

**Woodturner** n. A person who enjoys the art and process of shaping wood into various forms

"ask not what your guild can do for you; ask what you can do for your guild— you get back what you put in"

LOCAL AAW CHAPTER

## March 2010 VOLUME 6 ISSUE 1



# Message from Jack Wallace, President



As I write this note I have just completed a weekend with Kurt Hertzog as the demonstrator and teacher. We had a very successful session with great results. Thirtyfive members of WGO and TWG attended the Sunday demonstration and on Monday and Tuesday we had a sellout for hands-on at Joe Houpt's home. Every person spent the day making Ornaments. Now you know what to expect at the next "Show and Tell"! We all owe Kurt a great salute of thanks.

For the rest of this season we have a dynamic group of well respected demonstrators scheduled. In early February we will be hosting Alan Lacer. Alan has a great reputation for turning and both he and his wife Mary, have for years been a driving force behind the AAW. In April we will be hosting Curt Theobald who is an outstanding segmentor. His true touch is in making it all look easy! I do hope that many of you will want to participate in this seminar. In May we will be hosting Bonnie Kline who will be doing a demo of small items for which she is noted. She is also going to be the teacher at 2 hands-on sessions. These area sessions you just don't want to miss!

As we get closer to these events, watch the website for details and tickets will be available from John at Woodchuckers and from Peter at Artistic Wood. Be sure to watch for them and get your name on the list before the events are sold out.

This year we have been actively improving the database for the records of Club Members. The records have been moved from the old database of EXCEL and have been entered into a database using Microsoft Access. It is however necessary to have some backup capability here. Garry Berry is now using the template that I built for him and I am now asking for a volunteer to be available to help with any needed design changes in the template. If you feel you can help it will be appreciated. You do need to know or have some knowledge of Access and rudimentary VBA. This database is very important information for the club.

**Table of Contents** Turn a vase, part 2 2 Woodturner a winner 6 Sanding & Finishing 7 Rudy honours Louise 8 Turning Alabaster 9 Video review 10 Making copies 11 Fear & creativity 15 AAW Symposium 15 Hardness of wood 16 WGO officers, etc. 17

**New Members** 

Another aspect of this work is the need to record photos of each member so--- is there a person who can take this on to take and prepare photos for Gerry to enter into the database? You will need to be familiar with digital photos and processing them in Photoshop Essentials or a similar program. Any Volunteers please email me at <a href="mailto:iack@ikwallace.ca">iack@ikwallace.ca</a>.

# Woodturners Guild of Ontario Website: http://www.wgo.ca

President: Jack Wallace jack@jkwallace.ca Past President: Richard Pikul rpikul@sympatico.ca Vice-President: Joe Houpt jbhoupt@sympatico.ca

See page 10 for a full list of WGO Executive Officers and volunteers.

### IT's YOUR GUILD -BE INVOLVED!

Share your talent and learn from others at the same time.

Do you have ideas for us?

Please tell us how you can help - e-mail the editor at:

WGOeditor@gmail.com

## Turning A Vase– Getting Down To It (Part 2 of 2) Ron Stuart



### **CANTEEN SHAPED VASES**

This style of vase is my current favorite, as it opens so many design possibilities, both in shape, size and decorative concepts.

Although traditionally turned using "super jaws" or large shop made jam chucks to hold the vase's large diameter, it can be made with any regular chuck jaws, even with small jawed chucks; with a little care.

The procedure outlined here, in fact, makes it even easier to produce a canteen shaped vase than the traditional procedures; allowing firmer mounting than with super jaws and without having to make different sized jam chucks for each different vase shape and O.D. Additionally, you can fully see both vase sides while turning so that front and back contours can easily be matched.

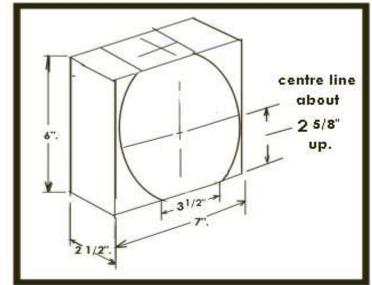
The only "drawback" is that you must have a chucking hole on one face. This opens up a whole world of exciting design opportunities.

In most literature a full blank is turned round and then a section at the bottom is sawed off and sanded to form the base. If you are able to purchase dimensional lumber by length, this approach allows a larger diameter vase to be made from a nominally sized board. (i.e. you can get approximately the same sized vase from a 6" wide board that traditional techniques get from a 7" wide blank).

**BASIC STEPS**: Procedure using rectangular v.s. a square block.

Wood preparation: Select wood and cut blank length approximately one inch longer than the width. If one face and edge are not quite square and flat, select the flattest face, flatten it so it will not wobble on a flat surface. Then disc sand, or by another method, square one edge to it. These two surfaces will be the base and first mounting side.

On the wood, layout the vase O.D. that will be turned by drawing a vertical center line all the way around the blank. Mark off the desired width of the base approximately 50% of the total



width gives a good proportion. Find a vertical center point from which a circle can be drawn through the base lines which just touches each side of the block. It should look like the sketch above. Draw a block width center line across the flat sanded base and across the top edge. Band saw off the top outer corners of the block to approx 1/8 inch outside of the vase O.D. line, which helps balance block for subsequent turning. If using a square block, find the centre and simply draw a full face circle.

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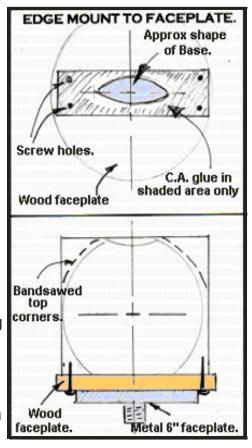
### (Continued from page 2)

**Mounting Block On Base Edge**: (refer to figure on right) On a large, (6") diameter metal faceplate, securely add a wooden face which is approximately 1 1/5" larger in diameter than the metal plate, i.e. about 7" in diameter. Turn round and flat, then locate dead center and mark so that a very small through hole can be drilled which allows for centering of work pieces.

Using the center cross lines drawn on the vase block base create a small dimple or pin hole, sit the block on the face plate center, using a pin or small drill through the plate into the dimple. Draw the block width on the exposed section of the wooden faceplate, then drill one or two screw holes within this area on each end of the faceplate. These will be used to screw the faceplate to the vase block in the waste wood area.

As you will be turning a distance out from the headstock, it is advisable to also use C.A. glue in addition to the screws. Apply the C.A. to the waste ends of the block and just along it's edges, being careful to keep it off middle area which will become the finished base.

Turning To Recess: (Watch out for flying corners) For the suggested size shown in above sketch, a top recess with a uniform radius of between 2  $\frac{1}{2}$  to 3" works out fine. Cut a cardboard template to this radius, marking its center line and the depth that will be turned into the block.



With the faceplate and bowl blank mounted on the lathe, bring up the tailstock center, checking that the vase top center mark is not too far off the actual turning center, (within about 1/8" or so). If not, check that the vase block is square and tight to the faceplate. If it is tight and square, you may start turning but be aware that your vase may need to end up smaller and/or thinner than designed. Using a pencil mark out approximate diameter of the top recess and after moving tailstock back, begin turning to this line, following the template contour. When the recess is completed, use a tailstock mounted drill, or spindle gouge, drill the vase flower hole as deep as possible. A 3/4" diameter hole works nicely.

**Note:** If intended for fresh flowers, find an appropriate sized glass insert, eg. a test tube, and make the hole accordingly.

As a design element, a contrasting wood ferrule can be turned to be inserted into a slightly larger hole, and once glued in can be drilled to final I.D. size. The ferrule can't be made too much wider than approximately. an inch as you run the chance of turning its edges off when turning the vase face..

(Continued on page 4)

### (Continued from page 3)

With the recess, and ferrule completed to your satisfaction, do a final sanding and apply your finish. Remove faceplate from the lathe, remove the screws and knock vase off the faceplate. Hopefully there will be no damage to the base center area, however, if there is disc sand or otherwise repair the surface. Re-true face of the wooden face plate to remove glue/wood adhered to the surface

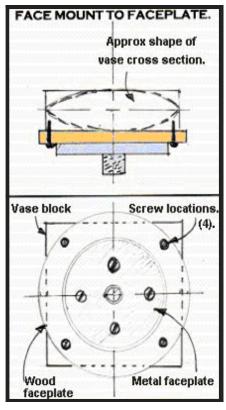
### Turning Vase Front Face (refer to figure on right)

Using the turning center drawn on the vase face, duplicate the center point location on the flattened rear face of the blank, create a small dimple or pin hole from which to center the blank onto the faceplate.

Lay this face onto the face plate, on center, and mark the outer perimeter of the block onto the exposed edges of the large wood disc. Around this perimeter area, locate four equidistant screw holes which will end up in the vase block's waste wood area. Drill faceplate for screws.

Mount the block, on center, onto the faceplate using 4 screws, It is recommended that double sided tape also be used for security. Ensure that the block has been pulled tightly onto the faceplate and that the screws are tight! Pre-drill small screw holes into the vase block and use a clamp to hold the assembly tight while driving the screws.

Mount the faceplate onto the lathe, and bring the tailstock center up to the vase face. It should be off no more than approx. 1/8" from vase center. If it is off significantly, recheck mounting location on the faceplate and the face drawing on the blank, correcting as necessary, A 1/4" off on a 6" circle will be noticeable, but accurately locating centers should prevent this much variation.



Using a bowl gouge, turn the outer edge round to slightly over 1/16" outside the desired final size. True up the outer two inches of the vase face using a bowl gouge on edge. You do not have to remove wood from the center face of the vase at this point. Once the face is running true, measure the block edge thickness and draw a circumferential line around the edge on center as a reference line.

With a gouge, begin rounding the face to the desired contour, blend the curve across the flattened area out to the edge reference line.

(Continued on page 5)

**Special note to WGO members.** This is your Newsletter. Your contributions will make the Newsletter first rate. Share your turning experiences. Help others accomplish that which you have learned, either by learning from others or techniques you have developed.

Tell others about tools you find useful and explain how to use them.

The editor will be pleased to help you put your article in final form if you wish.



### (Continued from page 4)

As you approach the vase outer diameter adjacent to the top recess, stop the lathe to ensure that you will not cut too far into the top center hole/ferrule area.

Once happy with the contour, turn a chuck recess into the face to suit your face design and chuck. Keep the hole edges square, (no taper), and make the recess to the hole depth recommended by the chuck manufacturer for best holding later. There is no need to sand the surface at this point. Remove faceplate from lathe, keeping the vase attached.

### Center Plug Preparation

Select a contrasting wood to create your center plug, (same as the ferrule?), Mount this wood between centers or on a faceplate and turn to the exact size of the chuck hole, with a slight chamfer on the lead-in edge. Although recognizing that A 2" plug will not fit into a 2" hole, still do a test fit of the plug to the chuck hole.

Remount the wood plug and slowly adjust it's diameter until it can be fully seated; providing a fairly snug fit. A very slight taper will help. The plug needs to be fully seated or else it will wobble while being turned and won't maintain a proper fit around it's edges when re-assembled. You do not want the plug overly tight to prevent its later removal to allow turning of the vase opposite face. When happy, cut or part the plug to about 1/8" over the depth of the chuck recess. Now, practice installing and removing the plug from the vase. A good tape will generally "pull" the plug out. If it is so tight that you are not confidant that it can be pulled out once smooth with the vase surface, you have two options. Remount the vase and slightly open the chuck recess, or optionally, decide to make a two sided vase as described later.

### **Vase Front Completion**

Remount the faceplate to the lathe, pop in the center plug ensuring it is fully seated, *Do not glue it yet*.

Using a bowl gouge, take shallow cuts to turn the plug and surrounding area to a smooth contour. Bring the total face surface contour to its final size and shape. Sand and finish the face. Remove from lathe, remove center plug and take vase off the faceplate.

**Note:** If at this time the plug can not be removed with out damaging, you are now going to create a two sided vase. Simply drill a knock out hole into the center of the back side of the vase and push the plug out. don't drill through the plug!

(Continued on page 6)

### **Woodturners Guild of Ontario Newsletter** is published quarterly.

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Views, comments and recommendations expressed by individuals contributing to this newsletter do not necessarily represent those of the Woodturners Guild of Ontario.

WARNING! Woodturning is an inherently dangerous active activity. Readers should not attempt any process or procedure described in this publication without seeking proper training and detailed information on the safe use of tools and machines.

### (Continued from page 5)

### **Turning Rear Face:**

Chuck the vase using the plug hole on it's front face. If you had to drill a knock out hole, at this point decide how to fill it. A small plug to just fit the hole or a plug which matches the front face plug would work.

Whichever redesign revision you decide upon, prepare the hole, clean up or enlarge it, turn the contrasting wood plug to size for a full depth tight fit and glue it in.

Using the bowl gouge, turn the rear face to match the front contour. You can create a totally different shape, but matching faces are more appealing.

Sand and finish the vase.

### Completion:

Remove from the lathe chuck, glue in the front plug, gently tapping to fully seat. If a slight ridge can be felt around any part of the plug, it should be slight enough that gentle hand sanding will correct it.

Refinish and admire!

### **Alternative Face Design Possibilities**

Larger or smaller center plugs: Add plug inserts elsewhere on the face.

Create ring inserts versus plugs. For this, turn a ring recess, turn a ring to fit the recess and chuck within the ring cutout using a compression grip onto the solid center. Note that the ring will fit tighter than a plug and you will probably need to have knock out holes from the reverse side, thus needing a two sided vase.

Design for an almost full faced pattern as an insert, Turn separately and insert as a very large plug. As the plug hole will be larger than your regular chuck jaws can handle, turn a chuck sized recess within the larger plug recess. This chuck recess will intersect the vase center, vertical hole. Don't worry though, as it will be hidden within the vase and will actually make it easier to knock the large front face insert out after turning flush with the face.

Alter the shape of the vase outer diameter by rounding of the edge, beading it, flaring it or ribbing it versus the traditional knife edged design.

### Experiment!

### Nova Scotia Woodturner is a winner!

John Macnab is the Nova Scotia Lieutenant Governor 2009 Masterworks Arts Award winner. Click on this link <a href="http://www.nsmasterworks.ca/en/current\_award\_season/winner.htm">http://www.nsmasterworks.ca/en/current\_award\_season/winner.htm</a> for complete story.

(Submitted by Mark Salusbury)

## Sanding and finishing: The bane of a woodturners existence. Or is it? Mark Salusbury



Why do we turn wood? Beyond the joy and learning we experience in our solitude, it's to produce a finished piece we can be proud of. Now, to produce a finished piece we need to be proficient in three distinct skills; woodturning, sanding and wood finishing.

While it's hard to master all things, lets begin by getting comfortable with some basics so that after the turning is done we don't wince at the thought of what's ahead.

Assuming you've been successful at creating a well shaped and proportioned piece with an acceptable "off-the-tool" finish, the next stage, sanding, is where we take the first step in keeping our following stage, finishing, to the very minimum.

### What's required:

- a firm yet compliant 2" or 3" diameter sanding mandrel/backing pad with a flat face and a recessed profile behind the hook-and-loop surface
- quality abrasive discs (I can't stress this too much) sized to match your mandrel so that the discs overhang the face of the mandrel just slightly (+/- 2mm) in grits from 80 to 800 minimum
- a variable speed electric drill. I like 0 2400 rpm range rather than slower speed drills
- a lathe that will allow you to readily reduce the spindle rpm down to about half your turning speed or less
- good lighting, preferably overhead fluorescent for general illumination plus a quartz 'task' lamp that you can move and locate so you can look at the work, lit obliquely.

Okay, now that we have the materials in-hand lets begin sanding. But first ya gotta put on your "sanding mentality". Sanding is an enjoyable process in which you'll be refining your tool work, your design and the fibres of the wood to within a hare's breathe of your proud expectations.

As in your turning, you want to invest in quality materials that cut well, hold their edge, allow you to follow your preferred profile broadly yet be able to seek into details and produce crisp edges and corner profiles. A good mandrel/backing pad sized appropriately to the profile and/or size of the piece and quality abrasives is your best investment. While it's true that quality costs more, it also lasts longer, produces better results, reduces stress and gives greater satisfaction. You're worth it, please trust me on this.

With the drill in your hand and your lathe speed slowed down to about half your speed when turning you can begin your sanding. Use a light touch and let the abrasive do the work. Too much pressure will only heat up the wood, resulting in tiny heat cracks that you'll never be able to sand away. Sanding has to be a fluid process in which the abrasive broadly removes a microscopic layer of material while you deftly pan the revolving sanding disc across the surface of the piece. Beginning with the coarser grits you'll level your imperfect tool work and tame unruly grain.

Stop your lathe and inspect the piece. Is there still any torn grain? Here's where the quartz "task lighting" and/or strong, diffuse natural light is important. Inspect the piece, still in the chuck, with the light hitting it incidentally, looking at the surface rather than the figure and grain. Sand areas that need spot attention, gently, with the lathe stationary and your sanding disc slowed and in constant movement over the area. Do this while you're at the coarser grit step making sure you remove all the defects, then blend these areas in with the rest of the piece with the lathe running. Move on to the next grit and repeat.

Obviously, the better your tool work the less grits you'll have to go through. Improve your tool work and you'll have to sand less, using fewer abrasives, saving you time and money. That said, a light pass with grits from 80 or 120 through 800 is a good progression to think of.

Why 800 grit or finer? You want your finished piece to have some kind of sheen or luster right?

(Continued on page 8)

### (Continued from page 7)

One way to achieve this is to quit at 200 or 320 grit then layer on coat after coat of varnish to fill in the microscopic, voids, scratches and swirl marks left by your abrasives, at the risk of making a piece that looks like plastic or worse, gloppy. This is a very time and varnish consuming process and the more you fuss, often the worse it gets, kinda like "Brer Rabbit and the Tarbaby" (Uncle Remus Tales) <a href="http://www.longlongtimeago.com/">http://www.longlongtimeago.com/</a> lita fables brer rabbit tarbaby.html.

The other way that produces a better result in my opinion, is to gently and smoothly sand the surface of the piece through finer grits then seal the piece with two, but no more than three conservative coats of varnish, hand sanded lightly with 1000 grit abrasive between coats, then finally buff the piece with a micro abrasive pad, with or without a tiny bit of wax.

Sheen is up to you. If you use a "gloss" variety of finish you'll get the best clarity to show off your piece's grain and figure best. If you like gloss you'll surely have it if you sand to finer grits. If you want to soften the look or make the piece look more natural, cut the finished surface back using a "grey" microfiber pad or "oil-free" "0000" steel wool, both available from Lee Valley (tool catalogue page 220) and other quality woodworking supply retailers.

Alternately, sand to even higher grits, 2000 and beyond and apply only oil, wax or no finish at all, letting the woods natural colours and iridescence radiate unhindered by chemical coatings. The amazing work of the late Gordon Dunphy will show you what I mean http://www.ingridmuellerartandconcepts.com/dunphy.html.

In future installments I'll discuss:

- abrasives I use, how I use them and what to avoid based on my experiences
- what kind of finish to apply to complete your piece
- -oils versus varnishes
- preparing a final surface, shellac and varnish finish

## **Rudy Saffron Honours Louise Bonneycastle**

At the January meeting Louise Bonneycastle was presented with a large wooden bowl. Rudy Saffron had made the bowl for her to honour her efforts for the benefit of the club over the years. She has frequently provided the eats and treats for various meetings and the members have been very grateful for her efforts. After Rudy made the presentation, Louise responded by saying that she always felt like the shoemakers child who never had any shoes and therefore she was doubly grateful. All the members join with Rudy in saying Thanks Louise!!!



# Turning Alabaster Jack Wallace



Warning alabaster creates much dust when turned! Be sure to have a good vacuum to clear the dust and have a breathing mask under your Facemask

Preparation of the stone is the first step. From a larger block of alabaster select a section without any obvious cracks. Using a diamond saw cut a suitable piece of stock. Be generous in the sizing of this stock.

Soak the stock in a 50/50 solution of white glue and water for a week. Remove the stock from the solution and allow it to set up for another week. This allows the glue to permeate the miniature crevasses in the rock and helps to prevent it from breaking as you turn it.

Now using a sanding disk cut a flat on the face of the alabaster that is to hook to the lathe Headstock. If this is to be a large piece you may wish to cut a parallel flat at the tailstock end of the rock.

Take two pieces of scrap 3/4" wood and bore a two and a quarter inch mortise in the wood that gets attached to the head stock. This permits mounting to the head stock with a set of #2 jaws of a talon chuck. Alternatively mount the piece on a faceplate. Now, using Weldwood glue, affix these pieces of wood to the flat ends of the alabaster.

Using Weldwood glue, affix these pieces of wood on the ends of the rock. This is one of the best glues to use for this as it has some flexibility. Allow to set up for a week. The rock can now be mounted onto the lathe.

Before I go further, a word about tools. Any tool you use for wood will cut alabaster for about 10 seconds before you need to re-sharpen. You need to use a carbide tip tool. I purchase mine, a bit for metal turning, from Busy Bee Tools. Here is the link to the aforementioned bit- <a href="http://busybeetools.ca/cgi-bin/picture10?NTITEM=B083">http://busybeetools.ca/cgi-bin/picture10?NTITEM=B083</a>



To sharpen this type of bit you can use a "green" wheel designed to sharpen Carbaloy drills. This works fairly well, but really never gets the bit to a sharp edge like a knife. I purchased a 5" diameter diamond wheel which I can mount on a slow lathe to run at about 300 rpm. Below the wheel I have a small magnetic parts dish, sitting on the ways of the lathe, into which I place a sponge or paper towel that is wet and rubs on the edge of the wheel to keep it moist and lubricated. This arrangement will now sharpen the tool bit to a razor edge quickly and accurately.

Mount this bit into a standard tool handle and proceed to turn in the conventional way using the tip to cut straight into the rock. I find the best angle is with the bit and handle horizontal. If the bit is dull the cutting action works when the bit is pointed down in more of a scraping action. A sharp bit cuts well horizontally.

The alabaster is turned between centers until the material is round or approaching the desired shape. At this time I normally us a standard parting tool to separate the wood block at the tailstock end. To start cutting on the end of the piece you may need (or wish) to secure the piece in the lathe using a spindle steady. It is now possible to hollow out a vessel in the usual fashion. I normally begin with a carbide drill bit in the tailstock to cut a core out of the stock. Once this is out, the carbide tool can be put back into action to hollow to the desired amount making a bowl or hollow vessel as desired.

The basic shape has now been developed and finishing can begin. I start with a 100 grit sandpaper to fine tune the design and then work through the grits to 600. With the 600 grit use waterproof paper and keep the rock moist. This will give a nice mirror surface. At this point, the exterior and interior surface is defined and is fairly polished. Finish the polish with buffs of Tripoli, diamond and carnauba wax.

Now to remove the piece from the lathe, use a cone support, or the like, at the tailstock end to help prevent accidental dropping of the alabaster. I then use a parting tool to separate the wood at the headstock from the rock. Cut it down to a small diameter and then you can bust the piece off the lathe. You will still have a thin layer of wood on the base that one can remove with a disk sander. Again work through the grits and polish the base to its finish. You may alternatively wish to reverse chuck the part for this step.

Manual carving and decoration can be done easily with small diamond bits and you can also carve the surface with small chisels.

One does not need to work solely with large pieces of alabaster. Below is an example how a small piece can be pre-

pared for turning and carving.





Here are two examples of what can be done with smaller pieces of alabaster.





**References**: At the demo for alabaster I was asked for the details on the diamond wheels that I use. This was purchased from KBC TOOLS in Mississauga. Their website is

http://www.kbctools.com/can/main.cfm then select page 543 in the catalog. I am using the Economy Diamond part no 1-640-276. Price about \$150. Note that with this you will need some sort of shaft adaptor to mount it on your lathe.

The bits are from BusyBee tools Part No B081 at <a href="http://busybeetools.ca/cgi-bin/product10?">http://busybeetools.ca/cgi-bin/product10?</a> &NMCLASS=00164&NSBCLASS=00271&NETID=1027370115102881706. This will require a handle to hold it. Just note the shaft is .5" dia. I use a Oneway or a Kelton.

Woodchuckers has the Oneway type

Kelton is available at Leevalley <a href="http://www.leevalley.com/wood/page.aspx?c=1&p=49136&cat=1,330,49236">http://www.leevalley.com/wood/page.aspx?c=1&p=49136&cat=1,330,49236</a> Part No 53B01.03

Alabaster Blocks are available from <a href="http://www.sculpturesupply.com/">http://www.sculpturesupply.com/</a> A typical block is 10x10x10" and costs about \$50 To cut the stone you can use a Sawsall with a carbide bit available at Home Depot or if you have a large concrete saw with a diamond blade that works well too.

## WOODTURNING VIDEO REVIEW Richard Pikul



I have watched many turning videos. Many are informative, some are useful, a few are terrific and some, unfortunately should be deleted. Check out this video:

http://www.finewoodworking.com/ProjectsAndDesign/ProjectsAndDesignarticle.aspx?id=33226

The video demonstrates turning a shaker table leg. Mark Salusbury sent me the link, and It turned into an exchange of messages about how the video (and/or the table leg) could be improved. The exchange ended when Mark came up with the most appropriate summary of our discussion:

(Continued on page 16)

## MAKING COPIES OF YOUR WORK Richard Pikul



This article is for turners who wish to make copies of their work but are not sure of how to get started. The following steps will be discussed:

- Planning ahead.
- Make suitable drawings.
- Minimizing the planning process for just a few copies.
- Hints for making accurate copies.
- Designing and making templates, story sticks and other aids.
- Hints for large numbers of copies.

A significant part of my work depends on accurate reproduction, and I have, over the years, developed my own methods to simplify the process of making exact copies in a practical, straight forward manner. My methods are not the only way, but I think they are a useful starting point.

Most turners do not make identical (or 'very similar') copies of their work. If you are a bowl maker or turn artwork pieces, the tendency is to use each piece of wood to it's maximum potential. This results in work that is very individual and unique, but what happens when you need to make a pair, a set, or a large number of pieces that are to be 'identical'?

There are many reasons to make identical pieces, of almost any kind of turning. The most obvious are table and chair legs, spindles for banisters and railings, architectural accents, a matching set of plates or bowls, pepper mills, candlesticks, utensils, tools and tool handles. Projects such as spinning wheels also use many identical pieces which are first turned, then assembled into the final product. There is also an occasional need to make copies for items that display better as a pair or set, or to provide the same item to multiple 'customers'.

When the first real need to make identical pieces comes up, most turners will shy away from the task. This is understandable as any unfamiliar project will tend to appear more complex than it really is, and can seem quite overwhelming when initially taken on.

#### PLANNING AHEAD

How does one make something daunting, easier to deal with? Start by breaking the project up into more manageable pieces. Even if you only wish to make just a few copies, take the time to work out the steps you will need to complete your project.

The following is my planning list for a new project

- Make initial drawing(s).
- Check to see if I have all the tools required a trip to the toy store may be required.
- If many copies are required I will make a prototype out of wood that can be discarded if it doesn't work out.
- I often make a second or third prototype, sometimes more, continuing until I'm satisfied with the design.
- Revise drawings to include changes made.
- Make templates easier if you have full size drawings.
- Make any tooling, special tools, gauges, jigs and fixtures that the project requires.
- Get the wood for the entire project. I often include extra wood to account for mistakes or unusable blanks.
- Make the blanks for the entire project. If the blanks are all the same, it's a lot easier to be consistent when turning.
- If the project requires any intermediate steps (e.g. initial turning is between centres, final turning held in a chuck or faceplate, off lathe hole drilling or shaping etc), then perform each step in order on all blanks. Again, this will help to minimize errors and keep your work more accurate.
- -Start turning. I will start slowly on the initial piece(s), keeping track of what is happening (yes, I make notes!). This is very important if the project is for many pieces. Making notes as you turn the initial piece(s) reduces the chance of making the same mistake twice, saves time in the long run and can also reduce waste. I make my notes on a copy of the drawing keeps everything in one place, easy to see and I don't have to remember where I put the notes. . .

(Continued on page 12)

### (Continued from page 11)

- If I must use a new tool, or one that has been collecting dust for a while, I will take the time to practise on scrap wood. I think this step is very important. It is unfortunate that this is a step that most turners do not even consider doing. Not taking the time to practise can result in discarding costly wood when the rusty hands don't perform as they should. A musician friend of mine practises four hours for every hour that he performs. Think of how good your pieces would turn out if you followed this regimen? Practise with purpose? Make give away items.

#### MAKE SUITABLE DRAWINGS

This can be a difficult step for those who have no draughting experience. In any case, do take the time to make drawings as this reduces errors and aids in refining a design. Start off with a pencil and paper to get the general outline of your project. Whether you use CAD software or wish to make all of your drawings by hand, make full sized drawings. Full sized drawings will simplify making templates and jigs.

Do you want to know more about how to make 'proper' drawings? Check out this web site (<a href="http://drawsketch.about.com/gi/o.htm?zi=1/XJ/Ya&zTi=1&sdn=drawsketch&cdn=hobbies&tm=9&f=00&tt=14&bt=0&bts=0&zu=http://www.ider.herts.ac.uk/school/courseware/graphics/engineering\_drawing/). This site provides the basic information of how to make drawings and how they should look. Lots of good information for those who use computer software drawing programs but never received any formal draughting training.

A list of software for woodturning. (I have listed only those for which I have positive feedback):

Woodturner Pro is well known in North America, designed specifically for woodturners. It is not difficult to learn. The full suite version will cover virtually all of your turning requirements. Web site at: <a href="http://www.woodturnerpro.com/">http://www.woodturnerpro.com/</a> A 30 day trial version is available as a free download – they will allow you to use it free for a month to determine if it will fill your needs. The full software suite is under \$US100.00

Creative Woodturner software is available as a download for US\$80.00 from: <a href="http://www.creative-woodturner.co.uk/">http://www.creative-woodturner.co.uk/</a> index.php This software is popular in Europe and other parts of the world.

Google SketchUp is available as a free download from: <a href="http://sketchup.google.com/download/index2.html">http://sketchup.google.com/download/index2.html</a>
A pdf instruction book on how to use SketchUp for woodturning is available for US\$11.00 from: <a href="http://www.turnedoutright.com/woodturning-products/modelling-woodturning/">http://www.turnedoutright.com/woodturning-products/modelling-woodturning/</a> I have no detailed information about this instruction book, but the table of contents indicates that the cost of the on line book is reasonable. If you are not familiar with CAD programs, you may need to find someone to teach you how to use SketchUp – or be willing to spend quite some time on your own to understand how to work with it.

#### MINIMIZING THE PLANNING PROCESS FOR JUST A FEW COPIES

**Make a drawing!!!** Even if you want to make only one copy, this is an essential step – it's the only way you will be able to minimize mistakes. If at all possible, make an actual size drawing – this will allow you to later make templates and story sticks easily.

There are three approaches to make the drawing:

One; you are copying something that already has been made. This is common for repair work on furniture and architectural turnings. In this case, take dimensions directly from the original for your drawing. Sometimes the 'original' is in poor shape, or covered in many layers of paint. This can lead to problems as some dimensions may need to be estimated, or paint layers, may need to be included to allow replacements to match the appearance of existing pieces.

**Two;** If you are copying a bowl, hollowform or box that you previously made (and are happy with), take accurate dimensions from your existing piece and make a drawing you can use as a reference while you turn. If you wish to make only one copy, you could use the existing piece as your "drawing" and take dimensions from it while you work. A tip; use sticky notes or pieces of tape to write down the dimensions and stick them to the sample piece. This way you need to take measurements only once.

**Three**; design your work on paper, then make a sample to confirm design dimensions are error free and practical. I suggest that you use a blank that you can discard in case the design needs more work. When the initial piece is a 'pass', you can use it as your sample for comparisons.

(Continued on page 13)

### HINTS FOR MAKING ACCURATE COPIES

Turnings fall into many major styles and categories, and each type of turning has it's own set of requirements. To make accurate copies of any style of turning, the most important items to take care of are:

- Don't hurry, take your time, work carefully.
- Keep your cutting tools sharp, dull tools are harder to control.
- Take accurate measurements.
- Make accurate and suitable story sticks, templates, jigs and fixtures.
- Use the narrowest parting tool that's practical for defining diameters.
- Minimize sanding 60 or 80 grit paper can take off enough wood to make even "identically" turned pieces look different.
- If you don't feel your skills are good enough find a turner who is willing to teach what you need to improve on. The money you spend on lessons can be recovered quickly either in time or reduction of the firewood made of expensive wood.

### DESIGNING AND MAKING TEMPLATES, STORY STICKS AND OTHER AIDS

To make an accurate template or story stick that includes the most information, glue a full size drawing to your template or story stick substrate.

A template is a cut out of the shape you want to duplicate. Note that the template will be the mirror image of the shape. A template for the interior of a hollow form or bowl may need to be made of more than one piece so that it can be inserted to check progress. Similarly, a template made for the outside shape of a complex piece which has undercut areas may need to be made of more than one piece. To make an accurate template or story stick that includes the most information, glue a full size drawing to your template or story stick substrate.

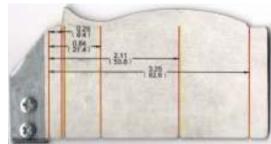


Figure 1

Example of a template made for a small jar made of galvanized steel. The outside shape is cut out on one side and the other side of the template is a story stick. A lip at one end allows the template to be placed at the end of the workpiece for accurate alignment. Note the pencil notches on the story stick side to help accurately locate marking.

A story stick is a straight piece with all of the critical positions marked. The story stick should also include the outline shape of the piece you are making, so that you can use it as a reference – particularly important for complex pieces

Example of a spindle story stick. Note that the vertical dark lines are used to mark the spindle transition points on the work piece. The one shown has many transition points. Not all of the transition points need be marked on the work piece at the same time. Turn round, then remove additional excess wood before marking the transition points. This will minimize the depth of the 'slots' you make with the parting tool to define final diameters.

Another example of a story stick / template combination. This example does not have a cutout to accurately check shape. It it intended for pieces whose outside shape is not critical. To view conformance to shape, this template is held behind the piece and the shape of the piece is compared to the shape on the template. Note that this template includes the rough outside shape used to remove the bulk of the stock before doing detail work

Example of a template / story stick for a production item. It is made of thin (and flexible) galvanized steel, with an actual

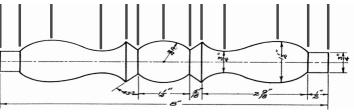


Figure 2

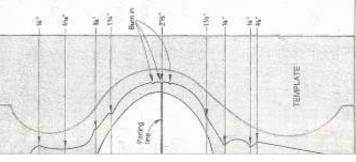


Figure 3

(Continued on page 14)

### (Continued from page 13)

size copy of the drawing glued to one side, then spray painted with Krylon clear coat. The right hand edge is bent at 90 degrees so that it 'hooks' on to a finished end of the blank, accurately locating the template.

Note the pencil guide notches on the edge. These are shaped and sized for a 0.5mm pencil, allowing me to make accurate, fine lines guickly. I have used this template to make more than 5,000 pieces so far and it shows very little signs of wear.

Making just a couple of copies, and don't intend to make more in the future? In this case, a template can be made easily from paperboard (like cereal boxes) or from a thin piece of wood or plywood. A story stick can be made from wood, plastic or metal. If the design may change, make a temporary template/story stick before investing time in permanent fixtures.

If you are making a copy or a drawing from an existing piece, you could use a profile gauge (see Fig. 5) to capture the shape and transfer it to your work. If you use this method, regularly check that the gauge has not been disturbed by testing it against the original.



The profile gauge shown is an 18cm (7inch) long gauge from Lee Valley (<a href="http://www.leevalley.com/home.aspx">http://www.leevalley.com/home.aspx</a>), stock # 44K14.02. They also have a 25cm (10inch) plastic version (03N01.01). The plastic profile gauge is made of thicker sections so is not as precise.

I found a 30cm (12inch) metal gauge on line from Germany at: <a href="http://www.fine-tools.com/">http://www.fine-tools.com/</a> kontur.htm#ziel306930

Garrett Wade has 30cm (12inch) 20K30.02 and 45cm (18inch) 20K30.03 plastic gauges, available on line from the USA at: <a href="http://www.garrettwade.com/product.asp?">http://www.garrettwade.com/product.asp?</a> pn=10K20.01&bhcd2=1262740672

If your work piece is longer than the profile gauge, simply use the gauge section by section. For spindle work try to work from the tailstock end, toward the headstock.

Figure 5

### PREPARING BLANKS

To make turning easier, make all of your blanks identical. This will both speed turning and help to prevent errors.

If you are making bowls, hollow forms or platters and the initial step is to turn between centres to develop the initial shape and / or to turn tenons for chucking later – do this step for all pieces first. Again, this helps in making the pieces more consistent and minimizes errors.

Making lidded vessels or boxes, where the lid is part of the same piece of wood? Turn round between centres, adding any necessary tenons and make the parting cut, but not all the way through. This will help to keep the boxes and lids together. It's easy to perform the last cut with a saw when you begin to turn each individual piece.

If your work is all spindle turning, cut all blanks to the same length and square dimension before starting. This will minimize changes to your lathe set up as you work.

### APPLYING FINISH

Unless you are applying finish on the lathe, wait until all of your pieces are completed. This will not only save time, it will be easier to apply the finish consistently over a number of pieces.

#### HINTS FOR LARGE NUMBERS OF COPIES

First, make enough pieces so that you are comfortable with the project. I have two magic numbers; 12 and 100. After making 12 pieces, I am confident of the design and turning techniques. After making 100 pieces, I have enough experience with the project to start including time saving techniques, make any special tools, improve jigs etc.

As you work, make changes to your templates / story sticks which will aid your work. Making templates out of metal will extend the life of these aids.

Does your work require the addition of holes or cutouts? See if it's possible to include these while you still have a workpiece with square corners – a lot easier to hold for drilling or routing.

(Continued on page 15)

### (Continued from page 14)

For some projects, it may help to break down the work into stages when turning. If this can be done, you can save lathe set up time by splitting up the work and completing each stage, in turn, for all pieces.

When suitable, invest in items such as special tool rests, live or drive centres or tools which will save time, materials or frustration. Do a cost analysis first – don't buy an expensive tool or accessory for a 'one job' requirement.

Continually improve your jigs and fixtures to speed your work, make the pieces more accurate or improve the quality.

If you begin to make production runs of many new designs, look into Computer drafting programs. Learn how to use the software, it can take the drudgery out of making drawings, especially those which are adaptations of existing designs.

Yes, there is a stage past this as well – high volume production. I have not reached this stage, but do know that to get involved one must start spending money in the five to seven digit range for equipment. I would love to talk to someone who does use CNC machinery to turn their whatsits.

If you have any comments, suggestions or a CNC lathe owner, contact me: Richard Pikul rpikul@sympatico.ca

# Set Aside Fear Of Making Mistakes: commentary by Mark Salusbury



Mark Salusbury submitted a link, to a Youtube video of Sir Ken Robinson giving a speech on creativity. Your editor replied to Mark that the video did not have much to do with woodturning, but if he would make a case for its inclusion, it would be so included. Mark's case is given below, ending with the link to Sir Ken's video.

Sir Ken Robinson states a strong case legitimizing creative expression which I think many woodturners may find a refreshing confirmation.

He, importantly, recommends setting aside fears of making mistakes so that we may explore and learn about the process and about ourselves. The fear of making mistakes, an unnatural fear, that has been introduced to us and nurtured since birth, is what separates many aspiring minds from achieving originality and success. Thankfully, that fear only kicked in after our first year, otherwise many of us might still not walk.

Without the freedom to let ourselves be creative, permitting ourselves to explore new ideas despite the probability of things not working out exactly as planned, we run the risk of cheating ourselves from achieving our potential.

Introducing the link to the members allows, them to decide, for themselves, whether it's a subject set they'd care to explore.

Click on this link http://www.youtube.com/watch?v=iG9CE55wbtY&NR=1

### American Association of Woodturners Annual Symposium

The 24th AAW Annual Symposium: June 18-20, 2010. Connecticut Convention Center, Hartford, Connecticut.

Help us celebrate AAW's upcoming 25th anniversary. To mark this important milestone, a special 25th Anniversary logo will be created. A member-wide contest is being held for design submissions. The most appealing, appropriate, and eye catching design will be selected by a special committee. All AAW members are welcome to submit their idea(s) for the 25th anniversary logo. Anything from a sketch to a well-crafted design will be considered. Please submit your image as a JPG. AAW reserves the right to modify any submitted design and will prepare the final artwork. The deadline to submit your logo ideas is February 28, 2010. All entries are to be submitted to the AAW office, either by letter or email, by that date. Please include your name, mailing address, email address and membership number. Mail submissions to: American Association of Woodturners 75 5th St W, 222 Landmark Center, St. Paul, MN 55102-7704 Email: inquiries@woodturner.org

### (Continued from page 10)

Question: How many woodturners does it take to turn a spindle?

Answer: Several...one to do the turning and the rest to say "I could have done it better".

Have a look at the video. View it a second time and be critical about the tools and techniques used by the turner. View the video again. If you still feel that the turner is making mistakes or should be using different tools - view the video again. Repeat until you finally realize that the turner in the video made a nice looking table leg in an efficient manner.......

### How does one measure the hardness of wood?

Mark Salusbury thought the WGO members might be interested in the following link. It describes the Janka method of measuring the hardness of wood. http://www.sizes.com/units/janka.htm

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