WOODTURNING FUNdamentals

AAW EDUCATION

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Fundamentals

Cover photo: Linda Ferber

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Woodturning FUNdamentals

Dedicated to providing education, information, and organization to those interested in woodturning

Introduction

At this time of year we are all thinking about turning functional items with a simple decorative feature to give as gifts. This issue's project articles offer a lot to inspire you and will be well received by your friends and family - Celtic Knot Beer Capper, Turkey Pot and Striker, Lazy Susan and Angel Ornament. I hope to see a few of these items in my chapter's gift exchange.

Spindle work is a skill builder but understanding the terms and common nomenclature may make it easier to assemble your next candlestick into a pleasing shape. While you are working on spindles, why not make a few handy morse tapers? Both articles are interesting and will make it a little easier for upcoming projects.

In this issue of *Woodturning FUNdamentals*, we continue with our "Ask the Expert" series. If you have a question for one of our experts, you can submit a question at http://www.woodturner.org/?page=Tips#TipForm2. We'd love to hear from you!

As always, *Woodturning FUNdamentals* invites you to submit your questions, tips, projects, and problems. Every turner develops techniques that work and also runs into frustrating obstacles from time to time. You're not alone. Please send your submissions to us at linda@woodturner.org.

I welcome your suggestions and concerns.

Stay Sharp and Turn Safe,
Linda Ferber
linda@woodturner.org

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CELTIC KNOT BEER CAPPER

Add a Little Class to Your Beer Cappers

By Jim Eagleton

"A thing of beauty is a joy forever."
--Mary Poppins (quoting John Keats)

Like many things in life, a series of simple steps led to a complex-looking outcome.

My favorite part of woodturning is the creative part. Most of my turning is done in my head. A segmented glue-up is like a puzzle in reverse. I visualize what I want a piece to look like. I then try to figure out how to make it. Sometimes my "mistakes" are fun surprises.

I enjoy making things that are functional. I prefer projects that do not require much time. For those reasons, I make handles for a wide variety of household tools.

Some turners spend many hours creating a stunningly beautiful piece of art. Because of the time involved, those pieces are high value and have a limited market. I greatly admire the artists who have that much patience. *I like instant results.*

My work takes much less time. Also, I can make several of these at once. Because I do not have much time invested, I can give these away or sell them for a very reasonable price. I am not an "artist;" I am a "craftsman."

Materials List:

- 2 blanks of contrasting wood (holly and walnut)
- 1 short piece of copper or brass pipe 5/8" wide and 1" long for making the ferrule. (available at lumber and plumbing supply stores)
- Beer capper (available at woodturning supply stores)
- Wood glue, epoxy, water-resistant finish.

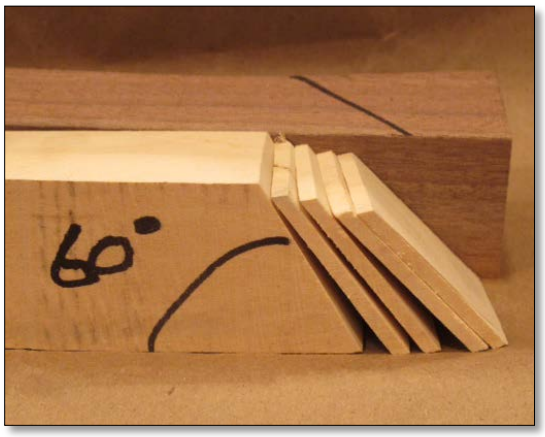
Tool List:

- Roughing gouge
- Spindle gouge
- Parting tool
- 4-prong drive center
- Cone-shaped revolving center
- 11/32 Drill bit
- Chop saw with miter capabilities
- Bandsaw

Create the blanks and turn the handle

1. Start with two blanks of contrasting wood, 1" × 1" × 8", or larger.

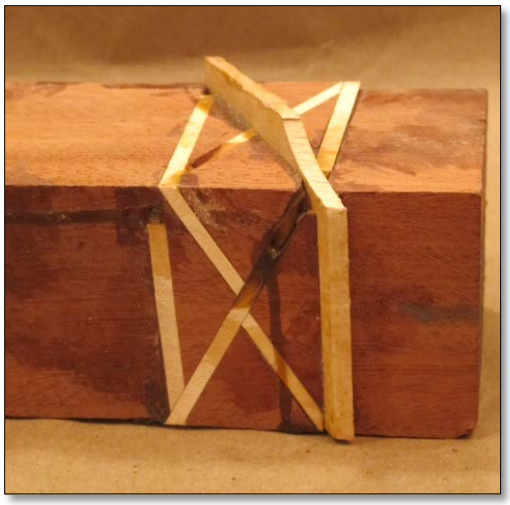
2. Set chop saw at 60 degrees. Using one of the blanks, cut a series of slats.



   These should be cut at 60 degrees, across the grain. Slats should be the exact thickness of the kerf of your saw blade (approximately 1/8" or 3/32").

3. Cut the other blank at 60 degrees, 2" from the end.

4. Using a 90 degree jig (pictured at end), apply glue to the first slat and insert it into the kerf left by your saw blade. Clamp and let dry overnight. Rotate your blank 90 degrees, chop saw it at 60 degrees and insert the next slat.



Gluing slats at an angle is a mess. After each slat, I trim the slat flush on the bandsaw or sand away the excess wood and glue. Position each slat so that the grain runs the same direction as the grain on your handle. This will reduce stress caused by seasonal wood movement. It will also make turning the handle easier as you will not be turning any endgrain. Use quality wood glue and consider using one that is water-resistant.

Because you are gluing endgrain to endgrain, the Celtic Knot will be a weak point in your handle. To minimize stress on the glue joint, position the Celtic Knot near the end of your handle, opposite from the tool.

Repeat on all four sides. It takes me four days to do this glue-up. I usually do a production run with several at a time.

5. Drill an 11/32"-diameter hole, 1 ½" deep in the end of the blank. (or follow manufacturers' recommendation). This hole will center the piece when the revolving cone center is tightened. This is also the hole that will receive your capper.

6. Turn tip supported by the cone center to size. Fit and epoxy copper ferrule. Cut copper ferrule to finished length, about 3/8", on the bandsaw. Sand rough edges on the copper ferrule.
7. Using a roughing gouge, spindle gouge and parting tool, turn handle round and shape. *This is the fun part.* The exact size is not important. Let the wood speak to you.
8. Finish with a water-resistant finish. Any good oil- or water-based polyurethane will do. This is a functional tool, not a piece of art.
9. Using epoxy, glue your capper into the hole.

Use capper to enjoy the beverage of your choice (only root beer if the power tools are on).

Dan Moerman has developed a jig that works well for the gluing process. This picture gives you an idea how to set it up. Dan Moerman is a professor at the University of Michigan. dmoerman@umich.edu

"Shop Therapy" Beats "Shock Therapy"

Perhaps fifteen years ago my brother John gave me a beat-up Craftsman lathe that he had taken as a legal fee. (John's clients are not the "silk stocking type"). That chance event has been a blessing to the tool and lumber sellers of America.

After a handful of "near death" experiences, I joined the AAW and the local AAW chapter, the Northeast Oklahoma Wood Turners Association (NEOWTA). The NEOWTA Members have been very kind to help me learn this craft. They are some of the nicest people I know.

I devour the *American Woodturner* journal like it was a box of chocolate, usually in one sitting.

What started as a chance event has grown into a passion. My worst day in the shop is better than my best day in the office. When I go into my shop and turn on the power tools, my mind is focused and at peace. I truly enjoy the simple act of creating something that is beautiful and functional.

"Shop therapy" beats "shock therapy" every time.

~Jim Eagleton, Tulsa, Oklahoma
Northeast Oklahoma Woodturners Association and AAW Member
Jimbo5857@aol.com

MAKING A SIMPLE TURKEY POT

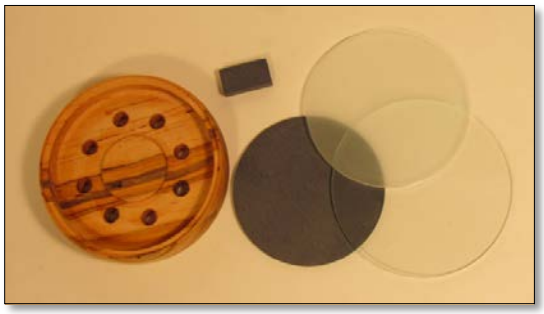
A project to gobble up!

By Janet Sutter

About Turkey Pots and Strikers

Turkey call with striker

A turkey pot or turkey call is a device designed and is used to imitate vocalizations of wild turkeys which include "gobbles", "clucks", "putts", "purrs", "yelps", "cutts", "cackles" and "kee-kees". A good hunter learns to use several turkey pots because it is unpredictable which type of sound a wild turkey will respond to on any given day. For a woodturner turkey pots can be made from a variety of woods. The one pictured is sugar maple, and the striker has a maple head with a walnut dowel. Wood selection, choice of glass, slate, aluminum or other materials, number of holes and their placement all play a part in decisions that go into the making of the pot. Often, strikers are made using combinations of birch, maple, cocobolo for the head and walnut, purpleheart, and hickory for the dowel. Various combinations of the two will result in anywhere from a low pitch to a high pitch when used with the turkey pot.



Items you can purchase online: slate, glass, burnished glass, conditioning slate.

When turning a pot, you will need a block of wood slightly larger than 4" × 4" and roughly 1" deep. Additionally, you will need to decide whether you want to try slate, glass, aluminum, copper or some other kind of material. I would recommend slate as I found it to be quite easy to create a successful call with making my earliest pots. Many materials, including burnished glass and slate can be purchased online from Brookside Game Calls. I find them to be quick and easy to work with and you can buy a single piece of slate or whatever insert you wish to use for just over $2. The small rectangular piece of slate is for conditioning your striker. It is not a mandatory purchase, but I would recommend it. The small circle in the middle of the pot with all the holes is for a sound board.

Soundboards are not mandatory, but some makers like to have them and I left room for one on this call so you could see what it is.

Making the Turkey Pot: Steps to create a single wooden turkey pot with slate on one slide.

Slate creates a lower tone, glass the highest, and copper provides a raspier tone. In choosing the wood for the pot, keep in mind the denser the wood, the deeper the sound. The slate comes in eight different widths from 1.75" to 3.63". Since I will be using a piece of slate that is 3.25" in width, I chose a 4" × 4" × 15/16" rectangular piece of sugar maple to work with.

Step 1. Find the center. Once you find the center, you'll want to mark the holes. I chose to make all of my holes 1.25" from the center. (This will vary based on the overall width of your pot. If it is smaller, you may want them closer to center. If it is bigger, you may want them further from center.)

Step 2. Drill your holes. I chose to make all my holes 8mm. The size is up to you. I would recommend you take time to sand out your holes after you drill them. Then I usually cut off my corners with a band saw or miter saw.

Step 3. Attach your wood to the lathe using either a glueblock, faceplate, screw chuck, or you can turn it between centers.

Step 4. Turn the outside and sides of pot on your lathe. Do your finish sanding.

Step 5. Reverse the pot and turn the inside. I line the inside of the chuck jaws with leather strips to keep them from marking up the pot. As I turn the pot I make sure I leave enough room for the slate on the outer edge.

Step 6. Turn a recess for the slate to sit on. Test to make sure the slate will fit snugly and evenly with the wood. The back edge of your call should leave approximately a .2" rim around the call with a depth to match the width of the slate or whatever material you are using.

Step 7. Once you have finished your turning, sand through your grits. I use 150, 220, 320, 400 then 660.

Step 8. Finish is a personal choice. For the purpose of hunting, you may want to consider finishes that will waterproof the call as well as make it durable. You may want to avoid putting finish on the rim of your pot as you will be gluing in that area.

Step 9. I use Goop to glue the slate to the wood. Epoxy works well, too.

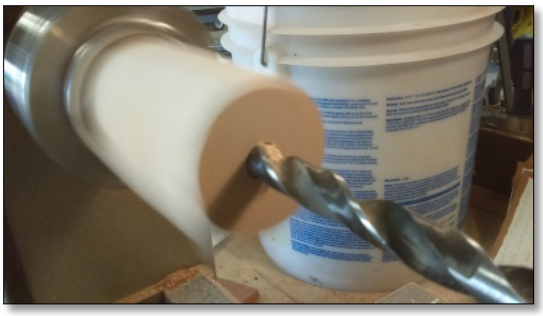
Making the Striker

If you really want to keep things simple, you can make your striker from a single piece of wood. Cut a wooden blank 9" long that is 1 ¼" × 1 ¼" then turn it down to the following dimensions: The handle will make up 3 ½" of the 7" length striker. The handle will be .95" in diameter when finished. The handle end tapers to .71" in the center and the remaining dowel of the striker is .33" in diameter.

However, if you wish to aim for a more specific sound, you will want to build your head and your dowel separately and glue them together. A 2" long head with a width of ¾" will give off a higher pitch, a 2 ¼" long head with a width of 1" will lend to a medium pitch, and a 2 ½" head with a width of 1 ¼" will give the lowest pitch. Choice of wood for the head is also a factor in the pitch. Another decision to make is the choice of wood and length of dowels. As noted previously, striker heads are often made from birch, maple, and cocobolo, and the dowels are made from walnut, purpleheart, and hickory.

Step 1. Secure a piece of 3 ½"x 2" in the chuck. Using a roughing gouge, turn it round and then use a spindle gouge (a scraper would work, too) to take it down to the diameter you are after. In my case, it was 1 ¼" in diameter.

Step 2. Drill a hole in the striker head 1" deep. You will want to be as close to ½" in diameter as you can get. The important thing to remember is to match your hole with the size of your dowel. (Remember, if you are using a pre-made dowel, you will need to find a drill bit to match the diameter of the dowel.)



Step 3. Make the dowel. I used a 1"x 1" x 6" walnut block secured in my chuck and turned it round with my roughing gouge. Once I had it turned down to about half an inch, I started watching my calipers really closely so I wouldn't get it smaller than the hole in my striker head.

Step 4. Once the dowel was the correct diameter to fit into the maple head of the striker, I then went to work tapering the rest of it. I didn't want a large taper, just a small one. Then I parted it off.

Step 5. Glue the dowel into the head of your striker.

Step 6. Finishing your strike is a personal preference, however, **the tip of the striker is used in making the sounds of a turkey so it is important not to finish the tip of the striker! It is acceptable not to finish the dowel at all.**

Janet Sutter, Benton, Kansas, has been turning wood since 2012. She got the itch to try game calls when an uncle from Montana loaned her the book Turning Custom Duck and Game Calls. Many of her neighbors who hunt swear by her calls, and she sells many online as well. She also enjoys turning a variety of other items and mentors a woodturning club at the high school where she teaches.

ANGEL CHRISTMAS ORNAMENT

Lovely Christmas Project for Building Skills and Gifts

By Eugen Schlaak

Making one of these lovely Christmas ornaments as shown here does not take much skill on the woodturning lathe, although mastering one of the most dreaded woodturning tools, the "skew," helps to make these efficiently and in a short time.

Many methods and tools can be used to produce these "angels" but over the years I have found the method described here the most convenient.

Photo 2

Photo 2 shows the tools and materials needed to make an angel about 3" tall, but other sizes, smaller and larger, can easily be made by adjusting the dimensions of the raw material.

The item in this article was made from black cherry wood, but other woods which have a more pronounced grain, as shown in the examples in Photo 1, are just as suitable. Parts of the angel ornament can also be colored or textured.

The bottom part, or skirt, can be hollowed, although the procedure is slightly different. For this process, the skirt portion is located towards the headstock of the lathe and the ornament will be parted off the lathe at the skirt end of the angel after all the other shaping is completed.

The following items are used (Photo 2):

- Endgrain wood 2" x 2" x 4" long
- Scroll chuck
- Oval skew 1" or smaller
- Flexible cloth-backed sandpaper 220 and 400 grit
- Friction polish
- Yellow carpenter's glue
- A 1/16" drill bit, a small screw eye and thin ribbon

Photo 3

Photo 4

Mounting and quick rounding of the wood to about 1 ¾" diameter is quickly accomplished using the skew, but a roughing gouge would serve the same purpose.

Because the skew is used extensively in the next steps, a change to a different tool would take extra time.

Photo 5

Photo 6

After the wood is rounded, the diameter for the angel's head has to be turned. Using the long point of the skew, a V-groove to a depth of about 3/4" diameter is created. Using a peeling cut with the skew in the horizontal position, the remainder of the wood is reduced down to the required diameter, in this case about 7/8", as shown in Photo 7.

Photo 7

Using the short point of the skew makes it easy and fast to define the round shape of the angel's head as shown in Photo 8. Make sure the bevel is rubbing, otherwise a dreaded catch can occur faster than you can say....never mind!

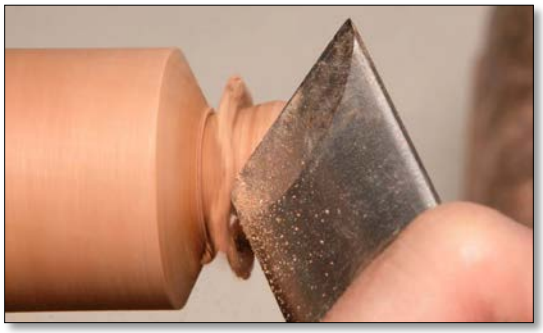


Photo 8

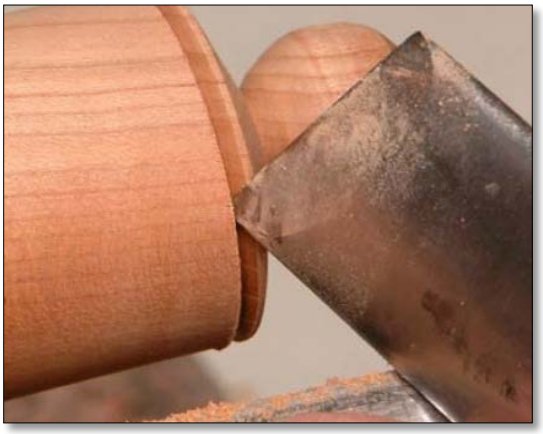


Photo 9

After finishing the shape of the head and making a final smoothing cut on the top of the angel's collar, successive V-cuts with the long point of the skew down to the neck size at about 5/8" diameter are made, along with a final smoothing cut on the underside of the collar to complete the upper part of the angel's body.

Ensure that the long and short point of the skew are extremely sharp and not ground convex to ensure a clean cut at all times (Photo 9 and 10).

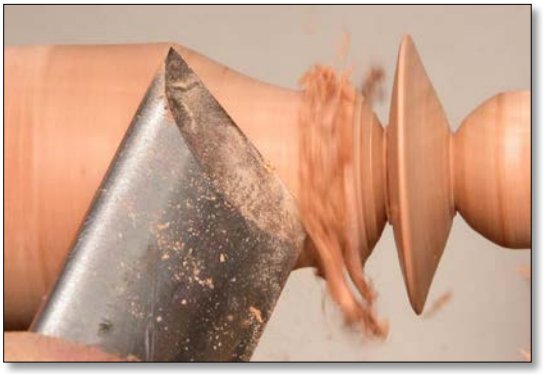


Photo 10

Photo 11

Rounding the lower "skirt" portion of the angel is the next step.

Successive steps using the short point and the cutting area just behind the short point make this part of the turning very fast and should leave an almost polished surface as the end result, as shown in Photo 12. Making the skirt part less convex is of course easier to achieve with the skew. To finish this area with a flawless and polished surface, the bevel of the skew must be rubbing the wood.

All throughout these last steps the revolution of the drive spindle of the lathe was about 1200 to 1600 rpm, a comfortable speed. I find higher speeds do not help in cutting cleanly because the sharp cutting edge of the tool tends to jump. Also, a lot of heat is created which has the tendency to quickly dull the tool's cutting edge.

Contrary to today's well-advertised theory about the quality and cutting ability of HSS tools, high carbon steel tools can be sharpened to a finer edge and consequently, make cleaner cuts, but the cutting edge does not stay sharp as long as those on HSS tools.

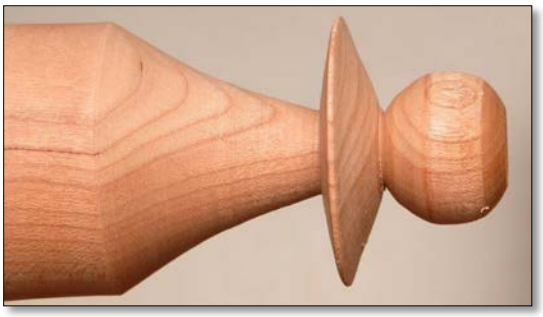


Photo 12

It's time to start parting off the item from the lathe, but not before some final touch-up sanding with 220 and 400 grit sandpaper has been done. The choice of grits depends entirely on the finish achieved by the proper use of the skew or other turning tools. If at all possible avoid the "80-grit tool;" too much dust is not good for your health (Photos 13, 14 and 15).

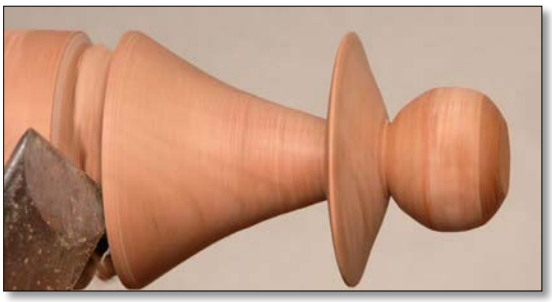


Photo 13

Photo 14

Photo 15

Photo 16

A couple of coats of friction polish are applied with soft paper toweling (Photo 16) before the angel is parted off.

Widen the gap a bit and use the long point of the skew and ensure there is a clean cut on the bottom part of the angel (Photos 17 and 18).

Photo 17

Photo 18

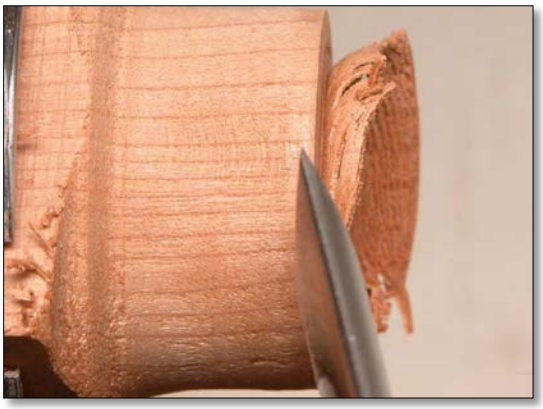


Photo 19

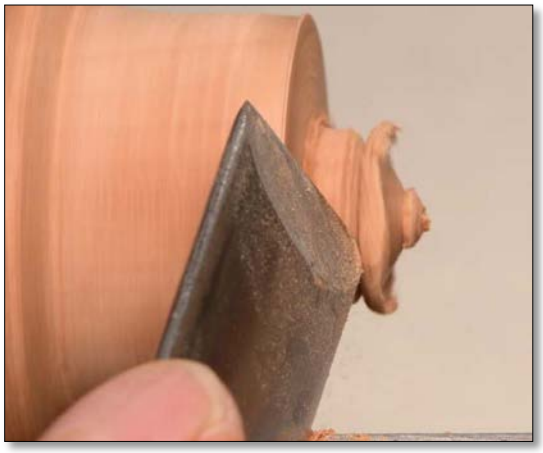


Photo 20

The remaining wood left in the chuck is used to produce the halo of the angel so the next step is to clean up the end of this wood and reduce the diameter to about 1 ½", the size of the angel's halo (Photos 19, 20 and 21).

Photo 21

After slightly rounding over the sharp corners of this disk with 220-grit sandpaper, friction polish is applied (Photo 22) and the disk (halo) is parted off, using the long point of the skew, as shown in Photo 23.

Photo 22

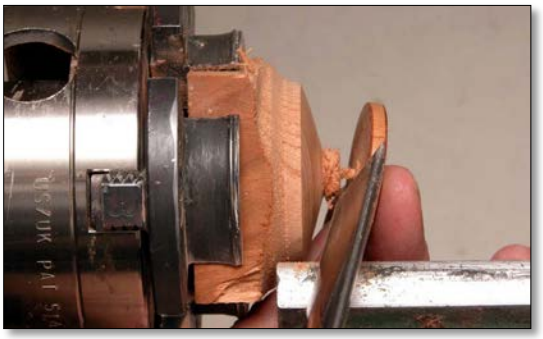


Photo 23

If a clean cut at the center cut-off point (Photo 23) is not achieved at this time, there will be another chance to make a correction later on after the halo is glued to the angel's head (Photo 27).

A stationary disk sander makes it relatively easy to flatten the front part of the collar and the top of the head at an angle towards the back. If a separate disk sander is not available, sandpaper glued to a wasteblock and mounted on the lathe drive shaft will suffice. I use 150-grit sandpaper for this procedure, which will give a smooth enough surface for this step (Photos 24 and 25).

Photo 24

Photo 25

A drop of glue to secure the halo to the angel's head is all that is required to make the final assembly (Photo 26).

Photo 26

Photo 27

After the glue has set, the top of the halo can be lightly sanded (if required) as shown in Photo 27.

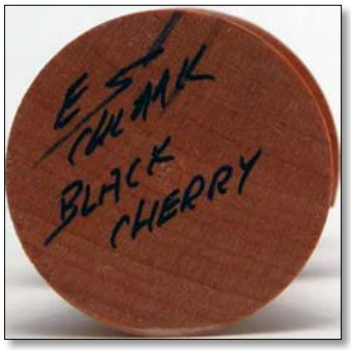
Photo 28

Photo 29

A couple of last steps are shown in Photos 28 and 29. Drill a 1/16" diameter hole for the small screw eye, attach a ribbon and sign the bottom. All done!

If the making of one of these lovely Christmas ornaments takes longer than 10 to 15 minutes, you need a bit more practice with the skew. But that, of course, only applies if you are in a hurry to make many of these ornaments!

Eugen Schlaak, Woodturner. Niagara Falls, Ontario, Canada



FORM AND FUNCTION: A LAZY SUSAN

An Heirloom Project for Your Breakfast Table

By Rick Auge

About this Lazy Susan

Lazy Susans can be made from a variety of woods. The one pictured is mahogany, and the base is 5" in diameter by 1 ¾" tall. The top is 10" × 1". This project was inspired by a purchase at an antique shop. After taking apart the antique, I found the unusual part of the project is the mechanism for this Lazy Susan is marbles; such a simple efficient method. To top it off, it spins with a simple screw! The inspiration piece was made of tight-grained tropical wood.

When turning a Lazy Susan, you will need a 5" × 5" × 2" blank for the base. Additionally, you will need to decide whether you want contrasting woods, milk paint or other embellishments. You can base the diameter on the size of the table or area where you will be using the finished piece. For this project the base was glued up using 2 pieces of 5/4 mahogany. The top was ripped and glued to make the 10" diameter, bookending the grain to try to enhance the pattern. Many design options would be available.

A butcher block style top would be attractive, as well as maple with a milk paint finish.

Try several; I am sure you will not have any problem finding a use for them.

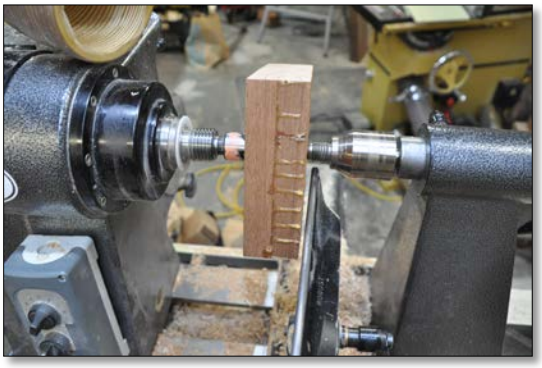
Materials and supplies you will need:

- 14 marbles of the same size.
- Wood:
  - Top piece 10" × 1 ½"
  - Base 5" × 5" × 2"
  - Wood for jam/tape chuck
- 1 Screw
- Double-sided tape

Tools you will need:

- A bandsaw helps
- Bowl or spindle gouge, negative rake scraper, parting tool, dividers
- Measuring device
- Chuck
- Ruler
- Compass with pencil
- Basic drill
- Jacobs chuck with various sized drill bits

Making the Lazy Susan base: Steps to create a single wooden Lazy Susan with marbles for the mechanism.



Step 1. BASE: Between centers, turn the base to a cylinder and face off the tailstock end. Cut an internal tenon to fit the profile of your chuck's jaws.

Step 2. Reverse the base and remount it using the internal tenon. True up the cylinder and face off the tailstock end. This will be the top of the pedestal.

Step 3. On the tailstock end of the base blank, mark off a 3 ½" diameter for the outside of the channel that the marbles will fit into. Mark off another 2 7/32" for the inside of the channel.

These basic measurements work well for marbles which are labeled 16mm, I found that the sizes of these marbles ranges from 15.1 to 15.8mm. One of the most challenging parts of this project was finding marbles that are all the identical size. Having identical sized marbles is the important part, ensuring a smooth spin to the top.

Step 5. Cut the marble channel using a spindle gouge (which is tricky), parting tool, or a good carbide cutting tool. I have used both spindle gouges and the Hunter Osprey carbide tool for this. The channel should be straight down on the sides and ½ " deep.

The channel cannot be larger than 3 ½" if using 14 marbles. The inside of the channel is where the adjustment is made so the marbles will fit inside the channel.

With a pointed tool cut a small indent in the center of the base. This will later be used to keep a small drill bit from wandering.

Get all the marbles to fit in the channel without binding. Keep adjusting the inside diameter until they fit. Be sure to not cut into the outside of the marble groove making it larger than 3 ½" or you'll end up with loose marbles! (NO comments from the peanut gallery!) We had a hands-on workshop for my chapter to make this project and marbles were rolling everywhere.

Step 6. Turn the shape you prefer for the outside of the base. Be sure to leave 3/8"– ¼" at the top outside of the marble channel. Sand and apply your finish of choice. If you are looking for inspiration for the base shape, take a little time and do Google searches for cake stands. Cupcakes are very popular at weddings now and I can see this would adapt to a cupcake stand.

Step 7. Finish is a personal preference. For the purpose of a functional item, you may want to consider finishes that will be food safe as well as make it durable.
Due to the open grain of this mahogany I applied 2 coats of sanding sealer and finished with friction polish.

Step 8. DRILLING: Drill a hole through the top of the base. This hole should be slightly larger than the diameter of the screw you are using. Large enough so the threads do not grab. Small enough to eliminate slop.

Reverse the base, now using the inside of the marble channel as a tenon. Drill a hole in this side that is slightly larger than the head of the screw. The depth is determined by the length of the screw and the thickness of the top.

You will want the screw to protrude through the top of the base far enough that it will go 2/3 of the way in to the top.

Sand and finish off the base.

Making the Lazy Susan Top:
Plan Ahead! If you wish to put additional design elements on the rim now is the time. I would keep in mind that is where people will grab the edge to turn the Lazy Susan so keep function in mind. While a couple of grooves might look nice will they catch particles and detract, that is up you and your design choices. A turned up rim will get in the way of a cake knife. This works well as a cheese and cracker platter, but for all functional purposes the comment below about the importance of a flat top will ***serve*** you well.

Step 1. TOP: I started the top with a glue up, then I sanded both sides flat. Cutting your glue up strips from a flat sealed board will simplify the turning and will guarantee a flat top. Next I applied two coats of sanding sealer.

On what will be the bottom of the platter, I laid a 10" round Masonite template with a hole in the center. I traced it and marked the center. Cut outside the lines for a round blank. (bandsaw, scrollsaw, etc.) if you do not have a bandsaw the blank could be rounded on the lathe.

Step 2*: First turn a jam/tape chuck.*
Be sure the top surface of the Lazy Susan is flat across the face. Apply high-tack (non-foam) double-sided tape to the jam chuck.

Step 3. Place the center point of the blank against the point of the live center and apply pressure to the new tape joint. Turn the edge of the platter with the tailstock in position. You should only have to sand and finish the edge since the flat sides are already sanded and sealed.

Option
Step 4. Remove the tailstock, and cut a shallow internal tenon that will fit the jaws you are using. If you are able to use large jaws, it is nice to use this recess to hide the marbles by turning the recess larger than the diameter at the top or the base. (Sometimes you will find it difficult to remove the top from the tape. First I smack it with my hand. If that does not work, I use a putty knife or wooden wedge. The wooden wedge will cause less damage if there is a slip in this process.)

Remount using the tenon and finish the top of the platter.

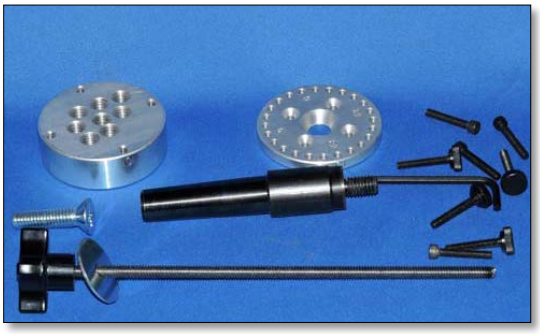
Assembly:
With the marbles inserted, place the top over the base and flip it over flat onto your work surface. As pictured this might require four hands as everything will need to line up. Drill a pilot hole in the bottom side of the top and screw the base to the top snugly enough that there is no play.

~Rick Auge, St Paul, MN. I am the president of The Minnesota Woodturners Association, have been involved in woodworking and woodturning since the purchase of my first lathe in 1978. Turnings include spindle, bowl, hollow form.

MAKE THE MOST OF YOUR JOYNER JIG

Explore the Varied Uses of This Jig

By Dawn Petrie-George



The Joyner Jig was first introduced as a jig to make pendants. However, it can be used for much more. This article will explore ways to use your Joyner Jig to expand your creations, as well as, how to create a template for the jig so that you can better understand the set-up and use of the jig. This article does not teach you how to complete the turning process, rather how to use the Joyner Jig.

#1 Use the jig as a faceplate
The Joyner Jig can be used as a faceplate for smaller projects. To do this, complete the following steps:

1. Screw a wasteblock onto the indexing plate. Drilling a hole through the center of the waste block is optional.
   If you have an older Joyner Jig, as in the picture, without a center hole, there is no need to drill a hole through the wasteblock. The purpose of the hole is to allow the turner to poke a pencil or dowel through to help remove the project from the wasteblock.

2. Attach the off-center plate to the indexing plate using the Allen screws provided.

3. Insert the mandrel into the center hole of the off-center plate.

4. Insert the mandrel into headstock and secure with draw bar for safety.

5. Faceoff the wasteblock and secure project wood with glue or double-sided tape.

#2 Use the jig to make pendants

The Joyner Jig has traditionally been used to make pendants.

1. Set up the Joyner Jig as a faceplate.
2. Attach a round disk to the wasteblock (usually 2-2 1/2" in diameter and less than 1/2" thick).
3. Turn the disk perfectly round and turn a dome on the face of the pendant.
4. Remove the mandrel from the center hole on the indexing plate and move it to desired location(s) to complete your design. Knowing where the desired locations are will be discussed later in this article.

#3 Use the jig to make fancy inserts

The Joyner Jig can be used to make fancy inserts to use in other projects.

1. Set up the Joyner Jig as a faceplate.
2. Attach a round disk to the wasteblock (usually smaller than 2 1/2" and less than 1/2" thick).
3. Turn the disk perfectly round and either leave flat or turn a dome on the face of the disk.
4. Remove the mandrel from the center hole and move it to desired location(s) and complete your design.
5. Insert your fancy disk into your other projects to add something special.

#4 Use the jig to decorate box tops

The Joyner Jig can also be used to decorate small box tops.

1. Set up the Joyner Jig as a faceplate.
2. Attach the plain box top that you have already made for your box to the wasteblock. This can be done using either hot glue or cut a recess in the block to hold the top. Make sure that it is centered.
3. Remove the mandrel from the center hole and move it to desired location(s) and complete your design.
4. Your box top is now decorated and ready to be returned to the box.

Making a template to know where your cuts will end up.

Using the Joyner Jig can be confusing and overwhelming when you first look at the jig. However, once you understand where the cuts will happen when you change the location number of the mandrel, it becomes less confusing, allowing the user to be more creative.

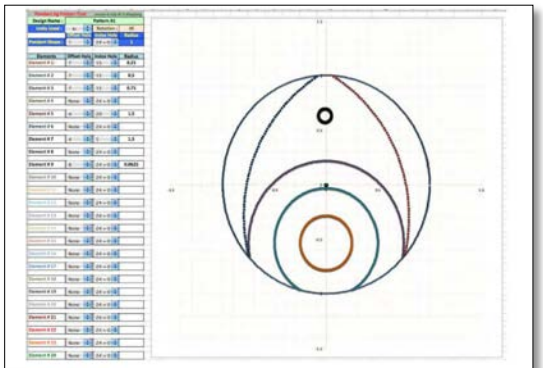


Figure 8 – Example printout of a completed design (Pattern #1)

Some people can just look at the jig and can quickly visualize where the cut will occur when they turn on the lathe. Others are very tech-minded and enjoy using computer programs and layouts to figure out how to set up the Joyner Jig. If this is your preferred method, please read the article by Bill Kloepping, in the *American Woodturner,* December 2013 AAW Woodturner online supplemental materials at http://www.woodturner.org/default.asp?page=JournalSupplemental.

The article contains information on how to use the Excel program and you can download his Excel program to help visualize where your cuts will be located when the Joyner Jig is used.

For those who want a low-tech way to visualize where the jig will make cuts, keep reading.

How to make a basic template

1. Cut a circle that matches the size of the off-set plate out of cardboard or light-colored wood.
2. Align the circle you just cut with the off-set plate. Using a colored pencil/marker, mark the center of each hole on the circle.
3. Write the corresponding numbers from the off-set plate onto the circle with your dots. This template shows the center points when your indexing plate and off-set plate are aligned at the zero marks. (fig 1)
4. If the indexing plate and off-set plate are aligned at "0" and "6", the new center marks will be at 90 degrees from the "0" & "0" dots. (fig 2)
5. At "0" & "12", the center points will be opposite the "0" & "0" points. (fig 3)
6. Lastly, set at "0" & "18", the center points are opposite of the "0" & "6" dots. (fig 4)
7. To locate other possible cut locations, use a compass, with the point on the dot and see where arcs look best. (fig 5)

These are the basics.

To see a video on how to make this template, Joyner Jig Template by Dawn Petri-George:

Access AAW Video Source at http://aawvideosource.org. Once you are in AAW Video Source, click the blue "Continue to Library" button.

When you're on the Library page, select the following:

- Category: Jigs & Drilling
- Keyword: General

Then click "Search" button. The video will be among the search results.

Click here for a direct link to video.

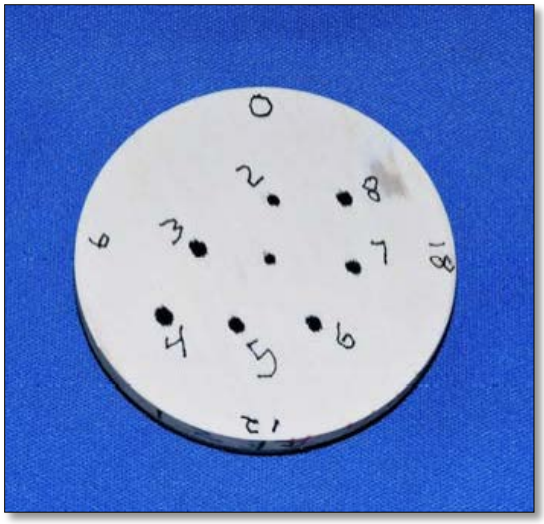


***Figure 1**: 0 & 0 setting*

Figure 2: 0 & 6 setting

Figure 3: 0 & 12 setting

Figure 4: 0 & 18 setting

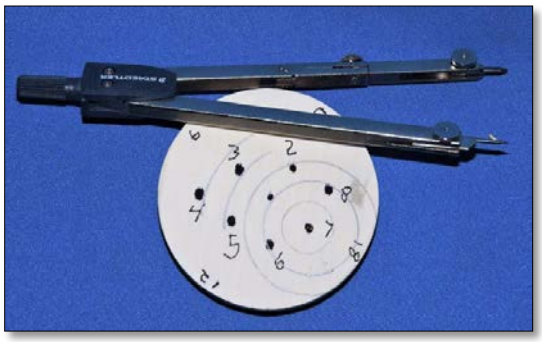


Figure 5: Use a compass to see where other cuts can occur. This shows the possible cuts from placing the mandrel in hole #7.

Experiment with the Joyner Jig

The template above provides the center points for each of the 4 combinations of attaching the indexing plate to the off-set plate. Many artists are happy with those combinations and stop there.

However, the indexing jig allows the artist to go one step further. There are 20 additional indexing locations besides the 0, 6, 12, & 18. The indexing locations are the circle of small holes shown in the picture above. Experiment using these locations and see what can be created. Practice on the lathe with a pencil first to better visualize the possibilities. Whether the Excel template is used or the basic template, have fun and explore the possibilities.

Tips and Tricks

Here are a few suggestions to help make using your Joyner Jig more successful.

- Drilling a hole through the center of the wasteblock will allow you to poke a pencil or dowel through if your project won't pop off the wasteblock.
- Sand the disk before you start cutting your design.
- Before you turn the lathe on, spin the piece by hand and hold up your tool so you can visualize where your cut will be.
- Giving your disk a dome shape is what will allow you to create those partial cuts, as in the box top, image #4.
- Put a piece of painter's tape on your tool rest and mark where you want your tool to enter the wood. Don't move the tool rest until you are sure you have that particular line/circle the way you want it.
- Use light cuts to better control how deep you cut.

Dawn Petrie-George
Port St Lucie, FL
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I began turning in 2005, when I moved to Florida, from upstate NY. I quickly fell in love with turning. I began turning pens, boxes and small bowls. I studied videos, attended symposium demonstrations and participated in all the hands-on opportunities available. In 2010, my world opened up and I began to explore woodturning as an art.

TECHNIQUES & TIPS FOR CHUCKING

Useful Techniques for Holding Work

By Chris Grace

There are several techniques for holding your work on the lathe. One technique is to turn a wasteblock to secure the work. A second technique is to turn a jam chuck with a spigot that fits into the opening of a vessel, making it easy to reverse chuck the vessel for finishing the bottom.

Wasteblock-1
Pressure fit a 3" wide by 1" thick blank between the chuck and tailstock. Turn a tenon that will fit into your chuck. True the face of the blank outside the tenon.

Wasteblock-2

Double-check the size of the tenon to make sure it will fit into the jaws of your chuck.

Wasteblock-3
A dovetail scraper makes creating the tenon a simple task. Simply line up the scraper flush to the blank...

Wasteblock-4
...then plunge it in to form the dovetail. Finally, draw it back along the cut face to true the face.

Wasteblock-5
Reverse it into your chuck jaws, and true the face before applying wood glue to the wasteblock. I prefer to use an octagon-shaped wasteblock, but a round one works equally well. If you choose to use a round wasteblock, be sure to true the outside diameter.

Wasteblock-6
Then press your turning blank onto the glued wasteblock with tailstock pressure. Allow ample time for the glue to set when using yellow glue. You are now ready to turn the blank into any desirable shape. This technique is particularly useful when the turning blank is limited in size and there is no room for a tenon.

Spigot-1
Occasionally you need to reverse chuck a vessel and there seems to be no simple way to do so. One solution is to turn a jam chuck with a spigot that fits directly into the opening at the top of the vessel. To make this spigot, mark a scrap of wood measuring 2" × 2" × 3" with your center finder.

Spigot-2
Mark from every corner in case it's not square, then eyeball the center and punch a mark.

Spigot-3
Press the blank against your chuck jaws, or better still your cork faceplate, and start turning it to a cylinder. Create a dovetail tenon on the outside end.

Spigot-4
Reverse, grip the jam chuck in your chuck jaws, and rough down, leaving a taper that will be sized to fit into the opening of the vessel you need to reverse chuck.

Spigot-5
Measure the hole your spigot will fit into, zero your calipers, and measure how much you still need to remove at different points along the spigot, then turn away the waste until you are almost at '0'.

Spigot-6
Fine-tune the fit with 80 grit abrasive; this also helps the spigot grip inside the vessel.

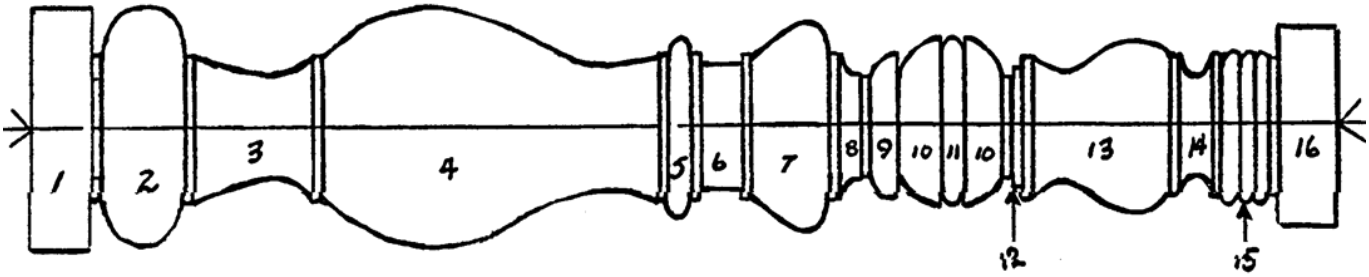
Spigot-7
Here I am using the spigot drive as a jam chuck to reverse turn an item that is difficult to hold any other way, and it is perfectly secure enough for me to use a gouge or large scraper.

~Chris Grace, Chairman of South Downs Woodturners. Chris Grace's interest in making things started with his grandfather bringing him tools and showing him how to use them. He has been turning since 2008 and is the founder and chairman of South Downs Woodturners in England. Chris sells work by commission, taches, and demonstrates. For more, visit NotJustRound.com

SPINDLE NOMENCLATURE

Shapes and Individual Features to Create Spindle Work

By Jim Galbraith



We have all chucked up a turning square of one kind or another and, with the set of tools common to most, roughed-out, parted-in, and gouged here, skewed there, and ended up with a potpourri of bumps and hollows that somehow pleased our senses. Lathe-hands over the centuries have been doing exactly that and, not surprisingly, have just about exhausted the number of different shapes that can be generated on a cylindrical surface. In fact, because that number is relatively small, a system of naming evolved, and the art of turning became a matter of juxtaposing the shapes in ways that appealed to the eye while satisfying function in the final construction.

The figure above includes most of the shapes you will be able to contrive, and the name ascribed to each. Your job is to pick a few of them, put them together in pleasing sizes and sequences, and come up with a work of art, or at least a leg, candlestick, or lamp. Of course the figure above shows far too many individual features to be good design. Only a few are included in most classical pieces. Assuming that the piece shown will be used in a vertical position, let us call the left end the base and work right toward the top. The turners of old probably plunged in with a parting tool to mark the location of each feature first, then went back and finished between the sizing cuts.

The first section is called a plinth (1) because it is at the base and is straight-sided. Next is a torus (2), and it is a large, semi-circular shape. Above the torus is a scotia (3), from the Greek word for "shade," so called because it is a sunk-in ovolo (compare 7). And next, perhaps the most classical of all basic forms, is the ogee (4). It is just an S shape, but it can be stretched or compressed and is usually asymmetrical in one direction or the other. Note the difference between shapes (4) and (13). With the large bulge below, it is ogee, cyma recta, and with the bulge above, it is ogee, cyma reversa.

An astragal (5) is semi-circular form that extends above the surface of the piece but is much smaller than a torus. A straight section occurring somewhere in an upper area can simply be called a neck (6). Above the neck is a protruding segment of an ellipse, an ovolo (7).

Above this is a quarter-hollow (8), topped by a quarter-round (9), and then, abruptly, a ball (10), which could be elongated into an ellipse. The abrupt transition, itself called a quirk, is the only such transition on the spindle; all other shapes are separated by straight sections (called fillets), which are parallel to the axis. The flat that ends the quarter round perpendicular to the axis is just that, a flat.

Cut into the maximum diameter of the ball (or ellipse) is a semi-circular bead (11). The difference between a bead and an astragal is now obvious—the bead is cut into a surface and an astragal protrudes above it.

Topping the ball, a series of three fillets (12), stair-stepped in reverse, effects the transition to the ogee, cyma reversa (13). Next comes a semi-circular hollow called a cavetto (14). You might want to call this a cove, which is a loose name for any hollow. If the hollow is semi-circular, it is a cavetto; if it is elliptical, it is a scotia.

Next is a uniform series of three beads (it could be more than three), called a reed (15). The spindle is topped by another vertical, straight-sided section similar to the plinth at the bottom. However, because of its position at the top, it is called an abacus (16).

There is just about only one other turned form I can think of—a V, either negative or positive. I have researched a goodly number of classical turned pieces, and the V is notably absent. Beyond the harsh feel and poor wearing characteristics of the positive V, I do not know why this shape has no classical favor.

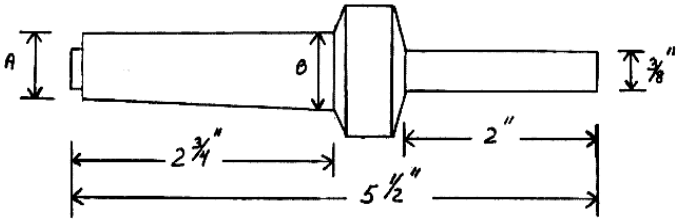
So, as woodturners—beginner, intermediate, or expert—I'm quite sure these old names are new to most of you. I feel it worthwhile to resurrect this ancient lore of naming. Happy turning, now that you can name what you are doing to that billet of wood!

This article is adapted from *American Woodturner*, December 1994

SHOP MADE MORSE TAPER

Steps to Making a Wooden Taper Mandrel

By Mark St. Leger



Making a taper mandrel. Start with a ½" square, 6" long blank. Use maple, cherry or whatever hardwood you have. First, mark the centers on the blank ends and mount on the lathe. Mount the spindle between centers (for the drive center I use a dead center or a ½" Stebcenter) then rough it into a 1 ¼" cylinder with a ¾" roughing gouge.

Use a #2 Morse Taper as a size guide for your mandrel. Measure back ½" from the headstock end and mark your cylinder; this will be the end of your taper. Then measure 2 ¾" for the length.

Set your calipers to the smallest diameter of your taper (A on the drawing), use a parting tool to cut on the left side of your ½" mark and take it down to your set diameter.
Then part down on the right side of the line at a slight angle to the set diameter. Now at your first parting, reduce the diameter another 1/16".
This sets off an area you can hit with your knock-out bar without harming your taper.

SHOP TIP

Your morse taper can be easily adapted for sanding.

Reset your caliper to the largest diameter of the taper (B on the drawing) and on the left side of your 2 ¾" mark, part down to that setting. With a roughing gouge, turn away stock between the two parting points close to the finished size.

Then take your skew and smooth the taper. I check for flatness with a small straight edge made from Formica. The taper must run true in the spindle, so you don't want any high or low spots.

At this point, take your piece off the lathe and cut off any waste at the small end of the taper. Now hand-fit the taper in the spindle then bring your tailstock up to seat the taper firmly in the head stock so that you can shape the end to whatever mandrel diameter you need.

This article is adapted from *American Woodturner*, Summer 2000

SHOP TIP

Lacquer-Saving Idea

If you use spray cans frequently, instead of inverting the can and clearing the nozzle after each use, cover the orifice with a 2" strip of masking tape. When you have finished the entire job in hand, then clear the nozzle for long-term storage. This method ensures that the propellant is not exhausted before the can is empty.

Cliff Walsh, Croydon North, Australia
walshie2010@hotmail.com
Forest Hill Woodturners

SHOP TIP

"Re-Shaping a Parting Tool"

Many of you have dove-tail jaws for your lathe chuck and an easy way to turn a tenon that will fit those jaws is by re-shaping one of your parting tools. I chose an old tool with a turning surface of about 1/8". I'll admit that I only "eye-balled" the angle, but it can certainly be calculated to exactly match the angle of the dove-tail jaws on your chuck.

In addition to using this tool to turn tenons on blanks, I use it to undercut finial tenons, to create shoulders on box lids, to scrape tight curved surfaces. I'm sure you'll think of many more uses for this tool.

To sharpen the parting tool, I slightly twist the handle which presents an angled surface to the grinding wheel.

~Janice Levi
Groesbeck, Texas
Brazos Valley Woodturners, Waco
Gulf Coast Woodturners, Houston

SAFETY FIRST

SEhhh, What Say?

By Harvey Rogers

Most of us know instinctively that we should not turn stark naked. We recognize, without even reading a safety article that we need to protect our pink bits when we turn by putting on some sort of clothing.

But most of us wear clothes most of the time, so putting on clothes when we turn isn't much of an inconvenience.

It's harder for us to remember to put on eye protection when we turn, because most of us don't wear adequate eye protection most of the time. But we can be pretty easily persuaded that wearing eye protection is smart, because we have all gotten something in an eye or two at one time or another, and we can remember how much that hurt, and how miserable it was to have our vision impaired, even temporarily.

It's much harder to get ourselves to use hearing protection when we turn, because most of us never wear hearing protection, and failing to use adequate hearing protection in our shops usually doesn't cause immediate pain or inconvenience. Hearing loss creeps up on us over time.

To make matters worse, noise levels, hearing loss, and hearing protection can be hard for turners to understand.

Noise levels are hard to understand because they are most commonly measured in decibels (dB). The decibel scale is a logarithmic scale. That means the same amount of change in decibels doesn't mean the same amount of change in noise. For example, a twenty decibel increase means a sound will be ten times as loud, but a forty decibel increase will mean a sound is one hundred times as loud.

And hearing loss depends not only on the loudness of the sound, but the length of time you are exposed to that sound and the frequency of that sound.

OSHA (the Occupational Health and Safety Administration) says that exposure to more than 85 dBs for more than eight hours a day is likely to damage your hearing. For every 5 dBs that the average noise level goes up, the amount of time you can be exposed to it without damage goes down by one-half. That means that your hearing is likely to be damaged if you are exposed to more than one hour of sound at average level of 105 dBs. This chart shows the dB level of some common sounds:

Noise Levels of Sources

Source	Noise level dB	Source	Noise level, dB
Air compressors	95-104	Quiet garden	30
Diesel generator	95	Ticking clock	30
Milling machine	112	Computer rooms	55-60
Power operated portable saw	108	Type institute	60
Trucks	90-100	Printing press	80
Car horns	90-105	Sports car	80-95
Jet takeoff	120	Trains	96

What does this mean for woodturners? If your lathe is in decent shape and its bearings are turning freely, your lathe likely has an average sound level below 85 dBs. That means you likely can turn for eight hours without damage if only the lathe is running.

But you probably will run other tools while you are turning. Two common examples are your dust collector and your air compressor. Dust collectors and air compressors are usually quite a bit louder than lathes, and exposure to their noise can damage your hearing pretty quickly. Sound levels increase the closer you are to the source, so moving your dust collector and air compressor well away from your lathe (or even outside if possible) can reduce the noise level at your lathe considerably.

And you can make loud screeches when your tool contacts the wood spinning on your lathe, or loud bangs when a blank flies apart, so the noise you make with your lathe can be louder than the typical limit of 85 dBs.

So it likely makes sense for you to wear hearing protection when you turn. Hearing protection comes in different forms, with different tradeoffs.

You can buy passive ear muff style hearing protectors for between $20 and $30. These can provide more than 20 dB of noise reduction and are the kind of hearing protection that is usually sold for guns and chainsaws, both of which are a lot louder than lathes. “Passive” ear muff style blocks out all sounds to the same degree. That means you probably won’t be able to hear someone who is talking to you unless you take the muffs off.

Active ear muff style hearing protection has fancy, noise-cancelling electronics and is available for a much higher price. It may provide less hearing protection than passive systems, but active ear muff style hearing protection will let you hear people when they talk, while still blocking out really loud sounds. Ear muff style hearing protection can interfere with eye protection because both types of protection often hang on your ears. Eye protection is really important, so make sure your eye protection and hearing protection are compatible.

You can also buy hearing protection that you stick inside your ears. This option ranges from simple foam plugs to fancy, custom-molded plastic models that are fitted to your ears. Foam plugs can provide good protection, but can be hard to put in so that they work well.

The fancy models are easier to put in. Hearing protection that you stick in your ears works with most eye protection.

The worst option is to skip hearing protection altogether. But the advantage of that option is that you could end up looking like a dashing movie character: Oin the woodturning dwarf from “The Hobbit.”

~Harvey Rogers
HarveyRogers@gmail.com.
Cascade Woodturners Safety Officer
AAW Safety Committee

ASK THE EXPERT

Help! I've got a question for the expert.

Q: What is causing the marks on my bowl when I use a vacuum chuck?

When using a vacuum chuck on a finished bowl I get what looks like an abraded area where the vacuum seal touches the finished surface. The seals I use are cut from self-adhering foam purchased at a craft store.

~ Peter Thomas, New York

Vacuum Chuck Marks on Finished Bowls

A: Peter, there are several possibilities that can cause marks from the vacuum chuck. Mostly it is a kind of compression mark. First thing to check is the finish itself. Has it had time to properly cure? If you can still smell the finish then it isn't cured. However that isn't 100%. Some finishes stay soft for a surprisingly long while. I switched lacquer brands once because it would take about three days for the lacquer I was using to get hard enough to buff effectively. It could be the vacuum chuck is simply denting the finish.

The second possibility is the foam seal is reacting with the finish. This is probably not as likely but most commercial seals I've seen are more of a rubber compound rather than foam. I have had good success with the foam sheets from Hobby Lobby which are probably similar to what you are using but I have seen bubble wrap leave marks in lacquer so it's always possible your foam is the culprit.

You didn't say what size chuck you were using. Large vacuum chucks can apply a huge force onto the bowl. On 8" chucks I often open my bleeder valve so I don't have full force on the vessel. I almost always use a tailstock as a safety when using a vacuum chuck. I pull it back to finish off the last little bit. By doing this I can often use less pressure.

Last but not least (I'll probably think of more things when I get back in the shop), the wood could simply be slipping slightly if the vacuum isn't strong enough and you are turning aggressively. That would kind of abrade the finish slightly and leave a ring.

What I do when I get those rings is to go over the area with 4/0 steel wool and then either buff it out, apply more finish, or both.

~ John Lucas, a retired photographer, has been working in wood for about 35 years and also dabbles in metalworking. He also enjoys modifying machines, making tools, and sharing his knowledge through written articles and videos. He has taught classes at John C. Campbell Folk School, Arrowmont, and The Appalachian Center for Crafts.

ASK THE EXPERT

Help! I've got a question for the expert.

Q: How to make and use a negative rake scraper?

I hear a lot about negative-rake scrapers and it gets confusing how to make one and when to use it.
~John Berger, California

A: Using Negative-Rake Scrapers

Being such a proponent of negative-rake scrapers, this is a question I am asked quite often. I started using negative-rake scrapers when I first began turning after meeting Stuart Batty and seeing the work he was doing on his wing bowls and deep vases. I do a lot of thin wing type pieces and platters and found they worked superbly and safely. I feel it is a very worthwhile change to make on a scraper, but first there are some things you should be aware of regarding negative-rake scrapers.

A negative-rake scraper is not meant to be a wood removal tool, but more of a finishing tool for smoothing out ridges or transition marks and small uneven areas left by a gouge or hollowing tool.

Negative-rake scrapers were designed primarily for and work best on hard, dense, dry woods.

Some turners say that they do not work on softer woods or green wood. I personally have tried them on all types of woods and I have often been surprised how well they worked. Regarding green wood, negative-rake scrapers most often will "fuzz up" the surface, but if you do not get a smooth finish with your bowl gouge, I believe it is easier to sand out fuzz on an even surface than tool marks or ridges on an uneven surface.

Negative-rake scrapers cut with the burr, which is produced during the grinding process. Since the burr is produced on the opposite side from the one that is being ground, it is important to grind the bottom bevel last. The burr does not last very long, only about 30 – 60 seconds for M2 high speed steel and maybe 2-3 times longer with the harder "10V powdered metal" tools such as provided by Thompson Tools and others.

It is essential that a burr can be felt on the cutting edge for it to work. Once the burr is worn away, the scraper will not cut efficiently, which causes you to apply more pressure and this will begin tearing grain and causing thin walled pieces to flex. Neither is good.

Negative-rake scrapers should be used in a level, horizontal position on the centerline and not tilted downward in a trailing position or on edge at an angle in a shear scraping position. Used correctly, I find them to be virtually catch-free.

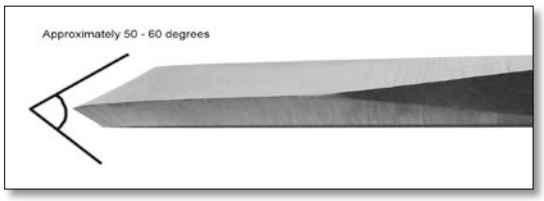
So if you are currently using your scrapers to hollow end grain boxes and such, you should probably preserve those as they are and purchase others to be ground as negative-rake scrapers.

The recommended included angle (as measured across both bevels) is generally between 45° to 75°. A negative-rake scraper with a 45°angle will cut a bit quicker, but the burr will not last as long as one at 60°. I have always ground mine with equilateral angles on both sides and have settled on the included angle measuring about 55° (it's really not that critical). Some people refer to these angles as being 30°/30°. That would be 30° down from both sides giving an included angle of 60°. By grinding the scraper in this manner it can be used in either a right hand or left hand position on different curves of a bowl or on either side of a wing or platter by simply flipping it over and regrinding the scraper to raise the burr on the top side.

There are many different methods of setting the platform angle to the grinding wheel. I am of the opinion of keeping it simple.

Having said that, rather than try to explain how to set the angles, I have come up with a jig that makes it quick, simple and easily repeatable.
I have a handout on my website (http://www.rudolphlopez.com/) that has information on the negative-rake scraper and includes a full-sized template for making a small jig to set the angle of the grinder platform. This will get you very close to 50° or 60°. You can then vary the angle if you wish.

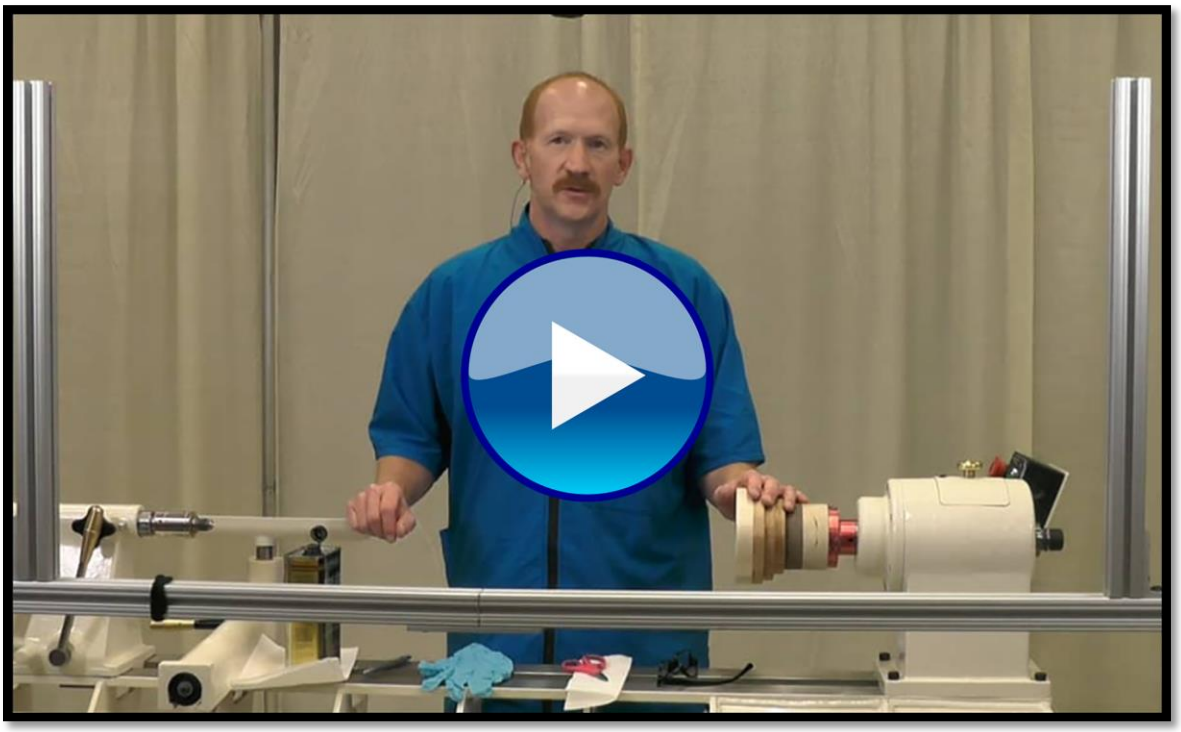
Just remember when re-sharpening the scraper, if you have changed the platform angle for sharpening something else, it is of utmost importance that you re-set the platform precisely back to the correct angle to ensure that you are grinding the entire bevel to produce a burr on the scraper edge. You must be able to feel a rough burr on the top of the scraper edge. Without a burr, the negative-rake scraper will not function properly.



~Rudolph Lopez, Tampa Florida
Woodturning has given me another way to bring out the sometimes hidden beauty of wood for others to enjoy and the opportunity to share my enthusiasm for turning through demonstrating and teaching at many clubs across the country, regional symposiums, and the John C. Campbell Folk School. My travels have allowed me to meet an endless number of wonderful people and many outstanding woodturners.

VIDEO TIP

How to Apply a Finish to Your Work



VIDEO: Applying Finish to Your Project by Curt Theobald (TRT 2:44).

If you have trouble accessing the video, copy the following link and paste it into your browser: http://www.woodturner.org/?page=VideoFinishTheobald

A Note About Safety
An accident at the lathe can happen with blinding suddenness. Respiratory and other problems can build over years. Take the appropriate precautions when you turn. Among the most important of these is the use of face shields, safety glasses, and dust masks. It is important to observe all manufacturers' safety guidelines. Following manufacturer's safety guidelines and information will help you continue to enjoy woodturning years into the future.

VIDEO TIP

How to Determine the Most Efficient Tool Rest Height

VIDEO: Woodturning Tool Rest Height, by "Rock Springs Woodturner" Jimmy R. Chrisawn (TRT 13:54)

1. Access AAW Video Source at http://aawvideosource.org
2. Once you are in AAW Video Source, click the blue "**Continue to Library**" button.
3. When you're on the Library page, select the following:
   - **Category: Lathes**
   - **Keyword: Tool Rest**
4. Then click "**Search**" button. The video will be among the search results.

If you have problems accessing the video, copy and paste the following link into your browser: http://aawvideosource.org/php/link.php?t=video_detail&f=link&i=251.

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MEMBER GALLERY

AAW Forum: “Turning of the Week”

Dill-DeGroot Swamp Bug
Ronald Campbell

Indian Summer
Michael Alguire

Bits & Bytes
Eldon DeHann

#12
Justin Stephen

Engage with the AAW Forum Community!

The AAW Forum is a volunteer member-moderated community ideal for sharing work and ideas, obtaining feedback, and connecting with other woodturning enthusiasts.

We encourage you to register for the AAW Forum, ask questions, seek advice, and submit photos of your work. Your work could be the next "Turning of the Week!" Click here to visit the AAW Forum.

Submissions

Want to share your work in *Woodturning FUNdamentals*? Please send your high-resolution images along with title, size, and materials used to linda@woodturner.org.

Want to "pay it forward?" *Woodturning FUNdamentals* welcomes other content including tips, projects, and informational articles. Please send your content ideas to linda@woodturner.org. The deadline for submissions for the January issue of *Woodturning FUNdamentals* is December12, 2016.

Please note: All content submitted may be subject to edit.

Expand your resources!