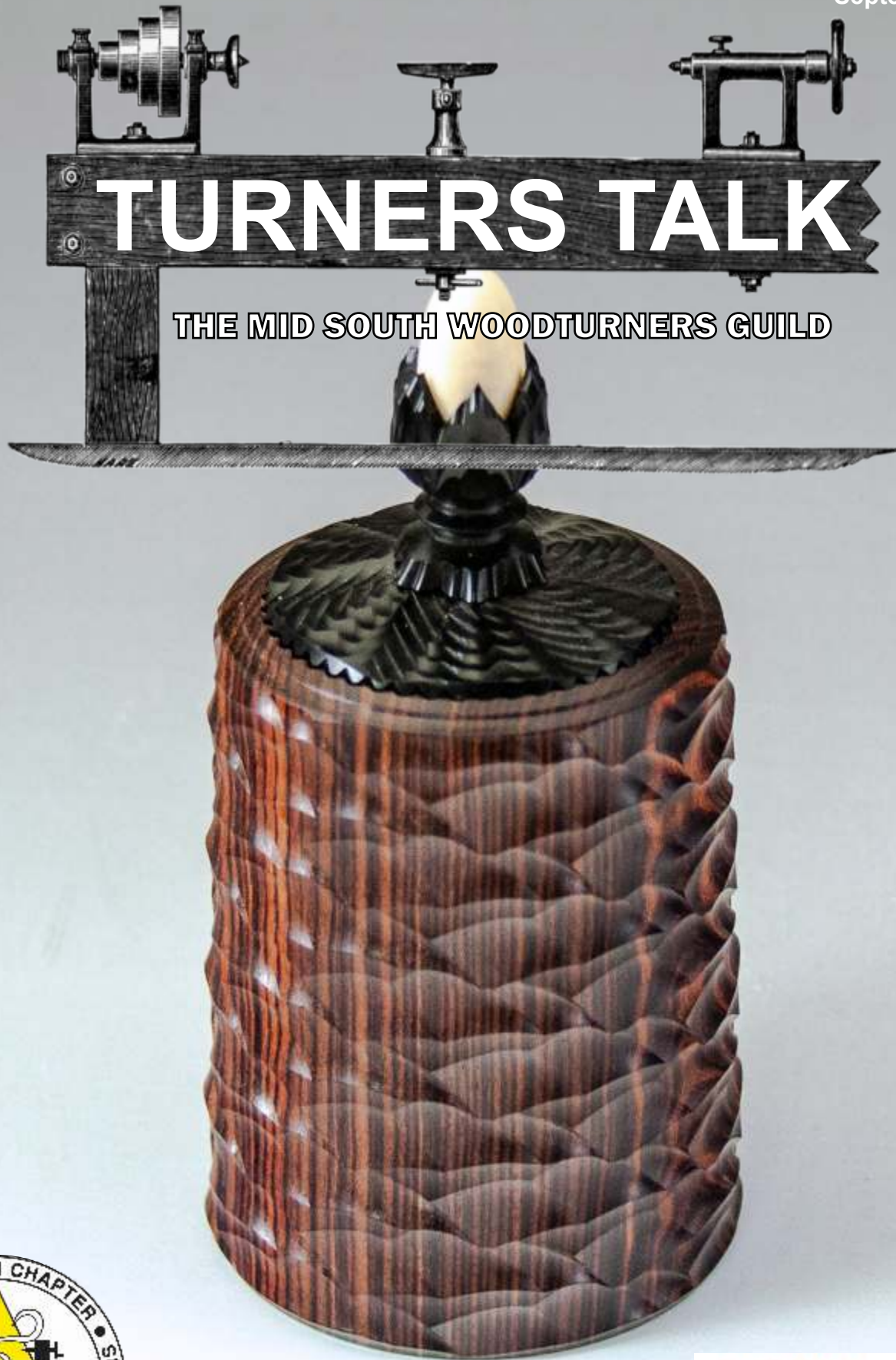


September 2018



# TURNERS TALK

THE MID SOUTH WOODTURNERS GUILD



**AAW** OFFICIAL CHAPTER  
AMERICAN ASSOCIATION  
OF WOODTURNERS



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A Jon Sauer Lidded Box  
from the collection of  
Rick Cannon and  
inspiration for the AAW  
Flashback Articles

## IN THIS ISSUE

Page 03 - The President's Corner

Page 07 - Shop Talk

Page 11 - AAW Articles Flashback

What is Old is New Again - Jon Magill

Ornamantal Turning Thin Layers- Bill Ooms

Page 22 - Instant Gallery

Page 28 - Upcoming Events

Page 29 - Mentors List

Page 30- Club Sponsors



Joel Benson treated us to a tour de force presentation on local woods last month. As a professional arborist and accomplished woodturner, he is uniquely qualified to bring a focus to turning local woods. He covered turning properties, grain pattern, strength and many other attributes of our local woods as it relates to turning.

Great job Joel. Thanks for sharing your knowledge with us.

# President's Corner

By:  
**Mike Maffitt**



Hello again my fine friends. The last month has been quite a challenge in organizing, cleaning and selling off a member's shop. In doing so, the club has earned enough money to recoup the loss we incurred when the new tv was broken and had to be replaced. In going through the process, I found it difficult to put back together what someone else had taken apart and distributed throughout his shop. Identifying pieces that seemingly should belong together was quite a challenge and very time consuming. Jerry Burch and I would like to thank all of the members who offered their time and services in this effort. The family was exceedingly grateful and donated quite a lot of items to The Midsouth Woodturners Guild for our future use. Think about how organized your shop is and if it will be difficult for someone to pick up the pieces of your life or easier to just call in a bulldozer.

The Bartlett BBQ Festival will be held on September 28th and 29th. We will be demonstrating for all of the people there turning Pens For Troops. Our gracious board member Sam Dawson has taken 100 pen kits and already glued up the barrels and wood making the process much less complicated for everyone involved. Sam is heading up this event and will need some help Saturday evening tearing the site down and loading up the lathes. Please see him if you can help.

The Pink Palace Craft Fair is going to be held from Friday the 12th through Sunday the 14th of October. We will be setting the site up on

Wednesday the 10th. If you aren't familiar with this event, we demonstrate for the public for three days the art of woodturning and everyone who signs up to work the booth or demo has the opportunity to sell their wood fashioned items to the public. This is a money maker for the club because a percentage of the profits go to The Mid South Woodturners Guild. I believe last year we earned almost \$500 for the club during this event and sold approximately \$4700.00 worth of goods. If you like being around the public and talking woodworking, this is the event for you. We always have a great crowd around our booth and the kids always love it. Please sign up at the next club meeting and get working on your items to sell.

I have the sign up sheets for both events and I will have a schedule for both at the upcoming meeting on Saturday.

October is slated to be a busy month for the club with The Pink Palace Craft Fair and the Oktoberfest quickly approaching. This year's Oktoberfest will be on the weekend of the 27th so it should not be a conflict with Halloween.

I will be presenting this month's demonstration and the demo will be on turning a four sided obelisk set. This set can be finished off as a weed pot, a candle holder or anything your



## President's Corner cont.

creative mind desires. The process will be the same whatever your project becomes. It should be a lot of fun, so come on out and enjoy the morning with all of your friends.

Hopefully, October will not be so crazy a month so we will have time to deliver our next load of Beads of Courage boxes and squeeze in a "Hands-On" class. I enjoy working with the members of our club and the woodworking community in the Memphis area. You are all wonderful folk and make our club and all the woodworking community a great place to be in and around.

Mike Maffitt



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## Tennessee Craft Master Artist/Apprentice Program - There is still time to apply

Would you or someone you know like to receive help developing your artistic skills as a woodturner? Check out the next two pages. Our own Dennis Paullus has been chosen to mentor an aspiring craftsman under the auspices of the Tennessee Craft organization. Dennis will be choosing an apprentice candidate soon, so if you are interested click the "Apply Now" button in the article on the next page. An \$1800 stipend is available to the chosen apprentice.

Master Artist / Apprentice Program (MAAP) [Click Here to go to the web page](#)



**MAAP Navigation**

**MAAP APPLICATION**

**MAAP ALUMNI**

**MAAP TESTIMONIALS**

Tennessee Craft, in partnership with the Tennessee Arts Commission, offers the Master Artist / Apprentice Program (MAAP) to open the door for emerging artists to learn traditional and contemporary craft skills from master craft artists.

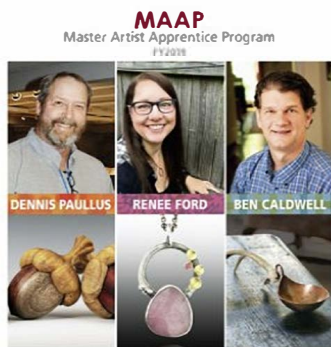
All artists in the program are asked to choose challenging goals that will catapult their skills and knowledge as craft artists. The Master Artist Apprentice Program was created to help artists reach the next level of their professional development from a six-month one-on-one mentorship, not typically available in most learning environments.

Awarded apprentices receive a \$1,800 stipend to work with their chosen master from Dec. 01, 2018 to June 15, 2019. For more information, email [Tennessee Craft](mailto:info@tennessee-craft.com).

Accepting apprentice applications online August 01 through November 01.

[Apply Now](#)

**Meet the 2019 Masters | Read their Bios**



**Dennis Paullus** is a master woodturner who lives in the Memphis, Tenn. area. You can read Dennis' full bio [here](#).

**Renee Ford** is a master jeweler who lives in the Franklin, Tenn. area. You can read Renee's full bio [here](#).

**Ben Caldwell** is a master metalsmith who lives in the Nashville, Tenn. area. You can read Ben's full bio [here](#).

**F.A.Q.s**

**How do know if I'm ready to be an apprentice?** Prospective apprentices should demonstrate investment and skill in the art form they wish to continue learning along with a readiness to take their skills to the next level. In addition, eligible apprentices must be residents of Tennessee, at least 18 years of age and cannot be currently enrolled in an arts-related degree program.

**There's a master I'm interested in, but I'm worried I live too far away. Can I still apply?** We find that the most successful master/apprentice partnerships are no more than a two- to three-hour one way drive apart. The good news is that given our state's geography, two to three hours encompasses more distance than you might think! We suggest using an online map driving estimate calculator to see if your master's hometown residence qualifies. If not, you can still apply; however, you'll just need to demonstrate on your application how you'll overcome the distance barrier (i.e., Skype meetings in between studio visits, paying for lodging overnight in the master's hometown in order to have concentrated weekend work

sessions, etc.)

**I think I'm ready to be an apprentice, as long as my busy work schedule doesn't get in the way. Can I create a flexible work schedule with my master, or is that set by someone else?** To a large degree, you're able to set your own schedule. Your master will work with you to try to find suitable meeting times that fit both your schedules. In the past, some partners liked to meet weekly, others meet only once or twice a month. It all depends on how flexible the master is with his/her time, how often you'll be meeting, how long your work sessions will last each time, as well as other factors such as distance apart and communication outside of the studio. Whatever work schedule you set with your master, keep in mind that you must meet together a minimum of 80-120 hours, and within the Dec. 01 to June 15 time period.

**I think I'm ready to apply, but the goals section has me stumped. What kind of goals should I include?** The goals you write on your application form are simply a starting point. Don't get too mired down in specifics. We're looking for goals that demonstrate your eagerness to learn, and give us some sense of what things you're hoping to accomplish. One big goal, or up to three smaller goals, are about all you'll have time for. An example of a large goal if you were applying under furniture might be something like, "I want to learn how to make a Shaker rocking chair." You could then elaborate on this goal to state all the joinery techniques making this chair might involve, or that you'd like to learn how to steam bend wood, etc.

**If I'm selected as an apprentice, what can my \$1,800 stipend be used for?** Award funding can be used for any number of apprenticeship-related expenses such as: craft supplies, tools, educational books on the subject matter, travel, fuel, etc. Note: Funding is intended to partially offset expenses of time and resources incurred by the apprentice; however, it is understood that participation in the program may involve additional expenses which shall be the responsibility of the apprentice.



### Keep In Touch

Sign up and receive **news, updates, and event announcements** from the fine folks at Tennessee Craft!

### Stay Connected

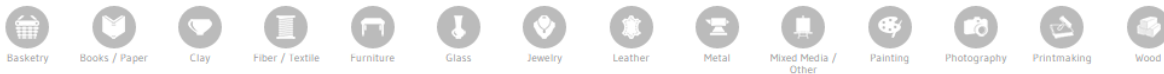
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### Next Event

**Tennessee Craft Week**

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# TENNESSEE CRAFT



### SOCIAL MEDIA SHARING



# Shop Talk

By: Eric Caron

**W**e welcome you to another installment of Shop Talk! Today we'll visit with Dennis Paullus, the most recent MSWG president and a long-time club member. Many know Dennis has served the club and Memphis-area woodturning community for 20+ years as a professional woodturner and teacher, but did you know he was a boilermaker for 10 years, and a contractor for many years as well?

## Woodturning Beginnings

How did wood turning start? One fine Christmas, 20+ years ago, Dennis's parents bought him a lathe from Colco. After a year of successes and failures, Dennis decided to attend a Mid-South Woodturners Guild meeting, who were meeting at Colco at the time. He has been a member ever since, 22 years.

Aside from his full-time, prolific turning, Dennis has also mentored many new turners in the Memphis area. As Binh Pho once said, "Copy me if you want; copy me if you can." Dennis believes that to emulate is to acknowledge the original, and it is always important to credit your sources and influences. Neil Scobie conveyed a similar message – copy to learn techniques, but ultimately your voice on the lathe will make itself known over time.

## Inspirational Woodturners

Dennis has learned from some of the names we all know: John Jordan (hollow forms and carving), Richard Raffan (boxes), Mike Mahoney (bowls), Alan and Stuart Batty (threading). Willard Baxter demonstrated a threaded top, which serves many applications in Dennis' lidded boxes. Beyond these artists, Dennis' wood carving has



been guided by the work of Dixie Biggs, Betty Scarpino, and John Jordan. Other wood carving influences are Keith Holt, Todd Hoyer, Stoney Lamar, and Mark Gardner.

## Into the Shop

The heart of Dennis' woodturning shop is a One Way 2436 with a 54" bed, and a custom outboard bowl turning ways, which allows room for a 48" bowl. That's a BIG banjo that does not go on your knee, oh, Susanna! Sure, there are other lathes, but Dennis probably turns 95% of his pieces on the One Way.



## Shop Talk cont.

Tucked away are a Powermatic 3520 and a Jet 1640.



The second most important lathe in Dennis' shop is the smallest – a Jet 1015 that Dennis modified around 2000 as a dedicated threading lathe for the many lidded boxes he makes, as well as for demonstrating threading.



Dennis primarily uses One Way chucks.

A 15" Powermatic bandsaw with a foot brake (!) is near the entrance of the shop, where some of the rough blanks are cut, however, a smaller bandsaw sees most of the blank cutting duties, especially for threaded boxes.

Importantly, there is dust collection and dust filtration. Dennis' shop has both in redundancies, especially custom air/dust filtration systems built



with A/C squirrel fans. For all you PETA members out there, no squirrels were harmed, just the A/C unit! Speaking of A/C, Dennis tapes air filters over the air intakes of his A/C window units in the shop, which prevents the fine dust from

reaching the interior of the A/C unit. Clean out or replace the filter and you are all set!





## Shop Talk cont.

A dedicated wood carving area allows plenty of light and a great view of deer in the backyard. A homemade downdraft table keeps dust out of the air when carving. If you've never heard Dennis or anyone else say it, "If you smell wood you're breathing it. STOP IT."



Dennis has other tools throughout the shop, though they surely do not get as much use as the Oneway or the bandsaws. A large 80-gallon air compressor provides needed air anywhere in the shop. As well, a table saw and integrated router serve their functions as needed.



### Woods + Preservation

Dennis prefers to use locally stable woods, which include walnut, tulip poplar, and cherry. Rarely does he use oak or sycamore, though it can be pretty. If you have helped with retrieving and processing large amounts of wood with Dennis, you know he has a few trailers that he lines with black 6 mil PVC sheets, then fills with wood, and then wraps with the same PVC sheet. This greatly slows the drying process and makes logs viable and available later. Think of it as a wood preserving burrito! Some of you know Dennis recently acquired a new Kubota tractor, that will surely help him move some of the large logs he is known to obtain and turn into large bowls.



### Shop Improvements

Nearing completion is the enclosing of the last portion of a pole barn, that will house multiple lathes for woodturning instruction. The area also houses Dennis cabinets of drying bowls and other turned pieces or raw blanks. It is a Wall of Wonder!

### Professional Wood Turning

As a dedicated, professional woodturner, Dennis has had the opportunity to teach and present at many different forums, from our own MSWG meetings to the TAW and other state symposiums, as well as the AAW symposium. As

## Shop Talk cont.



well, his work has been featured in several AAW magazines and exhibition catalogs.

2009 – Spirit of the Southwest – turned, hollowed, carved, and painted – Lizard Pot  
 2010 – Oops! A small maple bowl, turned then carved, with the appearance of drops melting from the side.

August 2011 – Mag

2012 – A Walk in the Woods

August 2015 – Turn an Acorn Box

Over time and through tough days, Dennis developed his “happy-sad tears” pattern that he incorporates into hollow carved vessels. Dennis continues to teach individuals through different methods – he will soon be mentoring a lucky wood turner sponsored by Tennessee Craft. Now is the time if you want to take your woodturning artistry to the next level! Also, just released - Dennis will be a demonstrator at the 2019 AAW Symposium in Raleigh, NC!

### Sales and Commerce

Dennis sells his bowls, lidded boxes, and other functional turned pieces at local markets and art/craft exhibitions. Dennis turns about 300 bowls a year, which make up about 60% of his turned pieces. He guarantees his bowls for life, which means he has to know the stability and strength of the wood for each piece. Is there anything that Dennis will not sell? Those would be the pieces recognized by the AAW.

Thank you, Dennis, for a great walk through your shop, your thoughts, your experience, and most importantly your openness to share your skills and knowledge with the Mid-South Woodturner’s Guild, others in our community, and the regional and national symposiums. That is how we build communities and individuals!

Jon Magill will be a demonstrator at the 2016 AAW international symposium in Atlanta, Georgia, June 9-12, 2016. For more, visit [woodturner.org](http://woodturner.org).

# WHAT IS OLD IS NEW AGAIN

## A History of Contemporary Ornamental Turning

Jon Magill

There seem to be two types of people, those who look at something and say, “That’s pretty,” and those who ask, “How did they do that?” Most woodturners, myself included, seem to fall into the latter category. That explains in a nutshell how I became fascinated with the relatively obscure realm of ornamental turning, or OT for short.

OT is a specialized subcategory of woodturning, much the way segmented turning can be thought of. Generally speaking, OT is a collection of techniques used to add decoration, or “ornamentation,” to turned objects. In some senses, it might be considered geometric carving that is typically accomplished with a rotating cutter of some sort. The departure from normal woodturning techniques becomes obvious when we look at the specifics

of the lathes used, how the workpiece is manipulated, and the cutters that are employed. Those constitute the root of OT and the nearly infinite patterns that are possible, once mastered.

### What is OT?

OT is all about geometry, the enablers of that geometry being the specialized lathes, the ingenious chucks, and the multitude of various cutters. Starting with the lathes, we encounter the first major division of the OT realm into its two main subcategories: index work and engine turning.

As its name implies, index work is carried out when the spindle on the lathe is indexed to a new fixed position, using an indexing wheel and a pin detent. Once the spindle is positioned, a cut is made, then the lathe is indexed again to another position



Turned Ivory by Johann Eisenberg, 1624, 16¼" (41cm) tall

Photo by Jon Magill, printed with permission, Museo degli Argenti, Florence, Italy

### JOURNAL ARCHIVE CONNECTION

Jon Magill has written extensively for *American Woodturner* on ornamental turning. His past articles are referenced more specifically throughout this article. AAW members can access these and all past journal articles online at [woodturner.org](http://woodturner.org).



to repeat the process. Carried out in repeating sequences, the indexing and cutting develops a pattern. Complex sequences create ever more intricate patterns. Many contemporary lathes have a rudimentary division plate that allows simple index work, like fluting, but is typically limited to twenty-four or forty-eight positions. Traditional OT lathes have multiple concentric rings of holes of various counts, allowing very precise positions to be located. The number of holes in each ring is carefully selected to provide numerous factors for a wide variety of desirable divisions—for example, hole counts of 66, 72, 84, 96, 120, 144, and 192 yield a dizzying array of possibilities, given all their factors.

Engine turning is the over-arching term used for the other subdivision of OT, mainly to refer to the work carried out using a rose engine lathe. There are numerous ingenious machines used for decorating in this vein, but for purposes of brevity we will limit discussion to the rose engine lathe. Unique to most rose engines is a headstock mounted in the bed using pivots, allowing the headstock to rock freely back and forth. The rocking motion of the headstock is controlled by mechanical means of a cam and follower. The cams, known as “rosettes,” often produce a floral pattern, hence the name given to the lathe. Traditional lathes arranged an assortment of rosettes in a stack, called a “barrel,” onto the spindle of the lathe. The barrel provides the user with a choice of patterns readily at their fingertips. Most rose engine lathes also incorporate the features of an ornamental lathe, hence adding significantly to their cost.

In addition to indexing and rocking, many OT lathes also incorporate a provision for the spindle to traverse, or slide axially, in the headstock. On a conventional OT lathe, this motion enables controlled operations like

threading. On a rose engine, under control of a rosette, it allows pushing the spindle in and out to create an action known as “pumping.”

All OT lathes need a means to control the movement and position of the cutting tool. That motion is achieved with a sliderest, which is characteristic of all OT lathes. Sliderest designs vary but they all allow precise movement of the tool. When combined with indexing, moving the sliderest over by the width of the cutter for the next set of indexed cuts enables a staggering number of possible patterns. (*For more on OT cutters and patterns, see past AW article, “The Cutting Edge of OT,” vol 23, no 1, page 32.*)

What may not be obvious by looking at an OT lathe is that the lathes are used at very low speeds. Think 3 rpm. A benefit of those low speeds is that wildly out of balance chucks can be attached to the spindle without the dangers that would be associated with normal wood-turning speeds. The result is that the workpiece does not necessarily need to rotate on center and can be oriented at any angle to the tool or lathe bed. (*For more on OT chucks, see past AW article, “Slightly Eccentric,” vol 24, no 3, page 60.*)

For a turner armed with a capable lathe, an assortment of chucks, and an array of cutting frames, the sky is the limit in terms of patterns and possibilities for adding decoration to turned pieces.

### How has OT evolved?

OT in one form or another has been around for centuries. Rose engines were well known and described in early works like Joseph Moxon’s 1680 book. Rose engine and swash turning in that era both used fixed tools, held rigidly in place, while the workpiece rotated past and was cut. The turned ivory collection, known as the Coburg Ivories, sacked from the Ehrenburg Palace during the Thirty Years War and now housed in the Pitti Palace in Florence, represent the peak of the craft in that era (*see lead Photo*).

The 18th century brought the advent of rotating cutters, held in frames that could be used with profiled cutters, presented to the workpiece at any desired angle via the sliderest. Combining index work with rotating cutters meant that many patterns could be cut on a much simpler machine, the ornamental turning lathe, simulating the patterns of the much more complex and expensive rose engine lathes.

The rotating cutters were driven by an “overhead” consisting of an upright at each end of the lathe and a rotating drum between them. A light belt dropped from the overhead to drive the rotating cutters. Overheads became the other hallmark of OT lathes, especially those produced during the heyday of OT in the Victorian era.

The Holtzapffel company, whose name is synonymous with OT, produced more than 2,500 lathes during the Victorian prime of OT. Of those, though, perhaps only sixteen ▶

## The Rose Engine

“The practice of ornamental turning exercises a fascination for many minds. It provides such endless opportunities for the employment of ingenuity, and offers so much scope for artistic ability, that once its elements are mastered it leads its votary forward, ever urging him to attempt more and more difficult operations, or to produce some more beautiful forms. But like every other mechanical operation, it requires apparatus, and this is by no means cheap. A lathe and set of ordinary chucks can be purchased at a cost which will compare favourably with that of any other hobby, such as a garden, a greenhouse, the collection of stamps or rare books, and the like. But after the lathe is obtained much remains behind, if the whole range of ornamental turning is to be traversed, and chief among the instruments which are unattainable to the possessor of modest means, is the rose engine.”

—Excerpted from *Engineering* magazine, Vol. LIV, 19th August 1892

were true rose engine lathes, costing many times more than the simpler ornamental lathes. Holtzapffel & Co. were perhaps even more well known for producing a five-volume set titled, *Turning and Mechanical Manipulation*. Volume five, *The Principles and Practice of Ornamental or Complex Turning*, is commonly referred to as “The Bible” of OT. The sixth volume was expected to

include information on the rose engine. Sadly, that was never completed. Recently, ornamental turner John Edwards in England has produced a compendium, titled *Holtzapffel Volume VI*, in an effort to fill that void. For more on that publication, visit [ornamentalturning.info](http://ornamentalturning.info).

The creative whims of other Victorian inventors gave us apparatus like Atkinson’s Reciprocator, Evans’ Spiral Spherical Sliderest, Pudsey-Dawson’s Geometric Sliderest, Childs’ Universal Rosette, and many more. OT was enjoying the limelight in the technical publications of the day, including *The English Mechanic*, which featured regular articles and commentaries.

Opinions vary, but many suppose that the arrival of the motorcar (c. 1886) provided a new pastime activity for the gentry, resulting in OT’s decline around the turn of the 20th century. Subsequent wars, with the melting down of scrap metal, sounded the death knell for many Victorian lathes. Numerous lathes did survive the war and a few practitioners kept the craft alive. In 1948, a small group started the Society of Ornamental Turners in England ([the-sot.com](http://the-sot.com)). Today, they boast a membership of three hundred worldwide. A more recently formed virtual chapter of the AAW, Ornamental Turners International ([ornamentalturners.org](http://ornamentalturners.org)), has about 250 members today.

lathes, the missing parts were often made before standardized screws came into being. If I wanted to get into OT, rather than machine restoration, I needed to find some other option.

In 1985, Ray Lawler, a gear manufacturer in Missouri, decided to make some modern ornamental turning lathes. His design inspiration was largely based on the popular Holtzapffel configuration, to which he added some modern innovations, like a full-length lead-screw, motorizing the lathe and increasing its overall size. Ray had produced and sold about thirty-six lathes by the time I learned about ornamental turning, and he was no longer making them. About the same time, James Harris, an accomplished ornamental turner in Texas, had created a website describing his transformation of a Grizzly 12" x 36" (30cm x 91cm) metal lathe into an ornamental turning lathe, with good results.

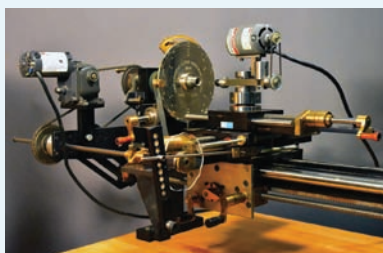
However, Gorst’s work that I had seen was produced on a rose engine lathe, and I was convinced I needed to find a way to acquire a similar lathe. The rose engine lathe that Gorst used was a painstakingly reproduced copy of one of the few extant Holtzapffel rose engines. Gorst’s lathe was made by Fred Armbruster, who was allowed access to measure every detail of Holtzapffel’s rose engine #1636, originally made in 1838. Fred made only two of those lathes, now known as the Mark I’s.

Paul Cler, an ingenious machinist in Illinois, had taken up the mantle and was producing a modern rose engine lathe at the rate of one or two a year. I got on his list and had a lathe within a year. The Cler lathe is based on modern linear rails, and his design does not use a rocking headstock, but instead uses the Pudsey-Dawson approach, whereby the top slide of the sliderest, with the tool mounted on it, moves in and out. The differences are somewhat subtle, but the main advantage is that without

## OT lathes



Lawler ornamental turning lathe, c. 1996  
Photo reproduced from product literature



Cler Ornamental Lathe with Rose Engine, 2001

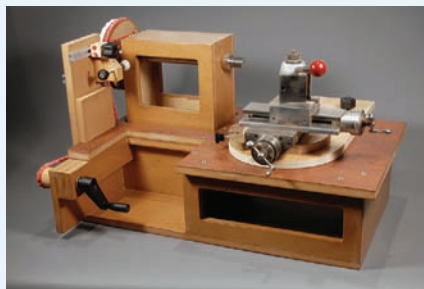


Holy Rose Engine, Gorst duPlessis, AAW Pasadena Symposium, 2003

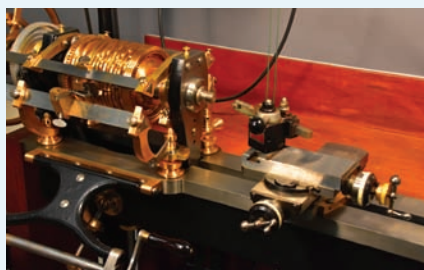
## Recent developments and milestones in OT

I was introduced to OT when I was lucky enough to meet Gorst duPlessis. The instant I saw his work and how it was produced, I was captivated. OT married three elements that have always resonated for me: woodworking, geometry, and mechanisms. The problem was, how does one get started? There were not many lathes available. The antique lathes out there were rare, expensive, and usually missing parts. Given the age of the

## More OT lathes



MDF Rose Engine with sliderest, 2007. Learn more about the MDF rose engine at [rogueturner.com](http://rogueturner.com).



Armbruster Rose Engine, Mk II, 2009



Lindow Rose Engine with sliderest, 2007. For more, visit [roseengineturning.biz](http://roseengineturning.biz).



**John Moe**, *Trinity's Friend*, 2015, Bloodwood, holly, 5½" × 4" (14cm × 10cm)

a rocking headstock, a simple tailstock can still be used. As mentioned above, most rose engine lathes typically also incorporate ornamental turning functions. Paul's design incorporated a lead-screw to enable spirals, a curvilinear apparatus, and the capability to produce two types of reciprocation, all fodder for future journal articles.

For the AAW's 2003 symposium in Pasadena, California, Gorst built a portable rose engine lathe. He perforated the aluminum body of the lathe to reduce weight and sized it to fit in a suitcase. He wanted to demonstrate OT to the masses. He did three rotations for standing-room-only crowds. People were fascinated and wanted to give OT a try, but they walked out of the demos facing the same hurdle I had a few years earlier: there were no readily available lathes.

Since the 2003 symposium, rose engine plans using MDF (medium density fiberboard) were published for anyone who wanted to build

their own lathe. (See past AW article, "Rose-Engine Turning," vol 22, no 1, page 46.) David Lindow has been producing and selling his Lindow Rose Engine, together with numerous OT accessories. Fred Armbruster has since produced more than twenty Mark II lathes, which maintain the Holtzapffel aesthetics while incorporating a number of modern innovations, notably rocking and pumping from all rosettes and a 5C collet for the spindle. Other lathes are on the horizon, as OT enjoys a relative resurgence in this century. Thanks to the recent availability of equipment, there are many new ornamental turners taking up the craft.

Among his other contributions, Gorst was the master of innovation when it came to producing striking finials. He has also encouraged many to try

their hand at making finials inspired by his designs. Gorst and I thought it would make sense to produce a special rosette to enable people to create variants of his signature triple finials. The GDP-3 rosette for the MDF rose engine allows people to try their hands at making a triple finial. Once the basics are mastered, the rosette has additional phasing holes to allow making a twisted version of the triple finial as exemplified by John Moe's twisted finial box. ▶

**Paul Fletcher**, *Cricket Cage VI*, 2004, African blackwood, 3½" × 3" (9cm × 8cm)



Long-time practitioners of the craft continue to raise the bar for the new generation. I aspire to follow in the footsteps of the late English master, Paul Fletcher. Experts, like Al Collins in California, are exploring techniques to produce works like the masters of centuries past, reviving the nearly lost art of fixed tool work. What is old is new again. In the words of the late Martin Matthews, "Perhaps I can inspire you to participate in the craft of ornamental turning."

*Jon Magill (ornamentalobsessions@gmail.com) is an ornamental turner who lives in Shady Cove, Oregon. Jon is a member of both the Southern Oregon Woodturners and Ornamental Turners International AAW chapters.*



**Al Collins, Coburg Quest, 2015, Alternative ivory, 12" x 3½" (30cm x 9cm)**

## Loss of a Legend



*Gorst duPlessis on his front porch in New Orleans.*

Photo: Brad Davis

In April 2015, the woodturning and OT world lost a legend when Gorst duPlessis passed away.

Gorst was perhaps the most prolific ornamental turner of the modern era. His creative flair and eye for aesthetics never tired.

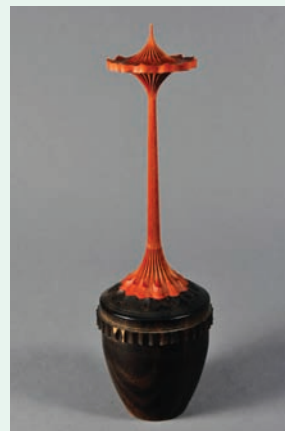
He created more signature designs, shapes, and techniques than just about any other ornamental turner. Stylistically, he brought an organic panache to the traditionally rectilinear realm of ornamental turning. With no fear of trying something new, Gorst developed many innovations that have become accepted practice in the OT world.

Gorst and his work inspired countless turners. His zealous joy for sharing and teaching

infected many would-be ornamental turners, myself included.

I met Gorst in the summer of 1998, when learning to turn spheres at Bonnie Klein's shop. When we went into the house for a cup of coffee, there was a wooden vase full of flowers on her mantle. Nearly everything in her house has been turned, so I said, "I know that came off a lathe, but I have no idea how." Bonnie's reply has been the punchline for every demo I have given since then: "Oh, that's Gorst. He's out buying wood. He'll be back in an hour." Gorst just happened to be visiting from New Orleans. When he returned and demonstrated the magic of rose engine turning, my own life changed course.

He was a patient, intelligent, and creative genius, probably the most enthusiastic ambassador that the craft of OT has ever had. His quick wit paired perfectly with his expansive repertoire of jokes and quotes. Everyone who knew him misses him. For Gorst's sake, I hope they have lathes in heaven.



*(Top row, left to right) For Mary, 2010, Cocobolo, boxwood, pink ivory, 10½" x 5¼" (27cm x 13cm)*

*Family of Man Series, 2013, Boxwood, bloodwood, mopane, tallest is 7¼" x 2" (18cm x 5cm)*

*Seattle Series, 2002, African blackwood, pink ivory, 8¼" x 2½" (21cm x 6cm)*

*(Bottom) OT Finials, 2010, Various exotic hardwoods, typical size 7" x 3" (18cm x 8cm)*

# Ornamental TURNING

## PATTERNS CUT THROUGH Thin Layers

Bill Ooms

**M**y fascination with thin layers started when I was introduced to the work of the late Dale Chase. I am told he was somewhat secretive about the equipment and techniques he used to create ornamental boxes. As a result, I have taken some time to recreate the techniques (or create new techniques) to make thin layers that can be cut through with an ornamental lathe, and then extend those techniques into new work of my own.

In my previous article (vol 28, no 1), I introduced the use of a mini metal lathe for wood. I will build on that foundation to show how to make multiple thin layers on the outside of a box, and then cut through those layers with a rose engine ornamental lathe. I assume the reader has taken the time to understand the basic techniques of using a metal lathe for turning wood, as well as a basic understanding of the use of a



*Inspired by Dale Chase, 2011, African blackwood, bloodwood, boxwood, 1.8" x 2.5" (46mm x 64mm)*

rose engine. If you do not have a rose engine, you could cut through the thin layers using appropriate cutters on a rotary tool (such as a Foredom).

### Mounting the work

The biggest challenge comes from transferring work between a regular

lathe, a metal lathe, and an ornamental lathe. Regular chucks are not sufficiently accurate to transfer work among various machines—slight irregularities in the thickness or concentricity of the layers will be noticeable when the layers are cut through to create a pattern. Precision is the



**1** Drill and tap a blank Morse taper arbor for a screw. Mount a scrap wood block onto the arbor.



**2** An MT2 to MT3 adapter sleeve can be used if necessary, but may require inserting a screw into the end of the arbor to permit removing the sleeve with a tapered knockout bar.



**3** The inner core of pink ivory and the outer layer of Katalox are mounted on MT2 arbors to enable moving from one lathe to another. Note the vent hole in the waste block on the lower piece.



goal in creating the layers and cutting the patterns.

The alignment error can be nearly eliminated by mounting work on a Morse taper arbor instead of using chucks. Morse tapers are more accurate and consistent among various machines. If your ornamental lathe does not have provision for a Morse taper, you may have to take your spindle to a reputable machine shop (or, if the lathe is new enough, contact the manufacturer). Otherwise, you will have to resort to a leveling chuck and align the work each time you move from one machine to another.

I use 2MT arbors (littlemachine-shop.com #2394) and drill/tap a 1/4-20 hole in the end. Even though the ends of the arbors are supposed to be machinable, you may find you need a cobalt steel tap (mcmaster.com #2662A11). I attach scrap wood to the arbor with a recessed screw and square off the end on the metal lathe (Photo 1).

If your metal lathe uses a 3MT and your wood lathe uses 2MT (which is my situation), then use a 2MT-3MT adapter sleeve. Just be sure you have a way to remove the sleeve afterward—I had to put an extension screw in the end of my arbor so I could use a tapered bar to knock it out (Photo 2).

Whenever possible, use a drawbar to keep the arbor snug. If it is not possible to use a drawbar, lightly tap the arbor in place with a plastic or wood mallet. Keep the Morse tapers clean—it only takes a bit of sawdust to lose an accurate fit. I use a dowel with steel wool to clean the tapers in the spindles and blow out with an air hose. There are also Morse taper cleaning tools available commercially.

### Starting materials

Start by rough turning the inner and outer layer on your regular

lathe. Any contrasting woods can be used, but for this project I've chosen a central core of pink ivory, 2.5" (64mm) long and 1.875" (48mm) diameter, with an outer layer of katalox (Mexican ebony), 2.5" (64mm) long and 2.125" (54mm) diameter. The central layer will be maple veneer. The base and lid of the box are katalox (each piece .625" [16mm] thick and 2.125" diameter).

The outer layer will need a vent hole to let air out when the inner core is inserted into it (this will become more apparent later). Drill the vent hole in the scrap block all the way through to the recess for the mounting screw. Once this is done, you can square off one end of the cylinders and glue to the blocks on the MT2 arbors (I use five-minute epoxy). Note the vent hole shown in Photo 3.

### Inner core and central layer

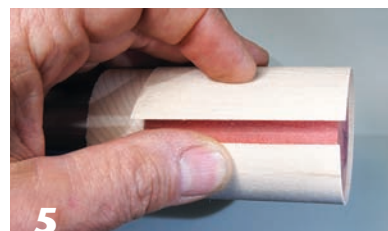
With the metal lathe, turn the pink ivory, along with the scrap block to a diameter of 1.740" (44mm) (Photo 4). Set the dial on your cross-slide to zero and *do not change or remount anything until after turning down the central layer*.

Now, cut a piece of maple veneer that is about 2.6" (66mm) in the direction of the grain, and about 6" (152mm) wide. Use veneer softener so the veneer is pliable (you can do this in advance so it will be ready when you need it). Try wrapping the veneer around the cylinder and mark where you will need to make a cut so the ends just meet. It is better to make several small cuts to approach the final dimension (Photo 5). A guillotine-style paper cutter works well on the softened veneer.

After the size is right, apply PVA glue to the outside of the cylinder. Apply enough glue to make a good joint, but not so much to cause a lot of squeeze-out. Wrap the veneer around ▶



4 Make multiple cuts to reduce the outer diameter of the core.



5 Use softened maple veneer for the middle layer. Trim the size to give an exact fit around the core cylinder.



6 Glue the veneer onto the core cylinder and wrap with rubber bands (long strips cut from an inner tube work well).



7 When dry, soak with CA, give it a shot of accelerator, then trim down, leaving a very thin layer of the maple veneer.



8 Trim the excess off the end of the cylinder.



**9** After drilling out the bulk of the outer wood, use a boring bar to match the dimension of the inner assembly. Note the small hole drilled through to allow air to escape when the pieces are assembled.



**10** Only apply glue on the bottom inside of the outer wood, then assemble and clamp in the lathe until cured.



**11** After parting off, turn the exterior, leaving a very thin layer of the outer Katalox wood.



**12** Trim the excess off the end of the assembly, showing the thin layers around the inner core of pink ivory.

the cylinder, letting it extend a bit over the end of the cylinder, and wrap securely with rubber bands. I use a long strip cut from an old inner tube (*Photo 6*).

When dry, remove the rubber bands, soak the surface of the veneer with CA glue, and give it a shot of accelerator. Now we can turn the outside of the central layer. My veneer was 0.024" (.610mm) thick, so I am going to make the central layer 0.020" (.508mm) thick. Back off the cross-slide dial by 0.025" (.635mm) and make a cut to remove the excess glue (*Photo 7*), then make two shallow cuts until the outer diameter is 1.780" (45.2mm) (the original 1.740" (44.2mm) plus two times the 0.020" veneer). Finally, trim the end of the cylinder flat (*Photo 8*).

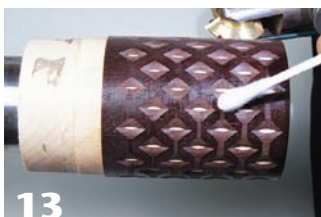
Alternate option: Rather than using veneer, you can put a layer of colored epoxy on the central core. I have used black TransTint dye to color five-minute epoxy and then turned it down to a thin layer, as thin as 0.006" (.152mm) to give a pleasing dark contrast between two lighter woods.

### Outer layer

Square off the end of the katalox and note the overall length (mine was 2.40" [61mm]). Drill out the bulk of the inside with Forstner bits to a depth less than the overall length—I drilled mine 2.25" (57mm) deep. I do this in two passes: first with a 1.25" (32mm) bit and then with a 1.625" (41mm) bit. I do this on my regular lathe with the belt set to lowest speed so I have good torque at low rpm

(370 rpm). Drill out a 0.25" (6mm) hole through the bottom so it goes all the way through the katalox. There should now be a clear path for air to escape from the inside of the cylinder through the vent hole provided earlier. Check with a blast of compressed air to make sure you have achieved a clear escape vent. Note the final depth of the hole for later cut-off. Mine was 2.25".

Using a boring bar, enlarge the interior of the cylinder to 1.780" (45.2mm) (*Photo 9*). Approach the final dimension with small cuts. If you experience chatter, try a slower rpm. Chatter can also be dampened by carefully placing the tip of your finger on the shank of the boring bar. Bevel the edge slightly with abrasive, blow out any sawdust, and check the fit of the inner cylinder.



**13** On the rose engine, start to cut the pattern so it barely goes through the outer layer and apply CA glue with a cotton swab.



**14** Cut the pattern with multiple passes, each going a bit deeper. Soak with CA glue after each pass.



**15** Drill out the bulk of the inside of the box, then use a boring bar to cut to the final dimension.



**16** Part off with the cut-off tool and catch the cylinder on your finger.

If necessary, make an additional pass with the boring bar taking off 0.001" (.025mm) and try again. In my case, I achieved a snug fit with an inner diameter of 1.784" (45mm). The goal is have as close a fit as possible, while still being able to insert the inner cylinder.

It is not possible to spread glue down the full length of the joint—the glue will bind up before fully inserting the two pieces. I sparingly apply five-minute epoxy on the bottom surface of the hole and up the side by only .125" (3mm). *Do not apply the glue to the cylinder.* Insert the inner cylinder while it is mounted in the tailstock to maintain straight alignment (*Photo 10*) and leave it clamped in the lathe until dry. The air escapes out of the vent hole.

When dry, apply CA glue around the joint to seep in. It will not flow all the way down the joint, but it will hold the edge secure during the next few steps. Mark the outside of the cylinder and cut it off to the left of the bottom of the hole—that is, cutting through the solid portion that remains of the katalox. The best option is to cut it by hand with the Morse taper arbor sticking out on the right side. It is *not* safe to part it off with a parting tool. Additionally, do not cut round stock on a bandsaw unless you have the proper equipment to hold cylinders and spheres securely.

Turn the outside diameter to 1.840" (46.7mm) (*Photo 11*), which will give an outer layer of 0.030" (.762mm) with the middle layer 0.020" (.508mm). Then cut off the end of the katalox to reveal all the layers (*Photo 12*). Apply some thin CA glue to seep into the joint and clean up the end again.

### Cut the outside pattern

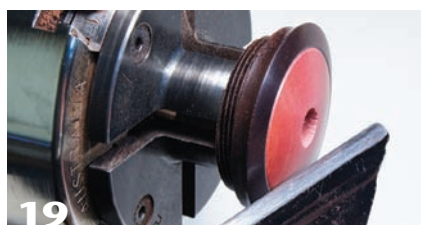
Plan your outside pattern so it comfortably fits on the length of the



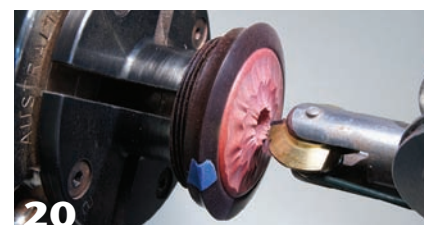
**17** The base of the box has a tenon cut to match the inside of the cylinder and can be decorated with the rose engine.



**18** On your regular lathe, turn a profile on the base and lid of the box while the lid is held in place securely with the tailstock.



**19** Cut a recess in top of the lid, glue a disk of pink ivory, turn it to shape, and drill a shallow hole for the lid's center button.



**20** Pattern the lid of the box being careful to align the pattern with the side of the box (note the blue tape).

cylinder. For this project, I am using a Lotus rosette with twelve repeats. It is similar to the rosette available from Jon Magill for the MDF Rose Engine. It is important that the rosette amplitude matches the cut depth. In addition, the cut depth should just go through the two outer layers to reveal the inner core. In my case, I am cutting a total depth of 0.065" (1.65mm), so I will have a rosette with a 0.065" (1.65mm) peak-to-valley amplitude. Some rose engines have the ability to adjust the amplitude. If yours does not have this capability, you will have to make or purchase a rosette of suitable amplitude.

*Do not cut the entire pattern to full depth at one time.* I first cut to a depth of 0.035" (.889mm) to barely go through the outer layer. I then apply CA glue with a cotton swab so that it soaks into the joint that was not glued thoroughly (*Photo 13*). Spray with accelerator to cure.

Cut further to a depth of 0.055" (1.40mm) to go through the middle

layer, then apply more CA glue. Follow that with a cut to a depth of 0.060" (1.52mm), more CA, then 0.064" (1.63mm), more CA, then a final cut of 0.065" (1.65mm). Note that the final pass takes off only a thousandth of an inch—this leaves a clean-cut surface that the CA has soaked into between layers (*Photo 14*).

Normally, I do not do anything further to a surface after cutting with the ornamental lathe; however, there will be small areas of uncut surface that have a coating of CA glue. The glue must be removed. Sanding is a poor choice—it will round over the crisp edges of the pattern. So, I use a negative-rake scraper to carefully turn away the glue on the un-patterned portion of the surface. Use a freshly sharpened tool and be gentle.

### Hollow the body

I didn't hollow the body of the box until this point because I wanted a solid interior to make sure no distortion would occur. If you hollow out ▶

the center earlier, you'll find some of the internal stress of the wood is relieved and the pattern will distort. When doing any thin-layered work, always keep as much wood as possible until the thin layers are cut.

Hollow the interior as before, using a 1.25" (32mm) and 1.5" (38mm) Forstner bit to a depth that just goes past the end of our pattern (2.3" [54mm] in my case). Use a boring bar to enlarge the diameter to 1.550" (39.4mm), which gives a side thickness of 0.145" (36.8mm), and will allow adequate thickness for threads inside the box (*Photo 15*). This is a good time to sand the inside.

In this design, I decided to thread the inside of the box and put male threads on the lid. If your ornamental lathe does not have the ability to make threads, use a threading jig or you can hand chase the threads.

Finally, cut off the cylinder with the cut-off blade at the edge of the cut pattern (*Photo 16*). Catch the cut cylinder by placing your finger inside it.



### Base of the box

Rough out the base on the regular lathe and put a recess on the bottom for an expansion chuck. Then on the metal lathe, clean up the end and cut a tenon 0.12" (3.0mm) wide to match the inside diameter of the cylinder. Sand the face and cut an appropriate pattern on the surface (*Photo 17*) and apply finish. I used a coat of Renaissance wax, and it is easy to buff it at this stage.

Glue the cylinder to the base, being careful to align the inner pattern with the exterior pattern.

### Top of the box

Rough out the top on a regular lathe and turn a tenon for the male threads. Hollow out a recess inside the lid—I hollowed mine out about .25" (6mm) deep and 1.25" (32mm) diameter—and sand the inside. Cut the threads on the tenon so the fit is a bit loose. The lid and the inner core of the body are dissimilar woods, so extra space is prudent to allow for expansion/contraction. When you twist the lid onto the box, it will not feel loose because the threads will pull everything snug.

On your regular lathe, turn a shape on the edge of the base and the lid (*Photo 18*) and sand. Note the use of the tailstock for added safety.

Mount just the lid with the expansion chuck inside the recess you previously cut in the lid. Then cut a recess in the top of the lid for an insert—I made the recess 1.55" (39mm) diameter and 0.10" (2.5mm) deep. For an insert on the top of the lid, I used pink ivory, cut to fit the diameter of the recess. Glue in the insert and shape the top. Drill a .375" (9.5mm) hole in the top for the center button (*Photo 19*). Do not drill all the way through.

*Lacy Box*, 2012, African blackwood, boxwood, katalox, maple, pink ivory, 2.9" x 2" (74mm x 51mm)

Plan the top pattern to complement the side pattern. I placed a small piece of blue masking tape on the side of the top so that I could align the top pattern with the side pattern (*Photo 20*).

I made the button from a .375"-diameter piece of African blackwood with a .25" (6mm) hole filled by a piece of boxwood. Glue in the button and turn the shape as desired. The final box is shown below.

A similar technique can be used to make thin layers in the inside of a cylindrical box and on the flat bottom of a box. The result resembles the work done by Dale Chase. The same techniques can be used to put multiple layers on the top surface of a box.

Creating thin layers on concave or convex surfaces requires more sophisticated techniques. After plain turning a curved surface, I digitize the curve and cut a matching piece with my computerized ornamental lathe. After gluing the matching pieces together, I can precisely cut off all but a thin layer of wood.

Cutting through thin layers can result in patterns similar to segmented work, but on a much smaller and more delicate scale. From a distance, the work might be mistaken for segmented work, but close examination will show the cut facets reflecting the light and giving the work a sense of depth. ■

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*Bill Ooms is a second-generation woodturner and learned basic woodworking from his father. As a young man, Bill's desire was to envision and create new things, which led to a career in engineering. In retirement, he has returned to his roots as a full-time woodworker. Recently, he has been working with rose engine and ornamental turning, which combine his woodturning skills with his math and engineering background. More of Bill's work can be seen at [billooms.com](http://billooms.com) and a profile of him appeared in *Woodturning magazine*, November 2012, no 246. Bill and his wife Pam have their home and studio in Arizona.*

# Ornamental **TURNING**

## GALLERY



(Clockwise from top left)  
*The Eighth Note*, 2012, African blackwood, holly, sterling silver, 6" x 6" (152mm)  
 AAW POP 2013 invitational exhibit "Harmony"  
 The head of the note is threaded and opens to reveal a triplet of small quarter notes made from sterling silver. The staff is made from wood and metal (painted black) on a base covered with printed parchment. The photo is a composite to show the note open.

*Purple Bowl*, 2012, Purpleheart, holly, 1" x 4.7" (25mm x 119mm)

*Inspired by Dale Chase*, 2012, African blackwood, 2.2" x 2.5" (56mm x 64mm)

*Neapolitan Box*, 2012, Katalox, maple, pink ivory, betel nut, 3.3" x 2.2" (84mm x 56mm)

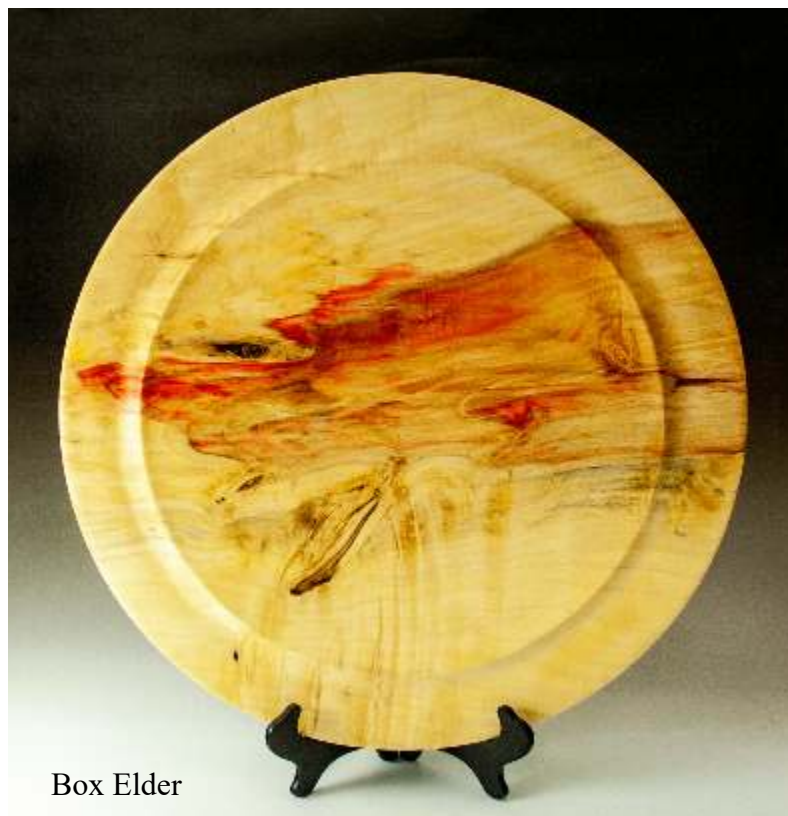
*Shawl Vase*, 2012, Maple burl, black epoxy, bubinga, ebony, 4.5" x 2.7" (114mm x 69mm)

*Pierced Vase*, 2012, Maple burl, black epoxy, maple, ebony, 5" x 2.7" (127mm x 69mm)



# Instant Gallery

**Karl Loeblien**



Box Elder



**Rick Stone**



White Oak

# Instant Gallery cont.

**Bill Bleau**



**Rich Williams**



# Instant Gallery cont.

**Mark Maxwell**





# Instant Gallery cont.

**Sam Dawson**



# Instant Gallery cont.

**Ray Tanner**



# Instant Gallery cont.

Rick Cannon



# Upcoming Events 2018

- September 22**      **Mike Maffitt** - 4 Sided Triplet Weed Pots  
President's Challenge - Goblet
- September 28,29**   **Bartlett Festival**
- October 12-14**     **Pink Palace Craft Fair**
- October 27**        **Oktoberfest**
- November 24**     **TBD**  
President's Challenge - Christmas Ornament
- December 15**     **Christmas Party**
- January 27**        **TBD**
- Febreuary 23**     **Mike Hunter** with Hunter Tools

# Mentor Program

All members of MSWG are invited to contact the following mentors to learn a new technique, improve their turning skills or turn something different. Mentors are volunteers and do not charge.

Contact information is on our website under Members Only and the Roster. Sessions should last no longer than 3 hours and be scheduled at the convenience of the mentor.

Benson, Joel	Wood Selection, Turning Green Wood, McNaughton Coring, Chain Saw Sharpening/Maintenance, Chain Saw Use/Safety
Cannon, Rick	Segmented Bowls
Maffitt, Mike	Bowls, Platters and Native American Flutes
Sefton, Larry	Milk Paint, Make Your Own Pyrography Unit, Hollow Forms
Stone, Rick	Finials, Bowls (incl. Natural Rim), Boxes, Spindles, Carving, Finishes, Pyrography, Making Tools, Turning Tool Basics (incl. Sharpening)
Tusant, Jim	Bowls, Hollow Forms, Pyrography, Carving, Dyeing, Tool Use
Voda, Joseph	Spindle Turning (e.g. Ornaments)
Wilbur, Skip	Bowls, Hollow Forms, Goblets, Finials

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**Fax:** (901) 755-2907

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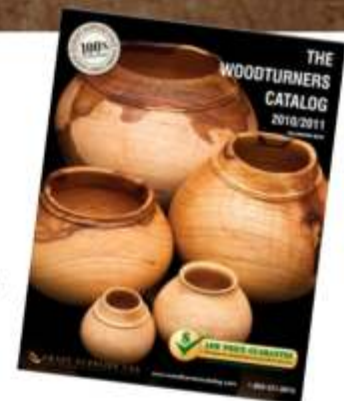
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