

BASIC WOODTURNING OR MODIFICATION OF FIBEROUS MATERIAL

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For those who attended the basic woodturning course at my shop and others who may find it useful.

Basics to be covered so that you can enjoy this wonderful craft:

Safety	Face Plates	Lathes
Tool Sharpening	Chucks	
Lathe Speed	Tools	

Keep in Mind:

- Sharp tools.
- Have fun – its only firewood.
- Practice turning.
- Keep an open mind.
- Be relaxed.

Safety:

- Safety glasses – when turning or sharpening.
- Face Shield – always use when removing bark and where there is loose or soft material.
- Dust Mask – use a good quality product.
- Dust Collection – use fans, vacuum or vacuum systems.
 - These two should always be used when sanding and when turning spalted material.
- Do not wear loose clothing – roll up sleeves and remove watch and jewelry. If hair is long – tie it up.
- Accidents happen with great suddenness.

Lathes:

Lathes come in many sizes, prices and quality. Your choice of lathe will depend on what you plan to turn. Check with other knowledgeable turners and if possible practice on different makes.

The spindle height should be about the same as your elbow. You may need to add risers to the bottom feet of stand or in some cases a higher stand, but in all cases be comfortable.

Tools:

Carbon steel – these are the older turning tools, but can still be purchased. They need to be sharpened more often, but they do have a sharp cutting edge. Need careful sharpening as the temper is quickly lost with too much pressure or on long grinding time will turn blue.

High speed steel – these are my choice – they stay sharp longer, are more expensive – they are carbon steel. Be careful when purchasing as some are a lower quality HSS and do not have a good shape or thickness.

Check with other knowledgeable turners. Home made tools – be careful – I think it is safer to purchase. I do use some small scrapers made from allen wrenches – tool steel – and some cutting tips silver soldered and or glued to a steel rod or shaft.

Spindle Turning:

Between center turnings – lamps – chairs rungs – balusters – newel posts, etc.
Many ask about speed – following is a guide:

2x2 - up to 2000 RPM
3x3 – up to 1500 RPM
4x4 – up to 1200 RPM
5x5 – up to 750 RPM
6x6 – up to 500 RPM

If turning a log which is unbalanced use a slower speed – no vibration on lathe. If in doubt – slower is safer except when crossing the road.

Alignment – before mounting the material check to see that the two points on head stock and tail stock match.

A live center is best for the tail stock. At the head stock use a spur drive or a dead center to drive material. Always check during turning to make sure the material does not come loose.

Tool rest – keep clean- use a file to smooth out any nicks – use sandpaper to clean off any junk – this is the only thing that doesn't need practice, but will improve your turning.

Recommend maximum reach over tool rest.

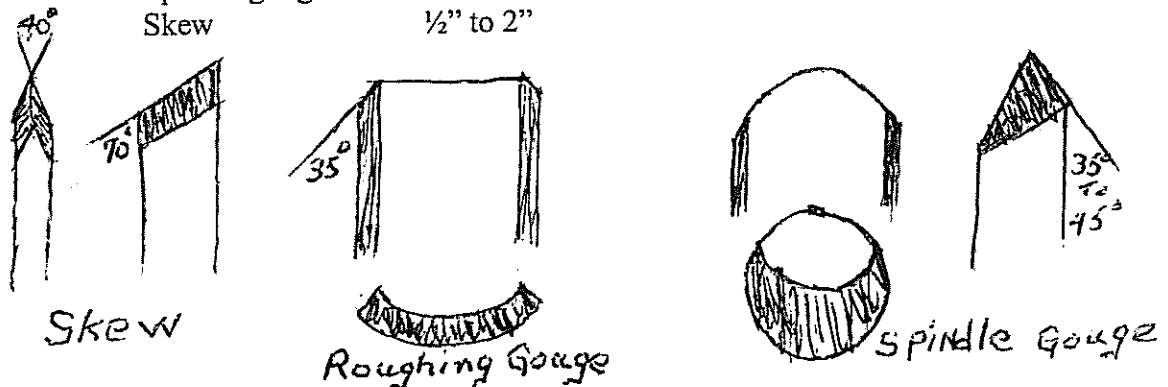
Do not exceed.

Spindle Gouges:

Gouge	Shaft Diameter	Max Reach
1/4"	1/4"	3/4"
3/8"	3/8"	1"
1/2"	1/2"	1 3/4"
9/16"	9/16"	1 3/4"

Let's start spindle turning -

Tools – Roughing gouge 3/4 to 1 1/2"
 Spindle gouge 1/4" to 1/2"
 Skew 1/2" to 2"



Mount stock to lathe between centers – tighten the tail stock lock. Place tool rest at or slightly below the center line – use roughing gouge to bring stock into round. Begin at tail stock end and work toward the head stock. Change hands and round down the last few inches – cutting toward the head stock. Then bring the stock to round. Be sure to place tool next to body and on tool rest. Raise handle until tool begins to cut – flute is in direction of cut – have feet spread apart and move body – tool in direction of cut. Keep moving toward head stock, but cut toward the tail stock until stock is round.

Always keep the bevel of the tool rubbing. Do not just use your hands and arms to make the cut – use your whole body.

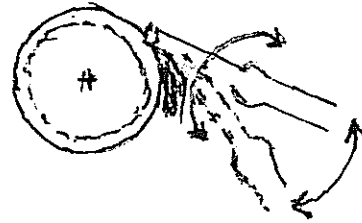
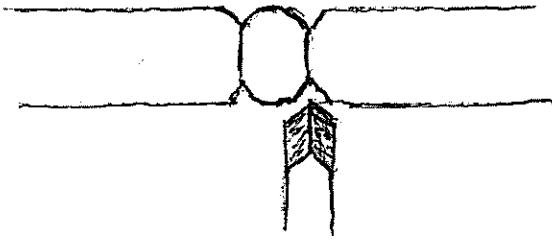
Always keep moving the tool rest close to the wood 1/4" to 3/8".

Now to the skew – it is properly sharpened and ready to smooth the stock. Raise the tool rest slightly above center. Place tool on tool rest and move the tool forward until the bevel is rubbing. Lift tool handle until the cutting edge begins to cut either to the left or right with body movement. Do not try to enter at the end of the stock, you can smooth that down later as you cut from the other direction. Always cut from the center of the tool down to the heel. If you are cutting above the center of the tool you will get a catch. All smoothing cuts are made with body movement – not with hands and arms. Do not take a heavy cut – always rub the bevel. If you need to press the tool down hard on the wood to get a cut your tool is dull – sharpen.

Practice – practice –practice

Cutting beads and coves:

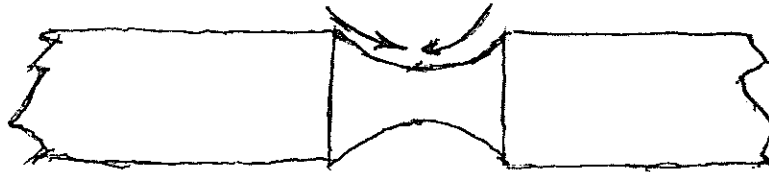
Beads are cut with a skew – parting tool or beden tool. The skew is usually the tool of choice when making beads. To start place tool on tool rest with long point down – do not push straight in, but have handle down – move tool forward – then raise handle and begin what will become the valley between beads. You can use either the long point or short point (heel) to make beads. I use the heel and begin thin cuts with bevel rubbing. When cutting from right side tip the skew about one minute before 12:00 and when cutting from left side tip the skew about one minute after 12:00. This will prevent a catch. Always keep the bevel rubbing. When finishing the bead the tool should be perpendicular to the wood in the bottom of the bead.



If steeper than 40 to 50 degrees the tool will bottom out before the cut is completed.

Covers are cut with a spindle gouge with the flute pointing in direction of cut. Always cut down hill – keep the bevel rubbing.

Practice



Practice