Rocky Mountain Woodturners
A chapter of the American Association of Woodturners
July 2009 Newsletter

Contents of Newsletter

Next RMWT Meeting

The next meeting of the RMWT will be on July 9, 2009. The demonstrator will be John Giem, Crafting a Cryptex. In Dan Brown's novel **The DaVinci Code**, an important clue was enclosed in a Cryptex. In effect, a Cryptex is a box surrounded by code rings that must be aligned with the proper 'code word' in order to open it to access its contents. John will demonstrate how to make your own Cryptex using the lathe and other common tools in your shop.

RMWT Meetings

Each month the Rocky Mountain Woodturners meet at Woodcraft of Loveland, located at 3718 Draft Horse Drive, Loveland, Colorado. We meet on the first Thursday after the first Tuesday of each month.

Meeting Format

6:00 – 6:30 – Setup and Social Time, come visit, share ideas and ask questions

6:30 – 7:00 – The general business meeting.

7:00 – 8:30 – Demonstrator time.

8:30 – 9:00 – Clean up and out by 9 pm sharp!

Scheduled Meeting Demonstrators

- July 9, John Giem, Crafting a Cryptex.
- August 6, Nick Cook, topic to be announced. We are also planning an all day workshop. See RMWT web site for details.

2009 Officers, Directors and

RMWT Activities

Report from the Treasurer

Recently, one of our Board of Directors was asked by a member "What DO I get for my money?" As the new Treasurer, this question was fielded to me and asked if I could expound on it. I know we had a dues increase this year of $5.00 per membership. Being relatively new to this organization, I have no reference to "the good old days" or any particular benefits from prior years, only what I've seen since I've joined. So, what DO we get for our $40 dollars per year?

The following may seem apparent, but let me restate the obvious. My observation is that we get a mix of world class and nationally renowned Turners doing demonstrations on a monthly basis. Hints and techniques are shared that are certain to improve our understanding of turning. These demonstrations are free to members, the cost being absorbed by our yearly dues. We are fortunate to get many of these demonstrations at reasonable prices since we have an abundance of great turners in this region. We are also able to piggyback many of the non-local demonstrators from demos they've done in Denver or other nearby areas, greatly reducing our expenses. The club has spent $2050 in demonstration fees in the past 12 months.

Our budget is largely comprised of the annual dues, with the balance generated from raffle sales, auctions of members work, t-shirts, and voluntary donations beyond the membership fees. Since I've only been treasurer for three months, it's been difficult to differentiate the individual sums and where they came from, but for all our expenses, we're in the black.

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At some point in the past, we raised seed money for our yearly symposium, which draws national attention. We have a savings account to maintain a prudent reserve of funds ($2000). RMWT actively supports opportunities for students with an interest in turning. Educational Opportunity Grants (EOG) are available to those seeking funds willing to give back to the community or promote our arts. We contributed $2250 towards Educational Grants in the past 12 months.

We have a wonderful newsletter that's compiled by dedicated volunteers. In the short time I've been a member, I've seen improvements in the newsletter and an uncompromising desire to continually improve it. This newsletter is available in both hardcopy and digital format to accommodate all of our membership. Usually a detailed synopsis of the previous month's demonstration, complete with photos, is available in better detail than I'm capable of recording and photographing. In addition, these files are archived so that demos are available at the click of a mouse. We had miscellaneous expenses of $235 to cover web fees, office supplies, and check fees.

We have a library of books, video tapes, and DVDs that are free for membership use. There is no strict time limit for the use of these resources. $294 was spent on the library during the past year.

The RMWT is governed by a Board of Officers, volunteers, willing to give of their time and effort to sustain this organization. They seek no compensation other than incurred expenses.

A discount for turners' tools and supplies is available for our members at Woodcraft (Loveland) and Rockler (Denver). We have a Wood-Bank that is stocked by volunteers taking their time to harvest local woods. Wood is free to any member desiring it, with no expectation in return. Our club is arranging with other regions to swap wood not native to this area, to our mutual benefit. We have a wealth of information from beginner to expert that is freely passed from one member to another when we congregate.

We've been able to purchase a used trailer to transport our mini lathes and tools (assets largely acquired from past

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dues), especially useful during our symposium or providing demos in our community. The trailer is also used to bring wood from the Wood Bank to the monthly meetings. We spent $1540 to buy this trailer, a spare tire and registration for it. This does not fully explain all our expenses over the past year. There are other miscellaneous fees, supplies, tools, and equipment not fully reported here. We did spend $734 for new audio equipment and a grinder for the monthly demos.

Therefore, we belong to an organization sustained by a number of people not taking compensation. For the cost of $4.33 per month, we have access to the multitude of benefits stated above. For less than the price of a meal at McDonald's, I believe this is a tremendous bargain. THAT'S what we get!!!

Pete Herman
Treasurer, Rocky Mountain Woodturners

Wood Bank:

There has been a lot of activity with the Wood Bank this last month with a lot of wood coming in and going out.

- Frank Amigo picked out several pieces to take to the AAW Symposium to support Turners that came from out of the Country.
- We received over a pick-up load of freshly cut Maple.
- You are encouraged to use as much of the wood from the Wood Bank as possible. If we don't use it for turning, then due to weathering it may become good firewood in the not too distant future.
- The present inventory of wood includes; Maple, Russian olive, Elm, Silver Poplar, Aspen, Pine (including blue beetle kill), Mulberry, Mimosa, Pecan and Cedar.
- We have some visitors coming up from Texas later this year and the Wood Bank may be able to exchange some Colorado woods for some Texas woods. One of the woods mentioned was Mesquite.

Vintage Lathes

Photos: Jim Harris of the South Plains Woodturners, Texas
Text: John Giem

Recently, I received photos from Jim Harris of some vintage lathes he saw in a museum in Louisiana. He gave me permission to share them with you so that you can appreciate the progress that has occurred in our Craft.
Remember, that I am an Engineer and look at things a little differently than many other people. Many of the lathes in our shops have 1.5 horsepower motors, or more, on them. The lathes below are foot powered, that is the Woodturner had to pump a foot pedal to turn the wood and still apply the chisel to do the shaping. The next time an Instructor tells you to have a good stance and hold your tool correctly, just be thankful that she is not telling you to pedal harder.
Another way for you to understand the effort to use these lathes is to understand how much work your electric motor does for you. For you to input one horsepower into one of these lathes, you would need to do the equivalent of having a 125-pound person

running up a nine-foot flight of stairs every two seconds. Obviously, these Woodturners kept in shape and probably could not work as fast as a Turner using modern equipment could.

The first set of photos is of a Pole Lathe. Things to note:

- Typically hand made by the Woodturner from available wood.
- In the first photo, the pole in the rafters is used as a spring. Often, you went out to the woodlot and cut your own or just put your lathe under a tree with the ‘ideal limb’.
- A rope is tied to the pole (spring) brought down and wrapped around the wood being turned and then down to a foot treadle
- In operation, the Turner steps on the treadle, the wood turns forward while he turns it to shape. Upon releasing the treadle, the work then spins backward due to the pole springing back up.
- The energy used to press the treadle down is used two places; first, turning the wood while it is being cut and second, energy is stored in the flexing of the pole. When the treadle is released, the stored energy in the pole is used to rotate the work back to its starting position.
- Notice the wooden tool rest.

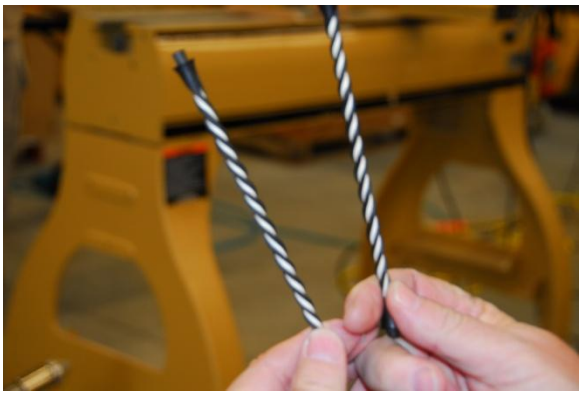
Here is another foot-powered lathe. In this case, the treadle is connected to a crankshaft, which has flywheels mounted on it. Things to note:

- This is a truly reversible lathe. Spin the flywheel by hand in the direction you what to turn and start pedaling.
- Flywheels store energy via rotational kinetic energy, larger mass near the rim allows more energy storage. The stored energy goes up rapidly as the RPM increases.
- Note the stepped pulleys on the headstock and flywheel under it.
- Note all of the open and exposed pulleys and belts; a modern Safety Engineer would really get excited over this!
- This is a big advancement over the pole lathe in that you could pump it up to speed storing energy in the spinning flywheel then stop pedaling and start shaping. You would need to resume pedaling when it started to slow down too much.
- This lathe exhibits the truly modern features of infinitely variable speed control and is fully reversible. The cast iron design is also great for vibration damping.
- In the photo below, note the grease cups on top of the two headstock-bearings to keep them properly lubricated. (When was the last time you lubricated your headstock bearings?)

Turning a Goblet with a Twisted Stem
Presented by Dennis Liggett
Reported by John Giem

At the June 4, 2009, meeting of the Rocky Mountain Woodturners, Dennis Liggett demonstrated how to make a goblet with a twisted stem. He has a lot of additional information on his web site: dennisliggettwoodturner.com, if you are interested in twisting, it is well worth your visit.
These fancy goblets with twisted stems are often used for speical occasions such as weddings or just for their beauty. When used

for those special events, they are often made in matching pairs with one goblet having a right twist and the other having a left twist. When held vertically, a right twist will move to the right as you move up the shaft, a left twist will move to the left.



To make his goblets, Dennis will form the stem and then glue it into the finished cup and base. This lowers the risk due to the possibility of loosing the stem while making it. The process of carving the twist into the stem will reduce its structural strength. By streaching out the twist along the stem, there is less weakening.

For the stem being crafted for this demo, he started with a blank about 1/2" square and mounted it on the lathe being careful to center it properly. This will form the outside of the stem. A small cone is cut into the end and is a little larger than the size of the drill bit that will be used to drill the length of the blank. The blank is held in a chuck on the lathe spindle and rotated while the bit is non-rotating.

When drilling the hole the length of the blank, the biggest challenge is keeping the hole straight down the center. Although the bit must be sharp and the wood grain straight, Dennis told us that the most important factor is keeping the end of the bit cool. He hand held the bit while drilling and frequently extracted the bit and cleared the chips to keep it cool. He told us that if the bit gets too hot, it will heat the wood making the wood harder (unevenly) and will force the bit off-center. This implies that the RPM during drilling will be slower than while turning. The spindle speed was not specified.

After the hole was drilled, Dennis removed the blank from the lathe and mounted a piece of holly in the chuck to be turned for the center of the stem. Holly was chosen because it is a very tough wood, the white color is secondary. Many woods, such as burls, are not tough enough to turned thin to be used as the center.

The outboard end was supported using a live cone center. A skew was used to plane down the blank into a rod small enough to fit into the previously drilled hole in the other blank. Without removing the holly blank from the chuck, the tailstock was moved out of the way and the holly rod was tested to verify it fit into the hole. Further turning and sanding was used to make it fit into the hole.

After a proper fit was achieved, the next challenge was to glue the holly into place. Dennis used thick CA glue because of its slow setting times. Normally, at his shop, he will let the stem cure overnight before continuing with the process. For our demo, he demonstrated the basic concepts and then switched to a previously prepared stem.

The glued-up stem assembly was remounted in the lathe using the holly as the centering reference. At the headstock end, the chuck gripped the holly while at the tailstock end, the cone of the live center was placed in the previous center hole in the holly. At this time, the stem would be turned to 5/16" diameter with a ¼" tenon at each end.

For his demo, Dennis choose to use a four start twist. (He has a good discussion on his web site.) For the 5/16" diameter of the stem, he choose a length of about 1.2" for one

complete twist. (For those of you acquainted with threads, this would correspond to the thread pitch.) On the lathe, layout the twist on the stem:

- draw four straight lines the length of the stem each 90 degrees apart. For reference label them A, B, C, and D.
- draw a starting line around the circumference of the stem about ¼" from the end.
- draw lines every 1.2" along the length to indicate points where the twist will complete one complete revolution around the stem.
- Divide each of these sections into four equal segments and draw lines around the stem at each.
- Number the circumference lines from the start to the end, i.e. 0, 1, 2, 3, etc. with 0 at the tailstock end and increasing toward the headstock. Now we have a 'grid' sketched onto our stem and the intersections of the lines are each uniquely identified by a letter and a number, i.e. A0, D6, etc.
- Starting at the point A0, sketch a line for the first hollow to be carved. The path will flow along the points A0, B1, C2, D3, A4, B5, etc. till the end of the stem is reached. This will yield a right twist.
- Mark the second, third and fourth hollows as follows:
  B0, C1, D2, A3, B4, C5, etc.
  C0, D1, A2, B3, C4, D5, etc.
  D0, A1, B2, C3, D4, A5, etc.
- For a left twist, just go the other direction. The first line would be:
  A0, D1, C2, B3, A4, D5, etc.
- Using a small rasp, start with A0 and follow the line carving through the outer shell and carve down until the holly is exposed. Continue for the length of the stem carving out one hollow only.
- Examine the glue joint between the core (holly) and the outer shell. If any voids in the glue joint are found, repair them with thin CA glue. Let the glue cure.
- Carve the remaining three hollows, again, exposing he holly in the center. Be sure to keep the starting and ending of the hollows aligned at the ends.
- Dennis rotates the work with his left hand while the right hand removes the waste wood with the rasp. The rasp is pushed back against the wood while the stem is rotated forward.
- Round off corners of the binds or beads by using larger diameter files (chainsaw files) held at an angle to the hollow so that the rasp is resting against the corners. Do not allow the file or rasp to sink to the bottom of the hollow while shaping.
- Further shaping and rounding of the beads is done with a strip of sanding belt folded and twisted into a cord. The

'sanding cord' is wraped around the twists to sand them.

- To do the final sanding, use regular sandpaper to sand the spindle with the lathe running slowly. Wipe the sandpaper both directions over the length of the stem.
- Finish up the stem by turning small beads at each end next to the ¼" tenons. The main purpose of the beads is to mask the glue joints at the bottom of the goblet's cup and at the base, with the secondary usage of the beads as decoration.
- Turn the goblet's base and cup and fit them with ¼" diameter mortises to fit the tenons on the stem.
- The stem is glued to the cup while it is still held in the chuck at the end of it's turning and shaping. Apply glue to the tenon at the top end of the stem and insert into the mortise in the cup. Support the opposite end of the stem with a live center fitted with an inverted cone to properly align the stem while the glue sets.
- Fit the live center with an adaptor shaped to fit the interior of the goblet's cup. The adaptor should apply pressure at the bottom of the cup, not the rim. Applying pressure at the rim runs the risk of splitting the thin delicate cup.
- Wrap several layers of protective tape around the rim of the goblet's base and fit onto a jam chuck on the headstock.
- Apply glue to the tenon on the stem and fit into the motise in the base. Support the cup using the adaptor on the live center until the glue has set.
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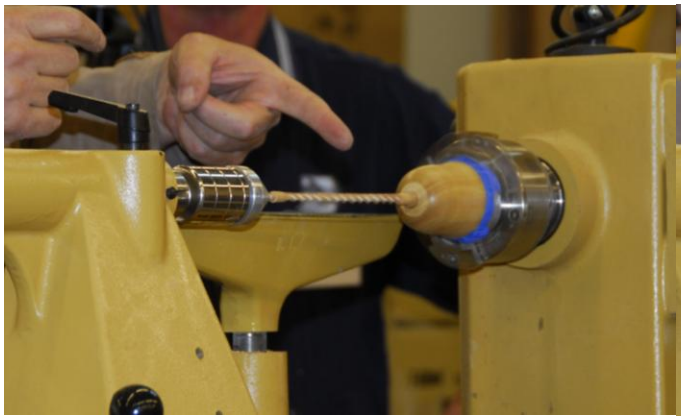

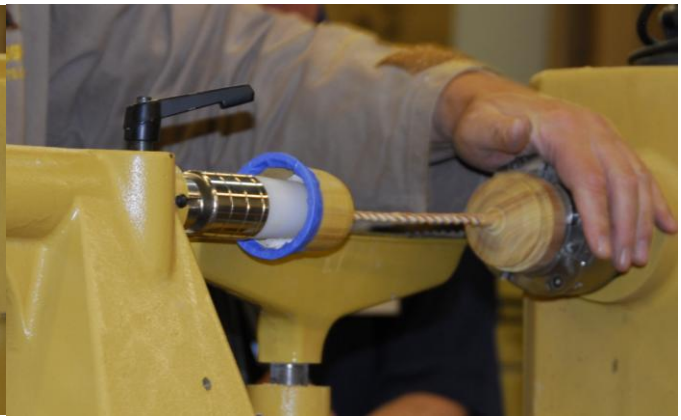

10% Guild discount

Wood Emporium
618 N Garfield Ave Loveland,

Sears Trostel
1500 Riverside Ave
Ft. Collins, CO 80524

Rockler's in Denver – You have to show your membership card.

Woodcraft
3718 Draft Horse Drive
Loveland, CO 80538
970-292-5940
Discounts on day of Club Meeting.

Clubs and Member's Websites

Rocky Mountain Wood Turners
www.rmwt.org

AAW – American Assoc of Woodturners
www.woodturner.org

Trent Bosch
www.trentbosch.com

David Nittmann
www.davidnittmann.com

Cindy Drozda
www.cindydrozda.com

John Lynch
www.johnlynchwoodworking.com

Curt Theobald
www.curttheobald.com

Katherine Kowalski
http://www.DaystarHandworks.com

Want your Website Listed? Contact a member of the Newsletter Team!!!

Learn From the Best…

Our Club, RMWT, is known around the nation because we have some of the best turners, nationally known demonstrators and best teachers of Basic Turning, Intermediate, and Advanced and Specialty turning right here in our own back yard.

Trent Bosch Woodturning Workshops

Workshops are held in Trent's studio in Fort Collins, Colorado. There is a maximum of four people in each class, which allows for lots of individualized instruction. The cost is $500 for the 3-day intensive workshop and $650 for the 4-day. Meals are also provided at no extra charge. His studio is also equipped with the highest quality equipment available for your use. For detailed information on workshops visit www.trentbosch.com or contact Trent via email or phone.

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970 568 3299

Lee Carter operates the **Rocky Mountain School of** Woodturning in LaPorte, Colorado. He offers classes in Basics, Intermediate and Advanced. Lee also offers private tutoring. Seven different brands of lathes are available.
Call Lee Carter at 970-221-4382 to sign up or have him answer any questions.
e-mail LLJTC4X4149@ CS.COM

Curt Theobald offers three-day workshops in Segmented Woodturning in his studio in Pine Bluffs, Wyoming.
Call Curt Theobald at 307.245.3310
E-mail cwtheobald@wyoming.com
Website is www.curttheobald.com

John Giem, Woodworker

Individual or small group woodworking instruction customized to the needs of the student. Offering both woodworking on the lathe and combined with regular power tools. Classes are held in John's workshop in Fort Collins, CO, which is equipped with a complete set of woodworking tools. Contact John to discuss your interests and needs.
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Woodcraft has classes for beginners in woodworking, shop safety, intro the machines, bowl turning, pen and pencil turning, hollow forms, Christmas tree ornaments, tool sharpening, etc. Please check out the class being offered at web page **www.woodcraft.com/stores/store.aspx?id=56**