

**Established 1987**

**Next Meeting  
April 6th 2017  
6:30 PM**

**Learn N Turn  
Richard Hunt**

**Demonstration  
Makiing Tolls  
w/ Michael Peters**

**First Woodturning Club in New England, AAW #26**

### ***President's Message March, 2017***

President's Letter, March 2017

I hope this letter finds everyone well and turning.



During a thoughtful review of my past letters, I was unable to recall any time when I wrote about the AAW. I have been remiss, and want to correct that now. If you are serious about woodturning, and you are not a member of the American Association of Woodturners, you are missing out on a great resource.

In early March, I participated in a conference call with Phil MacDonald of the AAW who shared some exciting news. Particularly, they have a new membership effort entitled "NewGen." The effort is designed to entice folks who have never been AAW members to join and is offering a 50% discount on the membership fee, \$30.00. The sign up period for NewGen begins on April 1 and ends on June 1 so act fast to take advantage of this offer. You can become a NewGen member through <http://tiny.cc/AAWNewGen> starting April 1, 2017. Remember, this deal is open only to new members. Folks who have let their membership expire will not be able to take advantage of this offer. If you have allowed your membership to expire I urge you to reconsider. Membership, whether through NewGen or the standard way entitles you to a year's worth of issues of the American Woodturner and annual membership runs for one year from the date you join.

The American Woodturner is a great resource by itself. Each issue is full of articles for both the beginner and advanced turner, useful tips are a regular feature, and the member's gallery contains great photos of really impressive turnings. Additionally, members have access to electronic editions of all past issues of American Woodturner, offering an almost limitless resource for ideas, techniques, tips, and tricks. Also included in the membership is the electronic Woodturning FUNdamentals. This publication is ideal for the new turner as it covers basic techniques and projects.

The AAW has and impressive video library available to members and have recently expanded this area by offering a review of current woodturning videos on the Internet. The videos are assessed for both safety and technique, saving all of us time and effort as we pursue YouTube looking for good videos.

This is just a short overview of the many benefits membership is AAW offers. If you have never been a member, join through the NewGen webpage. If you have let your membership expire, perhaps now is the time to reactivate your membership. I don't think you will be disappointed.

Be Well, *Joe*

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## Minutes February 2nd, 2017 Meeting

**Mike Smith, Secretary**

**President:** Called meeting to order at 6:30 pm  
**Treasurer:** Beginning balance \$6,958.24 YTD balance \$6,958.24

**Learn N Turn:**

**Int. VP**

**Attendance:** 45 members +/- 4 guests

**Discussion items:**

Leasing a location for future club meetings was discussed.

- A show of hands approved the measure to look further into this matter.
- Four members, chaired by Ben Kline, volunteered to form a committee to look into the idea.
- A findings report will be made available in a few months.

A new club logo was discussed and a vote will be held at the April meeting.

Dominic Ryan discussed some of the improvements to the website.

A vote was taken and passed allowing Fraser to spend up to \$250.00 for a new tripod system for the video cameras.

We had a great amount of wood this month for the wood raffle a big Thank you went out to all those who brought wood particularly Jim and Gail Taralli.

In order to improve the wood swap, Mike Smith requests you contact him prior to the meeting if you intend to donate wood.

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Meeting adjourned 6:43 pm.





## Tool making 101

I started making my wood turning tools more than 20 years ago because I had access to a my father in laws garage full of tools and a pile of scrap metal. At that time I had just enough knowledge to be dangerous and I was still young enough to believe that I actually knew what I was doing. Since that time I have learned to be a little more cautious and seek out improved methods for tool making. My goal is to share what I have learned with anyone who wants to make their own tools. When I started I was trying to save money, now I make tools simply because I enjoy it and it gives me a sense of accomplishment. The best feeling is to make a useful tool as good as any tool from a catalog for a fraction of the price. The process of making tools can be as simple as grinding a custom shape on the end of a large screwdriver or it could be a complex multi-step process using exotic tool steel, the choice is yours.



Before attempting to make any tools please ensure that you follow the appropriate safety practices for the activity. This includes the use of safety glasses, face shields, and dust mask/respirator. Never weld, braise or heat treat metal inside your woodshop this could be a serious fire hazard. If you are working in a garage have a fully charged fire extinguisher within reach.

If you decide to make a tool it is best to start small. One of the easiest ways to make a tool is to repurpose an existing tool. Old spindle turning tools can be reshaped with custom profiles to make custom cuts in hard to reach places. I recently made a captive ring tool out of a large broken screwdriver. It took about 30 minutes to shape heat treat and sharpen the tool. With this new tool I was able to make several captive ring baby rattles.



The complete tool making process can be broken down into four steps; select the metal, shape the tool, heat treating and making the handle.

If you enjoy going to yard sales and flea markets you can find some very high quality tool steel if you know what to look for. Tool bits from machine shops like drill bits and reamers are made from tool steel and can be reshaped into bowl gouges, scrapers, skew chisels, hollowing and parting tools. I have made several bowl gouges out of recycled half inch tool bits. These tools work as well as any tool that I have purchased over the years. Typically this scrap metal is extremely inexpensive and will cost much less than drill rod purchased from a catalog. If you do not like going to flea markets then I recommend O1 drill rod that can be purchased from MSC or most industrial supply shops. Most drill rod is annealed which means that it has not been hardened. This makes it easier to shape, bend and forge.



If you are using O1 tool steel you can grind, bend and forge it into its final shape as long as it is not hardened yet. You can bend and hammer annealed O1 drill rod but I recommend heating it to a cherry red or yellow glow first. If you are working with a tool bit from a machine shop you will need to anneal it before you can bend it. To

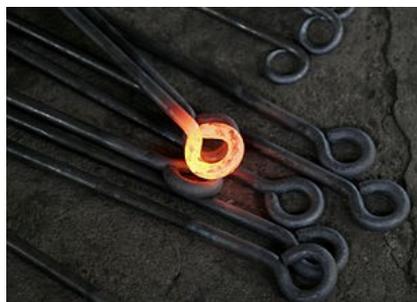
anneal the steel you must heat it to a cherry red then slowly lower the temperature over several hours. You can do this with a wood or coal fire. There are many different tool steels that are used for metal working and some are designed to hold the cutting edge when it is red hot.

Because of the variability of the metal you might be using you will need to experiment to find the best method for shaping your tool. If the tool bit you are using is labeled with the type of steel, i.e. M42 or 8% Cobalt I recommend searching the internet for instructions on how to shape and heat treat. One method to identify steel is with a spark test. The following web site provides a good overview of the process: [https://en.wikipedia.org/wiki/Spark\\_testing](https://en.wikipedia.org/wiki/Spark_testing). With many tools I have simply experimented with shaping and heat treating and ended up with a very useful tool that could hold an edge.

to hold an edge.

Heat treating is a science and an art. Some exotic tool steels should be heat treated professionally and all the rest can be done in your back yard fire pit or with a propane torch. When hardening steel you can estimate the temperature by the color of the steel when it is glowing hot. When the steel is cherry red it should be approximately 1500 degrees Fahrenheit (F) and is ready for quenching. The tint scale can be used when tempering. Steel that has been polished to a bright clean finish will form a thin oxide layer when heated. The color of this oxide layer will indicate the highest temperature that the metal reached. Straw or yellow indicates approximately 440 degrees F.

In order to keep things simple and easier to measure I recommend using two alternate methods for determining the proper temperature for hardening and tempering the tool. They require a magnet and a kitchen stove. Before heating the steel verify that it will stick to a magnet then when heated to the proper temperature for hardening the steel will not stick to the magnet.

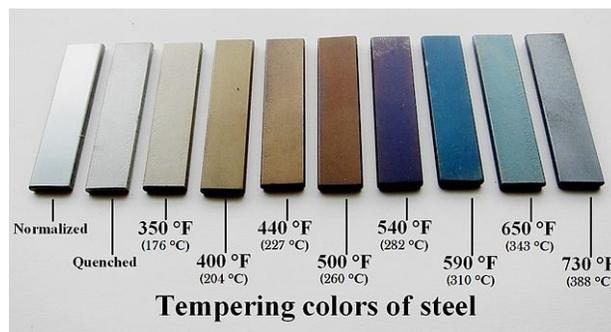


This is the best indicator that the steel is at the proper temperature for hardening. When the steel no longer sticks to a magnet plunge it into a metal bucket filled with vegetable oil. You can use other types of oil but I recommend vegetable oil because it is environmentally safe, non-toxic and if it has been used for cooking it smells like French fries.

The oil can burst into flames when the steel is quenched therefore you must be very careful and always use blacksmith tongs or a large pair of pliers with a long handle.

After the steel has been hardened it becomes very brittle and can fracture during normal use therefore it must be tempered. The best way to temper the steel is to clean off the oil and any scale from the hardening process and heat it in your kitchen oven to 450 degrees F for a minimum of one hour. Then without opening the door turn off the oven and let it cool down slowly. This process will make the steel less brittle while maintaining its ability to hold an edge.

Now that the steel is finished turn a handle, assemble, sharpen and enjoy your handmade tool. This overview of tool making only scratched the surface on this process. If you are planning on making your own tools I recommend searching the internet or purchasing a book on backyard blacksmithing for more detail, start with something small and ask for help from someone with experience.



Michael Peters

# FOOD SAFE FINISHES



After scores of conversations with chemists, regulatory agencies, finish manufacturers, finishing experts, and woodworkers, I found that there are a few finishes that everyone agrees are food safe. However, these finishes tend to be the least protective, and the great majority are in a kind of limbo, with many experts saying most are fine for use with food but with others saying they should be avoided because there are some lingering questions about their safety. In the welter of contrary opinions about which finishes are food safe and which are not, a few naturally derived, unblended, no-hidden-ingredients, certainly non-toxic finishes stand out.



**AAW's 31st Annual International Symposium in Kansas City, Missouri**  
**June 22-25, 2017**

**Pure tung oil.** Extracted from the nut of the china wood tree. Used as a base in many blended finishes. Available from catalogs and hardware stores. Difficult to apply, requires many coats, good water-resistance.

**Raw linseed oil.** Pressed from flax seeds. Not to be confused with boiled linseed, which contains metallic driers. Listed as a food additive by the Food and Drug Administration (FDA). Very long curing time, good looks, low water-resistance, frequent reapplication.

**Mineral oil.** Although derived from petroleum, it is colorless, odorless, tasteless and entirely inert. Sold as a laxative in drug stores and as a wood finish in hardware and kitchen-supply stores. Simple to apply, low water resistance, frequent reapplication.

**Walnut oil.** Pressed from the nuts of the walnut tree. Sold as a salad oil in health food stores and in large grocery stores. Walnut oil dries and won't go rancid. Easy to apply, frequent reapplication.

**Beeswax.** The work of the honey bee. Can be mixed with an oil to create a better-smelling, slightly more water repellent finish. Sold in woodworking and turning catalogs.

**Carnauba wax.** Derived from the Brazilian palm tree. Harder than beeswax and more water-resistant. Can be used straight on woodenware as a light protective coating or a topcoat polish. Sold in woodworking and turning catalogs.

**Shellac.** A secretion from the lac bug. Harvested in India. Super blond shellac in flake form is the most water resistant variety. A film-forming finish. Sold in woodworking catalogs and hardware and art supply stores.

### **A recipe for one sweet finish**

The food-safe finish that appeals most to me is one recommended by Jim and Jean Lakiotes, West Virginia makers of spoons and other kitchen items, as well as furniture. Their finish is a mixture of mineral oil and beeswax.

To make it, warm the mineral oil in a saucepan over low heat, and melt a chunk of beeswax in it equal to about one-fifth or one-sixth the volume of the oil. (At high heat, there's a potential for fire. Be sure to keep the heat low, and consider using a double boiler.) As the wax begins to flake apart and dissolve, stir frequently. When the mixture is blended, pour it into a jar to cool and solidify.

To apply, wipe on an excess of the soft paste, let it dry a bit, then wipe it off. If you want to apply it as a liquid, you can reheat it. Like any mineral oil or wax finish that will take a lot of abuse, this one will need to be reapplied often to afford decent moisture protection. But applying this fragrant finish is such a pleasure that you may find yourself looking forward to the task.

This article is excerpted from Jonathan Binzen's article "Which Finishes Are Food Safe," featured in *Fine Woodworking* #129.

Central New England Woodturners

A Chapter of the American Association of Woodturners



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- Club Store Manager:** Kevin Nee, W. Boylston MA 508-835-4301, kpni@charter.net
- Big Name Demo Coord:** Rick Angus, Moosup, CT 860-564-3660, rick.angus@gmail.com
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- Webmaster:** Dominic Ryan, Littleton, Ma. 617-347-1383, m.dominic.ryan@gmail.com



### Membership

To join or renew membership, please complete the form below and a check made payable to CNEW and bring it to a CNEW meeting, or pay online at the CNEW website under "join/renew" or mail to: Treasurer, Central New England Woodturners  
c/o Todd Heino, 148 Howe St, Natick, MA 01760

### Membership Application

To join or renew membership, please complete this form and a check made payable to CNEW and bring it to a CNEW meeting or mail it to:

Treasurer, Central New England Woodturners

c/o Todd Heino  
148 Howe Street  
Natick, MA 01760

Annual dues: \$40 including e-mail delivery of newsletter

Name: \_\_\_\_\_

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City: \_\_\_\_\_

State: \_\_\_\_\_ & Zip: \_\_\_\_\_

e-Mail: \_\_\_\_\_

Telephone number \_\_\_\_\_

Please check appropriately below

New Member

Returning Member

e-Mail Newsletter (\$40.00)

Please let us know of your interests:

How long have you been turning? \_\_\_\_\_

What programs would you like to see at meetings? \_\_\_\_\_

Would you like to demonstrate at a meeting? Yes/No If so, what topics do you offer? \_\_\_\_\_