Great Falls Woodturners Newsletter

www.gfturners.org

Volume 6, Number 12 July 2015

Club Elections

Those of you that attended the July Club Meeting know that the club elections for the 2015-2016 club year will be held on August 4th. The following offices will be available to be elected:

President

Vice President

Treasurer

Secretary

Directors – Four Positions

Editor of Newsletter

Please be aware that Sam Sampedro and Chuck Kuether will not be running for a club office.

Also, at the time this newsletter is being published, David Stratton, Treasurer and Marian Stratton, Secretary, are undecided if they will be a candidate for re-election.

And, the editor of the club newsletter will also be needed.

Club Dues

During the discussion of the election, the question of club dues was raised. Since August is the first month of the club year, dues for the 2015-2016 will collected and are the same as the last two years: $35.00. This amount includes paying for club insurance with the Hartford Insurance Co which has been $425 for a year. Hopefully that premium price will not increase in February.

Club Raffle Bowl

A Very Special Thank You

to the following Club Members for supporting the Club Bowl Raffle:

My sincerest apologies for leaving off Good Wood Guys the list of members supporting the Club Bowl Raffle.

Urgent: We have a need for demonstrators for the months of October thru December. Please see the dates in the Meeting – Demonstration calendar. Call Sam at 761-4145 or

email him at csampedro@bresnan.net to reserve your date. Thanks!!!

Club Demonstrations

Roger Wayman—June 20th

By Chuck Kuether

Roger Wayman gave us a great demo on Saturday, June 20, showing us another approach to making a lidded box. Roger used some dried birch with its bark still attached. You can see from the sample pieces on the headstock what a nice presentation they make.

Roger started by mounting the piece between centers, then making a tendon on each end of the piece.
Once the tendons have been made you should place the piece in a chuck so that it can be parted. Roger described the process of separating the piece to become the lid from the base. Working with this bark, he explained, it is important to remove the bark in a small area on each side of where you intend to part the lid from the bottom. If you fail to do this you are likely to lose some or all of the bark when you begin to use the parting tool.

Roger proceeded to part off the piece that would come to serve as a lid, then began work on the base. Initially he created a lip for the lid to ride on; then he proceeded to hollow out the base with a forstner bit.

When drilling the base you should drill slightly less deep than your projected total depth, as you will need to remove a ridge from the edge and a divot from the center created by the drill bit. Once that

has been completed you are ready to sand the inside of the base.

Next, the lid needs to be addressed. First, place the piece in the chuck. You can then use a caliper or other similar device to measure the width of the opening of the base and transfer that measurement to the bottom of the lid.

Once that diameter has been established you can begin to hollow the lid and test fit it on the base.
After the lid is hollowed and sanded inside and fits the base, remove it from the chuck and re-insert the base into the chuck. Then mount the lid on the base. Use tissues if the lid is not a tight fit, and bring the tailstock up so you can shape the outside of the lid.

The top of the lid can then be shaped and sanded on the outside and the entire piece can be finished.

Thank you, Roger, for a well-thought-out and interesting demo.

Finishing suggestion from Chuck:

You will find that for most boxes it is best to use a scented wax or lemon oil for the interior of the box. If you use a wipe-on poly or other finish on the interior of the box, it will continue to smell of petroleum. If you use lemon oil or wax, it will have a more pleasant smell.

Sam Sampedro – July 7th

Sam started the demo with a test for the group: Not putting on a face shield when starting to turn and was ‘caught immediately’ by Tom Krajacich. Then

Sam turned on the lathe with a SPINDLE ROUGHING GAUGE to start turning a natural edge bowl. He hesitated to see it anyone would admonish him for using it when turning a bowl. NO ONE DID! He queried the group and they said he may have a new technique……of course there isn't a new technique since you NEVER use a Spindle Roughing gauge to turn a bowl.

With the fun a games over, he discussed the method of mounting the stock for a natural edged bowl and demonstrated mounting it. He mentioned that you can turn a number of different shapes depending on the piece of wood mounted.

He turned the bottom of the piece and created a tenon using the Dovetailer gauge. He sanded and applied a coat of sanding sealer to the bottom.

Upon mounting the piece in the chuck, he turned the inside of the bowl. During this step there was a discussion about trying to ensure that bark is secured to the piece. Sam personally uses CA glue to help eliminate losing bark. Barry Rockwell indicated that he rather use 'wipe-on poly' which eliminates the possibility of CA staining the piece if there is runs of the glue. Sam indicated that he likes to put on sanding sealer which minimizes staining.

As Sam was finishing the inside bottom of the bowl, he mentioned using scrapers. There is an excellent Richard Raffan article titled Scrapers A Eulogy in the American Woodturner, April 2012, Vol 27, No 2 that discusses the use and shapes of scrapers.

He sanded the inside and applied sanding sealer.

He then remounted the bowl using a jam chuck to remove the tenon and discussed the method of sanding off the remnant of the tenon and applying finished to the bottom of the bowl.

Thanks

A very special THANKS to:

All of you that come in early to help set up for the meeting and those of you that stay after the meeting to clean up and secure the equipment. It is deeply appreciated.

Thanks to Chuck Kuether for doing the camera work at the June 20th demo.

Thanks to **Tom Krajacich** for doing the camera work on the July 7th Demo.

Safety

Have you hugged your faceshield today?!

Information Tip – Sam Sampedro

More Woodturning Magazine

Are you aware of the **More Woodturning Magazine** which is an on-line magazine. The subscription price is $25 and has 12 issues per year. Please see the site at:

http://www.woodturningonline.com/

Information Tip – Sam Sampedro

At the end of the newsletter, please see the extract of the Wikipedia Information on Woodturning. Also, note that you can hold the CTRL key and click on the blue items and you will be taken to additional info on that item.

2015 Syposium Corner

The early sign-up deadline for the 2015 symposium is Sep 8th to enjoy the reduced price of $95.

September may seem a long way away, but it's just around the corner.

Silent Auction Items: In the last two symposiums that the club had, one of the popular items of the symposium is the silent auction. It gives attendees the opportunity to pick up an item or two inexpensively to add to their tool collection.

With that in mind, please start giving some thought to any items that you aren't using any more or have replaced with something better and is taking up valuable space in your shop to donate for the silent auction. Any and all contributions will be very much appreciated.

Symposium Grand Door Prize

The Grand Door Prize for this year's symposium is a **Three Day Basic Turning Class at Craft Supplies USA.** It was graciously donated to our club by Craft Supplies USA. Please support this generous business as much as you can.

Rudy Lopez Workshops

Please see the information in the Rudy Lopez Symposium Flyer for the Workshop information. Only three slots remain for the workshops as of July 14th.

Please make out any checks to: Great Falls Woodturners.

Club's Appreciation

Editor's Comment: My thanks to the following individuals who helped with the content of this newsletter:

Chuck Kuether

CRAFT SUPPLIES USA
THE WOODTURNERS CATALOG
woodturnerscatalog.com • 1-800-551-8876

http://www.woodturnerscatalog.com/

Thanks to Craft Supplies USA for their generosity in donating a class for the 2015 Symposium Grand Door Prize.

Instant Gallery Photos

(Great Photos by Paul Snyder)

Chuck Kuether (at the Demo)

Roger Wayman

Scott Johnson (Scott is a New Member)

Roger Wayman (Demo)

Roger Wayman

Scott Johnson

Barry Rockwell

Scott Johnson

Barry Rockwell

Barry Rockwell

Del Johnson

Barry Rockwell

Del Johnson

Del Johnson

Dirk Johnson

Dirk Johnson

Tom Krajacich

Tom Krajacich

Sam Sampedro

Sam Sampedro (Demo Bowl)

Barry Rockwell

Rich Charlson

Terry Hill (Funeral Urn)

Great Falls Woodturners

Fifth Annual Family Picnic

August 15, 2015

Noon until 5 PM

Burgers, hot dogs, sodas, & water will be provided.
Please bring a hors d'oeuvre, hot dish, salad, or dessert to share.

Family & Friends Are Welcome

Location:

Barry Rockwell's House
22 Cox Creek Lane, Cascade

Take I-15 south to Exit 244, then go south on the Recreation Road 2.3 miles to Cox Creek Lane. Go up the hill to the 1st house on the right, a brick house.

Please RSVP to Barry Rockwell by August 1, 2015
468-9857 or barryrockwell@aol.com

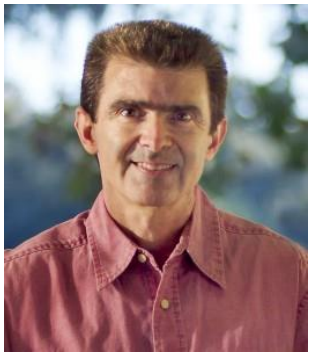
Or

Sam Sampedro by August 1, 2015
761-4145 or csampedro@bresnan.net

Great Falls Woodturners 2015 Symposium

Featuring





Rudy Lopez

http://www.rudolphlopez.com/gallery.html

Turning Bowls, Creative Shapes and Much More

When: September 26 & 27, 2015
9:00 AM to 4:00 PM

Place: Great Falls Fire Training Facility
1900 9th Street South
Great Falls, MT 59405

Grand Door Prize: Three Day Turning Class at Craft Supplies USA, Provo Utah

Door Prizes Silent Auction

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Registration Fee: Per Person:	$125.00
Discount if PAID on or before September 8th :	$125.00 – $30.00 = $95.00
One Day Attendance:	$60.00 (no discount)
Children Under 18 Accompanied by Adult:	$15.00
College of Technology Students	$30.00
Includes lunches on Dates of Attendance	(All Currency U.S. Dollars, Check or Money order)

Great Falls Woodturners Symposium 2015
Rudy Lopez Demonstration Registration Form

Name: _____

Address: _____

City/State_____Zip Code_____

Telephone:_____EMail Address _____

Total Payment Enclosed $_____

Names of Persons Attending (Including under 18:_____

_____

Registration Fee: Per Person:	$125.00
Discount if PAID before September 8th :	$125 – $30 = $95
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Children Under 18 Accompanied by Adult:	$15.00
College of Technology Students	$30.00
Includes lunches on Dates of Attendance	(All Currency U.S. Dollars, Check or Money order)

Mail Completed Form and Payment to:

GF Turners c/o
David Stratton
2120 3rd St S
Great Falls, MT 59405

Rudy Lopez Workshops

Rudy has graciously agreed to conduct two one day workshops with five students per workshop after the symposium. The possible dates are either Sep 28th and 29th or Sep 29th and 30th. A firm date will be determined soon.

Cost for the one day class is: $100. The first 10 attendees who pre-pay get to attend the workshops.

The workshops will be conducted at Barry Rockwell's Shop in Hardy.

Start Time: 9:00 AM

Lunch will be provided.

Further details will be provided as soon as they are finalized.

Please pre-pay for the class by Sep 1st to Barry Rockwell

Make checks payable to the Great Falls Woodturners

Only three (3) slots left!

Great Falls Woodturners
Meetings/Demonstations Schedule

***Aug 4** **Meeting/Demo/Club Elections – Demo - Dirk Johnson**

****Aug 15** **Club Picnic – Please see enclosed flyer**

***Sep 8** **Meeting/Demo – This is the SECOND TUESDAY of the month**

Please note: We will have a gentleman from out of state to give us a demonstration on using texturing tools in woodturning. This is a no charge event so plan on attending.

Sep 26 & 27 Rudy Lopez Symposium – At the Fire Training Station
Please see the Flyer

Sep 28 & 29 Rudy Lopez Workshops at Barry Rockwell's Shop
Please see the Flyer on Workshops

***Oct 5** **Meeting/Demo**

****Oct 17** **Demo**

***Nov 3** **Meeting/Demo**

****Nov 21** **Demo**

***Dec 1** **Meeting/Demo**

****Dec 19** **Demo**

Please Note: The items in blue are areas you can click on to obtain further information on that subject. Put your cursor on the word or phrase, hold down the Ctrl key and click.

Woodturning

From Wikipedia, the free encyclopedia

Jump to: navigation, search

Detail of woodturning in work

Woodturning is a form of woodworking that is used to create wooden objects on a lathe. Woodturning differs from most other forms of woodworking in that the wood is moving while a stationary tool is used to cut and shape it. Many intricate shapes and designs can be made by turning wood.

There are two distinct methods of turning wood: spindle turning and bowl or faceplate turning. Their key difference is in the orientation of the wood grain, relative to the axis of the lathe. This variation in orientation changes the tools and techniques used. In spindle turning, the grain runs lengthways along the lathe bed, as if a log was mounted in the lathe. Grain is thus always perpendicular to the direction of rotation under the tool. In bowl turning, the grain runs at right angles to the axis, as if a plank were mounted across the chuck. When a bowl blank rotates, the angle that the grain makes with the cutting tool continually changes between the easy cuts of lengthways and downwards across the grain to two places per rotation where the tool is cutting across the grain and even upwards across it. This varying grain angle limits some of the tools that may be used and requires additional skill in order to cope with it.

In spindle turning, the wood is fixed between 2 points. The spur center digs into the wood and is powered by a motor. The other, a hard center or a live center may be a point or set of points in the tail-stock. In face plate turning, the wood is secured with screws to a faceplate or in a chuck or jig. the tail stock and a center may also be used for added support on large pieces with a faceplate. Most bowls, platters and many vessels are face plate turned, while pens, furniture legs, spindles, and some vessels are spindle turned. The method used may differ depending on the shape of the blank and the technique of the turner, and both methods may be used on the same piece.

When wood is cut in such a way that the fibre being cut is not supported by the fibre below it, it tends to separate and tear. This "tear out" exhibits a rough, highly damaged looking surface texture and greatly reduces

the value of any product exhibiting it. The direction of cut is different in spindle turning and faceplate turning because cutting in the wrong direction can cause tear out. Spindle turning cuts are made from high points toward the axis on the outside of the piece, and from the axis toward the outside when hollowing. When faceplate turning, the opposite applies.


A turned wood bowl with natural edges

Contents

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History[edit]


Pole lathe

The origin of woodturning dates to around 1300 BC when the Egyptians first developed a two-person lathe. One person would turn the wood with a rope while the other used a sharp tool to cut shapes in the wood. The Romans improved the Egyptian design with the addition of a turning bow. Early bow lathes were also developed and used in Germany, France and Britain. Sometime after the turning bow was developed, a lathe was created that spun when a lever was pumped by hand. Early lathe workers would sometimes use their bare feet to hold cutting tools in place while using their hand to power the lathe. In the Middle Ages a pedal replaced hand-operated turning, freeing both the craftsman's hands to hold the woodturning tools. The pedal was usually connected to a pole, often a straight-grained sapling. The system today is called the "spring pole" lathe (see Polelathe). Spring pole lathes were in common use into the early 20th Century. Up to this point in history, the lathe operated in a reciprocal manner with the workpiece rotating back and forth as the drive mechanism reset to the loaded position in preparation for the next stroke. This required the turner to alternately apply the tool as the

blank spun toward the operator and remove it from the blank as it spun away from him. A two-person lathe, called a "great lathe", allowed a piece to turn continuously (like today's power lathes). A master would cut the wood while an apprentice turned the crank on a huge wheel, often several feet in diameter.


Belt driven lathe

The term "bodger" stems from pole lathe turners who used to make the chair legs and spindles. A bodger would typically purchase all the trees on a plot of land, set up camp on the plot, and then fell the trees and turn the wood. Bodgers would set up their lathes in a stand of trees, cutting all of the trees around them. Once all the trees in the immediate vicinity were consumed, the bodger would move his lathe to a new spot within the same wood, to repeat the process. Interestingly, bodgers sometimes used lathes that did not have integral spring pole mechanisms, but rather placed their lathes under a standing tree with a springy branch that was suitable to use as the drive mechanism. This made for a more portable type of lathe for the bodger. The spindles and legs that were produced by the bodger were sold in bulk, for pence per dozen. The bodger's job was considered unfinished because he only made component parts. The term now describes a person who leaves a job unfinished, or does it badly.


Electric lathe

During the industrial revolution the lathe was motorized, allowing turned items to be created in less time. The motor also produced a greater rotational speed for the wood, making it easier to quickly produce high quality work. Today most commercial woodturning is done by computer-operated machinery allowing for mass-production that can be created with precision and without the cost of employing craftsmen. Despite this, there is still a demand for hand-turned products. Woodturning is also a hobby enjoyed by many people.

Modern professional woodturners are typically either "production" turners producing large quantities of functional pieces, or artistic turners producing smaller numbers of pieces, often enhanced after turning by carving, piercing, coloring, applying pyrography, gilding, or a number of other techniques to produce objects for the art market.

Tools[edit]


Gouges for woodturning

Turning tools are generally made from three different types of steel; Carbon steel, High speed steel (HSS), and more recently powdered metal. Comparing the three types, high speed steel tools maintain their edge longer, requiring less frequent sharpening than carbon steel, but not as long as powdered metal tools. The harder the type of high speed steel used, the longer the edge will maintain sharpness. Powdered steel is even harder than HSS, but takes more effort to obtain an edge as sharp as HSS, just as HSS is harder to get as sharp as Carbon Steel.

A gouge in use

Unlike other edged woodworking tools, woodturning tools require more frequent sharpening, because the wood passes at a great speed. To maintain a clean cut, the sharpness of the tools edge must be maintained. Sharpening is usually accomplished with the aid of mechanical devices such as powered sharpening wheels and abrasives. This sharpening process requires either skill of the craftsman, or one of the many available sharpening jigs, which facilitate maintaining a specific bevel on the tool. As with any mechanical sharpening method, overheating or blueing is a danger to be avoided as it will ruin the steel's temper, rendering the steel too soft to maintain a sharp edge. When this happens, the blued area must then be ground away to expose fresh steel and the tool must then have the bevel reestablished and the edge re-honed. High speed steel is not prone to blueing (overheating) whereas carbon steel blues easily, requiring frequent quenching in water or oil to avoid losing temper.

Types

- roughing gouge - a wide fluted gouge used to initially round a wooden spindle, and to roughly shape it. Generally not intended for cutting end grain due to the large cut it takes and the relatively weak tang connecting the blade to the handle. Unsafe for making bowls or any faceplate work.
- spindle gouge or detail gouge - a shallow fluted gouge used to create details on spindles, including beads (raised portions of the turning typically semi-circular in cross section) and coves (relieved portions of the turning).
- bowl gouge - a deep fluted gouge used to turn the outside and inside of bowls and vessels. Often has a thicker shaft and longer handle than a spindle gouge because it has to cut farther away from the hand rest and deal with the forces of turning a large bowl.
- skew chisel - a wide, steeply pointed chisel with the edge running at an angle to the length of the tool. Used to smooth flat spindles, cut beads, and add details. Skew chisels are only used on spindle work (never on faceplate work) and are honed after sharpening to create a razor edge.
- parting tool - a pointed tool used to separate (part off) work from the lathe, and to create a straight edge separating large and small diameter sections - wide parting tools also called bedans are used to create evenly sized spindle sections.
- hollowing tool - many different types of tools used to cut out the deep sections of steep bowls, vases and hollow vessels. Often with very long handles, to maintain enough leverage when working in a deep vessel, far away from the hand rest.

- scraper - a tool that scrapes the wood fibres instead of cutting - these are used to smooth off wooden items cut with other tools, and to shape items that are not possible or difficult to shape with gouges. A sharp scraper has a burr at the edge which cuts the wood, only a dull scraper actually scrapes.
- bowl saver - a tool used to core out the inside part of a bowl, allowing the waste piece to be used to create a smaller bowl, and to limit the amount of wood chips created when hollowing out a bowl.
- auger - a drill bit used to drill a hole partway or all the way through a wooden item. For cutting the hole for a lamp cord, or as the first step when hollowing out a bowl or vessel
- chatter tool - a flexible scraper used to add decorative chatter marks to turned items
- wire - a simple wire, sometimes with handles attached at either side, for the purpose of burning lines into the piece with friction.
- there are also several tool types for special purposes, as well as tools that are a combination design of the above tools, i.e. skew/chisel combinations, thread cutting tools, ring cutting tools, medium fluted gouges, etc.

Other techniques[edit]

- Eccentric turning - turning a single piece multiple times, upon different axes each time.
- Oval or elliptical turning - turning a piece using an accessory mounted to the headstock that changes the center of rotation of the piece in time with the rotation, so that a cutting tool held in a fixed position on the tool-rest cuts an oval rather than a round path on the workpiece
- Therming - mounting a carrier between centers, and then mounting the small workpiece(s) to the carrier, so that the axis of the headstock/tail-stock does not pass through any of the workpieces, and each workpiece gets cut only on one face. As noted in Wood-turning Methods by Mike Darlow, the etymology of the term "therming" comes via a corruption of the name of the Greek god Hermes, who was often represented as a statue set atop a plinth with a construction characteristic of thermed work.
- Segmented turning - a method of woodturning where the wood blank is constructed from many individual pieces of wood (segments) which are glued together before being turned. Many interesting patterns can be generated through the process of gluing and shaping on the lathe.
- Green or wet turning - turning wood while its moisture content is above equilibrium. Often done when the wood is newly felled. May be turned to finished thickness, in which case the differential shrinkage of the wood will result in a finished piece that is not perfectly round. Alternatively, it may be "rough turned". Rough turning involves turning the piece only to its general shape, leaving enough thickness so that after turning it can be allowed to dry to equilibrium moisture content and distort. The advantage over first drying the wood then turning is that a rough turned piece dries faster, will probably distort instead of split as solid wood tends to, and that wet wood turns better, since it creates less dust. Rough turning is inexact science: turning wood too thick will lead to splits, turning wood too thin will lead to distortion that cannot be removed, because not enough thickness is left. Once dry, it is mounted on the lathe a second time and turned to its final form. Rough turning is typically used on most functional work and some artistic pieces.
- Natural edge work - pieces which include the outside of the tree trunk or limb as the edge of the piece. Typically artistic turnings, usually bowls or hollow vessels, and usually green turned to final dimension. May include the bark or not, but pieces with bark should not have any bark damaged or missing.
- Ornamental turning - also known as OT, a method in which the piece is mounted upon a rocking headstock, and a spinning tool is used to cut out exotic and decorative patterns. The device is called a rose engine lathe
- Plywood is produced by turning a log called a *peeler* and removing thin sheets (plies) which are then glued together.

Safety[edit]

When woodturning, it is important to wear certain personal protective equipment (PPE). Loose clothing should not be worn, all jewellery should be removed, and long hair should be tied back. Wood shavings generated during turning will also need to be periodically removed.

- **Eye protection** is a necessity when woodturning. There are several PPE available for eye protection such as safety goggles, glasses and visors, some of which feature built-in respirators. Although all of these are adequate, for the highest level of protection, a visor that protects the entire head from dust and debris should be worn.
- **Respiratory equipment** and Dust collection systems are also important when woodturning or doing any type of woodworking that creates dust. This can range from a simple disposable dust mask, to a full face helmet with built in respirator. Most stand alone respiratory equipment will interfere with dust shields and visors, so devices that incorporate both are available. Many woods create dust that is actually a health hazard. For example, cocobolo (granadillo) dust is known to be toxic (toxic shock). Many people are sensitive to oils carried in walnut, locust, and oak sawdust. Long term exposure to fine wood dust has also been linked with an increased risk of developing cancer.
- **Ear protection** Compared to other power tools, a lathe is a quiet machine. Ear protection should be used if noise is excessive, this may be due to motor (fan) noise from a shop dust collector, or the combination of wood and tool being used.
- **Hand/Skin protection** Gloves should not be used with rotating equipment, since there's always a risk of getting tangled in the machine. Nevertheless, some woods provide splinters that not only puncture skin, but also cause festering sores and/or skin irritation. Polishes and finishes used in woodturning can also be harmful or irritant to skin, often containing organic solvents such as methanol, turpentine and toluene. This subject continues to be debated in the community.
- **Foot protection**. Protective footwear, often leather steel-toe boots, is required for any type of shop activity.

A good way to check the safety before starting the lathe is 'SAFER':

- S - Speed - check the rpm speed, slower for big, heavy things, faster for smaller lighter things.
- A - Aside - make sure you are standing to the side of the blank's 'firing line' (not in front of the wood).
- F - Fixings - check that the wood, tool-rest, tail-stock etc. are correctly attached.
- E - Eye protection - make sure you're wearing sufficient eye protection.
- R - Revolve - Check that the wood can turn around without encountering any obstructions.

Safe usage of a lathe also depends on the operator knowing proper techniques and being aware of the limitations of both the machine and the workpiece. For example, using a high spindle speed with an unbalanced workpiece may cause the lathe to vibrate dangerously. Spinning a large workpiece too fast may cause it to explode. Inappropriate use of tools such as gouges and skew chisels can cause a *catch*, where the tool bites suddenly and aggressively into the wood in an uncontrolled manner. This exerts very large forces on the workpiece, the tool, the lathe and the operator, often causing the workpiece to break apart or tear free from the lathe or pulling the tool out of the operator's hands and throwing it through the air.

External links[edit]

Wikimedia Commons has media related to ***Woodturning***.

- Ornamental Turners International

- Ornamental Turning

- The Irish Woodturners' Guild
- The Dublin 15 IWG Chapter - Craobh Cuig Deag
- The American Association of Woodturners
- Association of Woodturners of Great Britain
- The National Association of Woodworkers inc. New Zealand
- The British Woodturners Association
- The Register of Professional Turners

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