back or bi-metal hook-tooth blades with three tpi

More on Bandsaws—Blades & Fixtures

did the best overall job. A bi-metal blade is considerably more expensive but it will far outlast a hard-back blade because of the extra-hard, high-speed steel used to form the teeth (Fig. A, above).

Blade Thickness

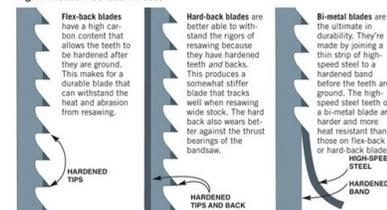
We recommend a maximum blade thickness of .025-in. for use on a 14-in. bandsaw. Most 14-in. saws are just not built to properly tension a blade thicker than .025 in. and the thicker the blade the more tension it takes to make it work properly. Also, forcing a thicker blade around a 14-in. wheel at 35 mph can lead



This story originally appeared in American Woodworker December 2001, issue #91.

Solving Bandsaw Wander: <http://www.rockler.com/how-to/solving-band-saw-blade-wander/>

Fig. A Premium Bandsaw Blades



to metal fatigue and possible breakage.

Be sure to clean and lubricate the blade.

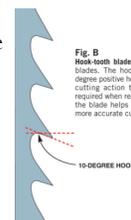


Fig. B Hook-tooth blades are our top choice for resaw blades. The hook-tooth blade has a 5° to 10°-degree positive hook. This makes for an aggressive cutting action that lessens the feed pressure required when resawing. The reduced pressure on the blade helps to keep the blade straight for a more accurate cut.

This month:

More on Bandsaws

Blade Width

For resawing you want to use the widest blade your saw can handle. A wide blade resists bending as stock is pushed into it. This is commonly referred to as “beam strength.” Another advantage to wide blades is their ability to dissipate heat. The extra metal acts as a heat sink, drawing excess heat away from the teeth. Note: Most 14-in. bandsaws can take a 3/4-in. blade, but be careful! Most 3/4-in. blades are also too thick (.032-in. or greater) for your saw. So, it’s the thickness of the blade that limits how wide a blade you can put on a 14-in. saw. For the most part, you are limited to 1/2-in.-wide blades in order to stay within the .025-in. thickness limitation. Some notable exceptions are Olson’s All-Pro (AP77105) and Grizzly’s Carbide Embedded blade, which are 5/8-in. wide. The Timber Wolf AS-S series is 3/4-in. wide but only .025-in. thick.

Teeth Per Inch (tpi)

Use a three tpi blade for resawing on a 14-in. bandsaw. The larger teeth on a three tpi blade have deeper gullets that help carry the sawdust through the cut without binding. A four or a six tpi will give you a slightly smoother cut, but you’ll have to slow your feed rate down on wide stock.

Tooth form describes the shape of the tooth. A hook tooth is the best tooth form for resawing. The hook angle cuts aggressively and has a self-feeding action that reduces feed pressure (Fig. B, below).

Durability

If you do a lot of resawing, you may find bi-metal blades worth the extra money because the extra-hard teeth are designed to outlast hardened carbon-steel blades.

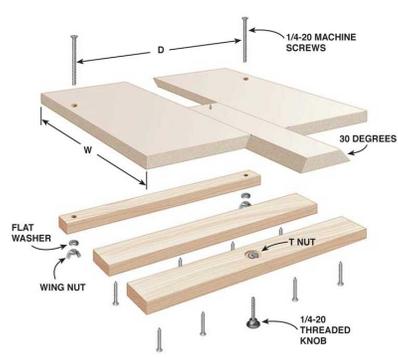
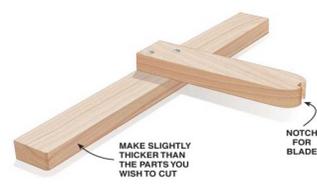
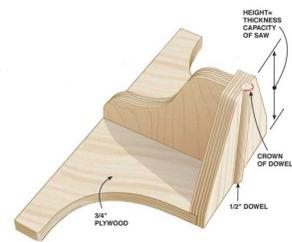
Here were two blades: Highland Hardware’s Wood Slicer blade and the Timber Wolf AS-S gave the smoothest cuts of all the blades we tested. Carbide blades are the ultimate in durability. But, the \$100 - \$200 price tag keeps them out of reach for most shop owners.

Fixtures

For resawing, it’s best to use a resaw fence that compensates for the drift of the blade. If you only need to resaw a board or two, a single-point fence is the way to go. The round face of a dowel is the only surface the material bears against.

For identical parts using a template, create a pattern cutter. It’s a lot easier than following a line. The pattern cutter will help consistently cut within 1/16 in. to 1/8 in. of the template; then trim off the waste with a pattern-cutting router bit.

A jig makes cutting circles a snap. Fit the jig to your saw. With a 1/4-in., 4-tpi blade on the saw, make a notch in the blank for the blade to start in, on an edge of the blank. Mount the jig to the saw table. An adjustable dovetail slider, and a screw for a pivot point. The pivot point must be aligned with the front of the blade. Clamp the jig to the table, measure from the blade to the jig’s pivot point, for the desired radius, and lock the slider. Put the blade in the blank’s notch, center the blank on the jig, and press the blank down onto the pivot point. Spin the blank to cut a perfect circle.



Next Month Meeting

Ron Kositsky

We will be visiting Ron Kositsky’s shop at [3711 Blue Mound Dr.](http://3711BlueMoundDr.com) [NE](http://NE.com) in Cedar Rapids. This will be exciting to see another shop and take notes on Ron’s setup and tooling choices. We’ll try to work through some demonstrations of techniques on how to flatten wood pieces.

Last Month meeting

The CWG met at President Joel Gillett's shop, a new 36'x40' heated building. An enviable shop with an office, utility space, a bathroom, and



trenched for power and dust control. We toured around, saw outdoor life out the windows. Joel then shared a WWGOA video by George Vidraska on bandsaw on his tv in the shop.

We were then able to experience a bandsaw demonstration. Joel changed out a blade, put a plug in for E&J Tool Grinding(now A1 Precision Sharpening) for good blades. He then did some resawing, and explained how to get book-end boards.

Then we were treated to chili and soft drinks. We discussed other methods of saw mills, chainsaws, large commercial bandsaws, and circle saw.

Bandsaw / Joel's shop



Last Month Project

January's project was to be made from pallet wood. Joel's project was the work bench he's had from college days, made from rail pallets used to transport large pipes. Two other members described their projects they made from pallets. In addition another member brought his finished spoons that were the December meeting's project. And one last project by Ron Kositzky made from aged cedar made it a very light-weight box.



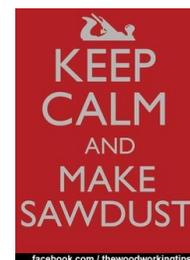
Pallet Wood project

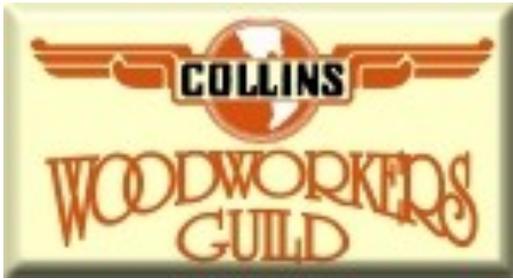


Upcoming projects:

- March:** Plywood Core project
- April:** Patio Project
- May:** Noise-maker, musical or otherwise
- June:** Box Joints/Fixtures
- July:** Handles/Knobs
- August:** Inlays

We would really LOVE to come see your shop. Would you be willing to open your [garage] door some time?





The Collins Woodworkers Guild is a club dedicated to preserving the age old practice of creation using the medium of wood. CWG members gather monthly to share tips, ideas and experience to further the knowledge of all members. From creating heirlooms for their families to Toys-For-Tots, members help each other get the most out of their woodworking experience.

Membership in the Collins Woodworkers Guild is open to ALL Rockwell Collins, Inc. Employees, Spouses, Retirees, and Contract Employees, AT ALL ROCKWELL COLLINS LOCATIONS!! Everyone is welcome at our meetings and yearly dues, renewed each September, are \$17.00

GUILD BENEFITS

- Access to our EXTENSIVE library of books, magazines and Tool Collection
- Open exchange of ideas, from project help to house building; and a hand when needed
- Social Activities
- Workshops
- Toys-For-Tots and other Programs to help our Community
- Educational and Informative Presentations
- Open Houses
- Tours

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