Knothole News

www.greencountrywoodworkers.org

PRESIDENT'S MESSAGE

Greetings,

I'm looking forward to the next meeting, we'll get to see Harold Blalock's new shop space and hear a presentation on shop organization. Harold has a clean slate to work with and will be pleased to share his ideas and to hear your favorite "organization" ideas. Bring them along, with pictures if you can.

We will also be spending some time firming up the details for the October Club Toy Build at Earle Smith's. If you have a sample of one of the models bring it, along with any jigs, fixtures, tools, methods or ideas you've found useful. Jim Rouse would like to know what your wheel and axle needs will be for the Build. Earle would like to get a good idea of what tasks will be left to accomplish so we can be set up to do so.

(continued on page 3)

THIS MONTH'S MEETING

Thursday, September 12, 2019 at 6:30PM

We will meet at Harold Blalock's shop

(see page 7 for directions and a map)

This month's topic is about

"Shop Organization"

Officers

President
Bill Nay 918-492-8481

Vice-President
Gregg Zumwalt 918-605-2761

Secretary
Bill Morgan 918-369-6435

Treasurer
Ray Hucek 918-618-2980

Club Committees

Membership Management
Vacant

Continuing Board Member
Harold Blalock

Luncheon
Bill Morgan 918-369-6435

Name Tags
Ray Hucek 918-618-2980

Newsletter
Mike Ruttgen 620-717-4520

Program Coordinator
Vacant

Toys / Show & Tell
Betty Zumwalt 918-249-4663

Toy Wheels & Axles
Jim Rouse 918-636-9286

Minutes from Last Month's Club Meeting
by Bill Morgan

The GCWW met on 8/8/19 at Bill Nay's shop. In attendance were Bill Nay, Gregg Zumwalt, Arthur Barber, Harold Blalock, Jim Rouse, Ed Sherman, Stan Townsend, and Bill Morgan. Bill Nay called the meeting to order and led the group in a discussion of a few items of club business:

The September meeting will be at Harold Blalock's recently completed shop building. Harold is soliciting ideas for optimizing his shop layout. Earle Smith will host the October meeting and the main focus will be on completing and assembling toys for the Christmas donation to Toys for Tots. The November meeting will be at Robert Rothenbucher's shop and our December dinner meeting will be at The Silver Skillet. Gregg Zumwalt will follow up on making the reservation.

Jim Rouse distributed copies of a set of plans that detail various parts that can be assembled into a number of different wheeled toys (panel van, minivan, pickup and semi truck). Several people signed up build a number of the toys. Jim will furnish the wheels and axles and we'll plan on drilling the axle holes and adding the wheels at the October meeting at Earle's shop. Jim is ordering an additional 1000 wheels and Bill Nay has ordered 2000 nylon washers.

Jim discussed some of the techniques and jigs he uses to build toys and led a discussion of alternate toy designs and materials. Gregg Zumwalt mentioned that Walmart carries reasonably priced acrylic latex paints in a range of colors from Rustoleum.

Bill Nay presented a good overview of the use of abrasives in woodworking. In general abrasives are small sharp particles that are bonded to some kind of substrate and act as multiple cutting tools to remove material. While commonly referred to as "sand paper", the "sand" can be garnet, silicon carbide, aluminum oxide or various kinds on ceramic materials and the "paper" can be paper, cloth, metal, mylar or one of many other materials.

These materials can be combined to form simple abrasive sheets, belts, pads, wheels, sleeves or any number of special shapes designed for specific needs. Bill has an extensive shop and showed samples of several different abrasive types and a range of grits. He discussed the progression of grits that he uses when sanding and finishing a project. The coarsest grit is used to remove any defects in the wood and each successive grit just removes the marks left by the previous grit. Depending on the surface condition of a board, Bill usually starts with around a 100 grit and progresses in stages up to around 220 grit. Finer grits can actually cause problems when staining some woods.

The most common power sanding tool that most of us use is the random orbit sander. Best results are obtained when you avoid the temptation to "bear down" a little on problem areas and are mindful of the speed with which you move the sander along. A rate of about 8 to 10 seconds per linear foot with an overlap of about 1/3 of the previous pass is generally recommended.

Bill also discussed several approaches to hand sanding. Sanding blocks and sponges are almost a necessity to keep the surface you're sanding flat. Sand paper can be attached to a block by several methods and using a spray on adhesive is one of the quickest and easiest ways. Sanding blocks can be flat or contoured to match almost any shape.

Abrasives can be purchased almost anywhere, but Klingspor is a good source to order direct at reasonable prices. Gregg Zumwalt mentioned that Abrasive Specialties has a local outlet and he's been pleased with both the availability and pricing.

President's Message (continued from page 1)

If you need any assistance on anything concerning the build, be sure to give a shout out. I'm sure we can find that knowledge, procedure or tool that you are needing.

Remember Show and Tell. Also, bring a buck to buy a raffle ticket for the pair of nifty clamps that Gregg donated, you just might win and the Club will have a few more dollars for wheels and axles.

Bill Nay, President

Reminders

Upcoming Meeting Locations

October	Earle Smith's
November	Robert Rothenbucher's
December	The Silver Skillet

Open Positions

- Program Coordinator
- Membership Management

Photos from Last Month's Meeting

An assortment of abrasives, sanding blocks and sandpaper cleaner stick (eraser)

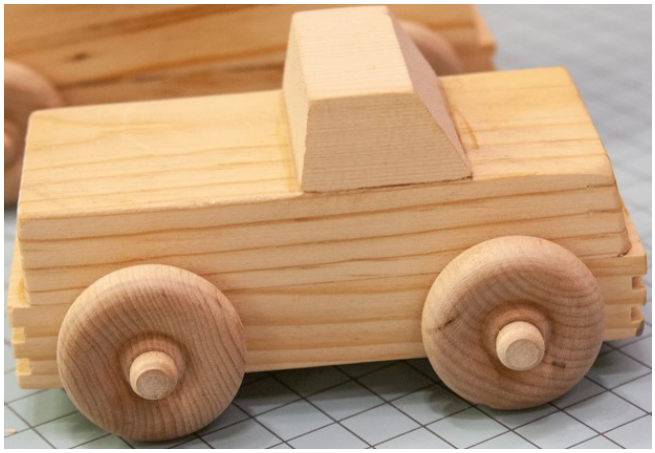
Photos from Last Month's Meeting (continued)

Bill Nay had a nice display of power sanders (belt and random orbital), flap sanding wheels, pack dispenser, string, drums, pads, sponges, etc. Having the right tool makes sanding less tedious.

Spray adhesive is a great way to adhere sandpaper to a block of wood.

Toy Photos from Last Month's Meeting

We had a great variety of toys to see during the toy planning session.



Toy Photos from Last Month's Meeting (continued)

Jim Rouse discusses the toys he brought.

An old credit card makes a great spacer when attaching axles.

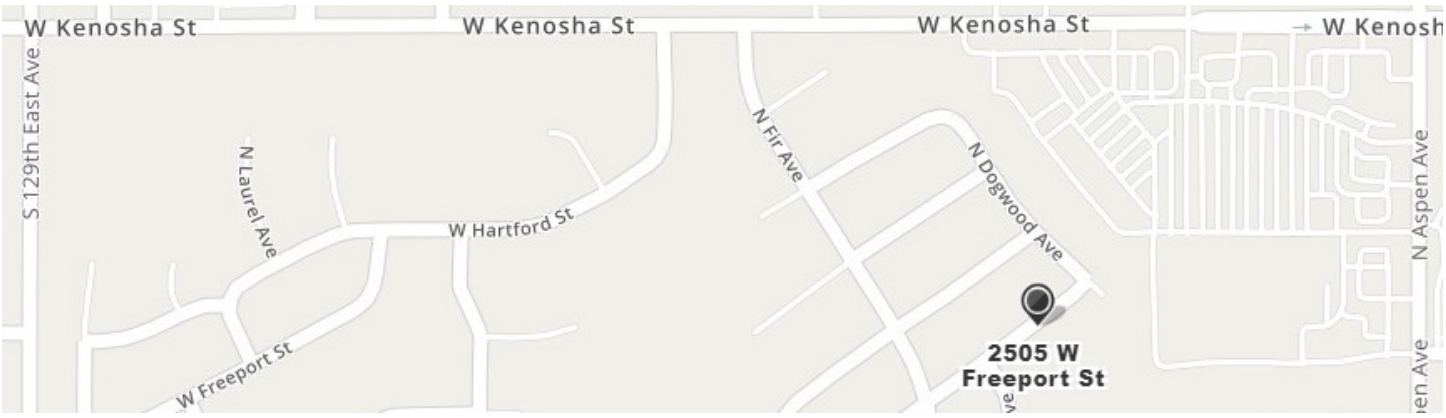
For Sale

Mike Ruttgen would like to sell his Rockwell International wood lathe that he purchased back in 1982. Includes 4-speed lathe, stand, 1/2 hp motor, wrench, head stock, live tail stock, Shopsmith chisel set and owner's manual. $350 OBO.

If interested, call (620) 717-4520 or email rruttgen@att.net.

Our next meeting will be on Thursday, September 12th, 2019 at 6:30PM at Harold Blalock's Shop 2505 W Freeport St Broken Arrow, Oklahoma

- From the intersection of US-169 & E 71st Street South
- Go East on 71st Street (W Kenosha St) approximately 2 miles
- Turn right (South) onto N Fir Ave
- Take 5th left onto W Freeport St
- Proceed to 2505 W Freeport St; Harold's house will be on the right



GREEN COUNTRY WOOD-WORKERS

The Green Country Woodworkers are made up of men and women who are interested in woodworking as a hobby.

The monthly meetings are conducted as educational forums for the benefit of our members and guests. We have idea exchanges, problem solving sessions, safety tips and tool tips plus a main speaker on topics related to woodworking in all its phases.

The club sponsors community service projects such as making Toys for Tots at Christmas and supporting Beads of Courage by turning bowls and making boxes for children undergoing cancer treatment at Children Hospital at Saint Francis. The containers hold the children's beads. The beads represent their treatment progress.

OBJECTIVES

- To provide the Knothole News, a monthly newsletter
- To promote woodworking and participate in woodworking and craft shows to inform the public of club activities
- To make wooden toys which are donated to selected organizations throughout the year
- Monthly Show & Tell; all items entered in the show and tell will be presented to the membership by the builder

Membership applications are available at each meeting from the club secretary or treasurer. At this time, no membership fee is charged.

MEETINGS

The club meets on the second Thursday of each month at 6:30PM, typically at a designated member's shop. The upcoming location and topic are published in advance in the Knothole News.

We also have a monthly dinner/social on the 4th Thursday of the month at 6:00PM; the location is determined during the regular monthly meeting.

WWW.GREENCOUNTRYWOODWORKERS.ORG

Please be sure to check out our new web site for more information about the organization, past Knothole News publications, pictures, resources, etc.

KNOTHOLE NEWS

c/o Mike Ruttgen
rruttgen@att.net
(620) 717-4520, landline

This article was submitted by Gregg Zumwalt.

You may download a soft copy here:

https://www.highlandwoodworking.com/library/manuals/rikon/bandsaw_blade_selection_guide.pdf

How-To's for all Band Saw Blades

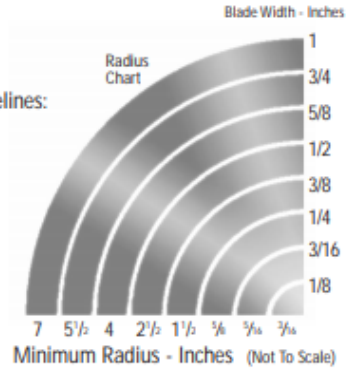
Choosing the Correct Blade Width

Blade width is measured from the tips of the teeth to the back edge of the blade as shown above. The instructions for the particular machine being used should be followed when selecting blade width.

If no such instructions are provided, blade width should be determined with the following guidelines:

For Cut-Off Sawing, the blade should be as wide as the machine will allow. The wider the band is, the straighter the cut will be. Faster feeding can be achieved.

For Contour Sawing, the blade should be as wide as the machine allows, but still narrow enough so that it can cut the desired shape (radius). Minimum dimensions for different cutting radii are shown on the chart at right.



How To Choose The Correct Number Of Teeth Per Inch (TPI)

The number of teeth per inch (TPI) is important in obtaining the finish desired and the proper feed rate. A coarse tooth blade (2, 3 TPI) should be used for resawing wood and cutting thicker stock up to 8". A fine toothed blade (18 to 32 TPI) should be used for thinner metals and plastics under 1/4". For general cutting of 3/4" wood 4 TPI will provide a fast cut and 14 TPI will cut slow, but leave a smoother finish.

When Selecting TPI remember:

- More TPI give a smoother but slower cut
- Fewer TPI allow a faster cut with a slightly rougher finish
- At least three teeth must be in the workpiece—the chart to the right will help you decide.

TPI	Minimum Material Thickness
32	3/32"
24	1/8"
18	5/32"
14	1/4"
10	5/16"
8	3/8"
6	1/2"
4	3/4"
3	1"
2	1-1/2"

It is important to know the SFM for the various speed settings of your band saw, so that you can select the proper speed for cutting wood or other materials. Check the operator's manual of your band saw to determine the SFM or use the following procedure:

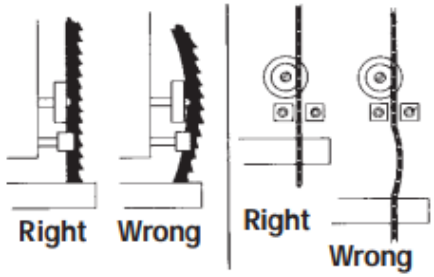
1. Determine the RPM: check the operator's manual or clock the revolutions per minute of the wheels with a tachometer or revolution counter.

2. Measure the diameter of the drive wheel in inches and multiply by .262 to obtain the wheel circumference. The RPM times circumference equals the surface speed of the blade. **RPM x diameter in inches x .262 = SFM.**

Note: Spring Steel Wood Cutting Band Saw Blades should never be operated at surface speeds above 3000 SFM. Carbon Hard Edge Flexible Back Band Saw Blades may be run up to 8000 SFM.

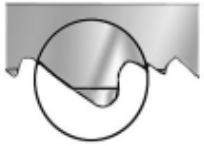
Installing your Band Saw Blade

1. Unplug the saw, then loosen the tension on the upper wheel. With all the blade guides backed off, slip the new blade around the wheels and then tension it.
2. When you have tensioned the blade enough to keep it on the wheels, track it by turning the upper wheel with one hand while adjusting the tilt of the wheel's axis with the other hand. The blade should ride in the middle of the rim. **Never track the blade with the motor running and the cover open.**
3. Next, adjust the blade guides; first the thrust bearings: upper and lower, then the left had side guides.
4. Use a square to make sure you are not pushing the blade out of line and place a piece of white paper between the blade guide and the blade to allow for clearance.



Diagnosing Problems

1. Premature and Excessive Tooth Wear



- Feed pressure too light, increase it.
- Lower band velocity.
- Improper tooth selection, use a finer pitch.
- Improper break-in with new band. Velocity and feeding should be reduced the first few cuts.
- Teeth are running the wrong direction. Be sure teeth are pointing in proper direction.
- Incorrect saw guide insert size for the band, allowing them to strike teeth

2. Blade Vibration

- Increase or decrease band velocity.
- Increase tension of band.
- Teeth too coarse for workpiece.
- Increase feed pressure.
- Material not securely held.

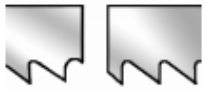
3. Gullets Loading

- Teeth too fine for workpiece - use a coarser pitch.
- Decrease band velocity.

4. Band Stalls in Work

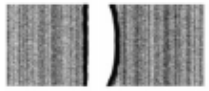
- Feed pressure too great - decrease feed.
- Teeth too coarse, use finer tooth blade

5. Premature Blade Breakage



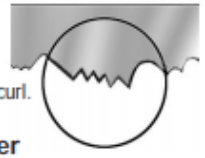
- Thickness of blade too heavy for diameter of wheels and speed of machine
- Increase or decrease velocity
- Check wheels for defects
- Teeth too coarse for workpiece –use a finer pitch
- Decrease blade tension
- Decrease feeding force
- Brittle weld – increase annealing period, decreasing heat gradually
- Check for proper adjustment of band guides, saw guides, saw guide inserts. and back-up bearings.

6. Blade Making Belly-Shaped Cuts



- Increase tension.
- Adjust guides closer to workpiece.
- Teeth too fine – use a coarser pitch.
- Decrease feed force.
- Teeth dull.

7. Tooth Strippage



- Teeth too coarse for workpiece.
- Material not securely held.
- Too much feed pressure –reduce for good chip curl.
- Band velocity too low – increase speed.

8. Band Develops a Negative Camber

- Band is riding on saw guide backup bearing too heavily. Adjust band for alignment on top and bottom wheels.
- Check band wheel alignment.

9. Blade Not Running True Against Saw Guide Backup Bearing

- If clicking noise against saw guide backup bearing, remove burr on band.
- Check band wheel alignment.
- Check saw guide backup bearing for wear, replace if necessary
- Weld not in proper alignment. Reweld blade straight and true.

10. Cutting Rate Too Slow

- Increase band velocity.
- Increase feed pressure.
- Use a coarser pitch.

11. Blade Leading In Cut

- Reduce feed pressure or rate.
- Check adjustments and wear of saw guides or rollers.
- Lack of band tension.
- Tooth set damage.

12. Premature Loss of Set

- Improper width selection - check chart for correct width for radius cutting.
- Reduce band velocity.

13. Band Develops Positive Camber

- Decrease force.
- Use a coarser pitch to increase tooth penetration.
- Adjust saw guides closer to work.

14. Band Develops Twist

- Wrong width for radius being cut – choose a narrower blade.
- Binding in cut – decrease feed pressure.
- Decrease band tension.
- Adjust saw guides further from workpiece.

15. Finished Cut Surface Too Rough

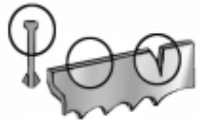
- Improper tooth selection – choose a finer pitch.
- Increase band velocity.
- Decrease feed rate.

16. Band Scoring (side wear or grooving)

- Check for wear on saw guide inserts.
- Too much pressure on saw guide inserts.
- Check alignment of saw guides – be sure they are square to front vise. Replace or clean guides.

17. Burring or Mushrooming of Blade Back Edge

- Increase tension and adjust guides.
- Check contact between blade and back edge rollers.
- Reduce feed pressure.
- Use coarser pitch blade.
- Use finishing stone.



And here is a link to a Youtube video to help with your band-saw blade alignment.

https://www.youtube.com/watch?v=jTjwPo0VtaQ

Wood Review TV
Published on Nov 25, 2016

Peter Young gives a step by step demonstration of how to adjust the blade, instead of the fence of the bandsaw, to compensate for drift.