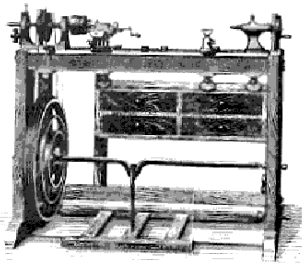
FRASER VALLEY WOODTURNERS GUILD



2001 December Edition

CONTENTS

The F.V.W.G. meets every 3rd THURSDAY of each month of the school year at 7:00 p.m. We meet at 6418 Mt. Lehman Rd. (and Taylor) in Abbotsford. Take the Mt. Lehman exit off of Hwy 1 and proceed North about 3 miles. The Hall is on the corner to your right. Next meeting is December 13th.

These folks are kindly asked to bring a snack to share for the coffee break or a piece of wood for the raffle. Thank you.

Goodies – December	**Wood Rotation –December**
All members to bring a small goody for the Xmas meeting. We will be having guests.	No wood raffle this meeting. A donated wood turned ornament or other item for the auction.
Goodies – January	**Wood Rotation – January**
Sluys, Vosburg, Weibe, Gislason, Pinkerton, Eisenman	Hensman, Hobbs, Hoskins, Isaak, Kealy, Kreiger

PRESIDENTS CHALLENGE

There will be no Challenge at this meeting due to it being a Social evening. This will be a slight reprieve to get us motivated for the coming New Year. Our January Challenge (Jan.17th) is going to be an egg and egg cup. I'm giving you guys and gals lots of time to get creative with this challenge.

REMINDER: For those of you, who have not paid your Membership Dues by December, I am advising you that I won't be E-mailing or Mailing you persons a Newsletter after this issue.

Cont…

UPCOMING EVENTS

January: The Yale School has not finished its Renovations yet, so possibly February for our meeting at this location. Will keep you posted.

Ian Fulford stated that he would be doing a Pen Turning Demo for this meeting. I heard you say this "Ian", at our November 15th meeting.

February: Hopefully we will be at the Yale School. They apparently have Lathes that we can use, so we will try to line up some Demo Turners.

March: Maybe, I'll do a sandblasting Demo. If the School has a compressor, then I won't have to bring mine in.

EXECUTIVE/COMMITTEE:

President – Murray Harris - 604-826-8439 or E-mail: nomurray@excite.com
Past Pres. – David Broomhead - 604-533-1142 or E-mail: broomhead@telus.net
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Soc. Con – Paul Weibe – 604-856-5432
Raffle – Perry Neihaus & Ian Fulford

WEBSTER'S CORNER: Club Website: www.lanslide.com/fvwg/fvwg.html

We have added quite a few more interesting sites to visit. Click on LINKS and check them out.
The education page is looking for more woodturning articles. If anyone has articles he or she would like published, send or e-mail a copy to Kelly at: riverwynd@telus.net
We have the competition pictures posted to the Gallery as an extra feature. We would like to thank Art Leistman for sharing these pictures with us.

FRIENDS OF FVWG:

These fine retailers have donated items for our monthly raffles: space for meetings and /or equipment for demonstrations. They deserve our consideration when we make purchases that they can supply.

Bow River Craft Woods 604-795-3462 www.bowrivercraftwoods.com
KMS Tools (Abbotsford and Coquitlam) www.kmstools.com
Lee Valley Tools www.leevalley.com
Nuefeld Hardwoods (Chilliwack) 604-795-7886
Mohawl Western Finishing Supplies
Reimer Hardwoods, Peardonville Road, Abbotsford
Windsor Plywood (Langley)
Laser Valley Technologies Corp. (Langley) www.laservalley.com

Cont…

Copying Spindles by Scot Belway

First take the Spindle to be copied and create a memory stick that records the distance and diameter of the different details you wish to copy.

The memory stick should be 1/8'' – 3/16'' thick and 1 – 1 ¼'' wide and as long or longer than the spindle to be copied, is best.

Notch cut or V file the edge of the stick to help the pencil lead find the marks easier.

Now determine the wood to be used and figure out if you have enough to complete the project. Always add one or two extra for mistakes or practice. Then cut the wood to the desired lengths required for each spindle.

Determine how the piece will sit on the lathe. As a rule, the largest finished diameter should be on the Spur end. This is usually the top of the spindle and the zero point for marking.

Mark the center on the end grain of all pieces to be turned or drill small holes if more wood relief is required for the Spur to engage.

Before you start your lathe, follow these Safety Rules.

1. Wear face shield or protective glasses.
2. Check by hand that the wood is secure.
3. Make sure your speed is set properly.
4. Check the tool rest, is it at the proper height.
5. Do not wear loose clothing or jewelry.
6. If you have long hair, keep it pinned back. (Ponytail is best)
7. Always have good lighting at cutting point.
8. Check that wood will clear tool rest.

Spindles for 1'' – 3'' in diameter are safest to cut at 800 to 1200 rpm, a little faster for small diameter and a little slower for larger diameters.

Start lathe and rough cut all spindles to their maximum round. Start your cutting at the live center end.

Next, cut all spindles the proper shape and same thickness using calipers and a parting tool. Remove waste with the roughing gouge or square end scraper.

Apply memory stick to first or practice spindle. Go from the live center to spur end, cutting each section to its proper diameter, again, using the parting tool and calipers. Remove the waste with the square end scraper. Work one section at a time. Then go back and make all parting tool cuts for the bottom of the coves. Remark with your memory stick, where necessary, and repeat this for each spindle.

Cont…

Mount spindle to be copied next to the rough cut spindle, so the two can easily be compared. Cut the detail to match the prototype.

Here are the tools I use and the different uses I have for them.

1. Skew (1'' or less) Shear cutting, scraping or bevel cuts. Good for beads, flats or V-cuts.
2. Parting Tool (3/16'' or less) Shear cutting or bevel cuts. Good for depth grooves, small beads and small flats.
3. Roughing Gouge (3/4'' or more) Shear cutting or bevel cuts. Good for waste removal, bring to the round or long gentle coves and beads.
4. Small Gouge (1/2'' or less) Shear cutting or bevel cuts. Good for coves and roughing out large beads.
5. Bull Nose Scraper – Roughing coves of all sizes.
6. Square End Scraper – Removal of waste, roughing large beads and roughing flats and angles.

Some simple rules to follow:

Don't cut a curve with a gouge.

Put tool on the tool rest before contact with wood.

Scraper must be kept flat on the tool rest and presented at a blade down or level altitude.

For best cutting angle for gouges, skews and parting tools, rub bevel against wood and raise handle until cutting begins then hold it at that angle.

The farther apart the finished spindles are from each other, the less obvious any mistakes will appear.

Don't sand until you are satisfied with all your cuts on ALL of your spindles. Sand only the areas that require it and only to the degree which is needed.

One final note: NEVER wrap sand paper around your fingers.

HAPPY TURNING

SAFETY TIP: When using your 4 Jaw Chucks.

A Chuck with its jaws extended beyond the edge of the chuck body can be a real knuckle buster. Be **Safe** by applying a piece of duct tape or masking tape to one jaw and let the tape extend past the jaw outward for about ½ to ¾ inches. When the chuck is spinning and your hand gets a little close to the extended jaws, now you will feel the gentle flapping of the tape against your hand instead of the hard, sharp steel biting into your flesh. Since I started using this technique, there are no more sudden surprises when I get close to the spinning jaws.

John Horn, Fort Worth, TX

FOR SALE:

Hardwood Lumber Sale:	12/4	Maple Clear Select	$3.00 per BF
	4/4	Maple Mill Run	$1.50 per BF
	4/4	Cherry Mill Run	$2.00 per BF

Slabs and Burls in Stock. Custom Cut Lumber and Logs. Phone toll free 1-877-777-3292 or 604-826-7410 e-mail: tedltd@uniserve.com

FOR SALE:

Western Maple, both spalted and figured. Sizes range from 2'', 6'' and 9'' thick turning blocks. Also a few burls. Call Steve Likness at 604-574-3927

GENERAL NEWS

It definitely was a great turnout for our November meeting. We had seven new persons at this meeting, apparently some wanted to check us out after our KMS Demo's.

Hello to: John Murray, Don Bandurka, Peter Dombrowski, Ralph Ohlman, Ralph Robertson, Leo Haley and Bill Howells.

Our Executive meeting will not be until Dec. 4th, by then I'll have the newsletter in the mail. Don't forget that our next meeting is Dec.13th at 7 P.M. at the Mt. Lehman Hall. There won't be any heavy thumping from the upstairs Martial Arts Class this evening.

I apologise for not having a Show & Tell this month. I've gone on to the Net but I have not found the extra Competition Pictures or our November Gallery Pictures.

I'll make up for it on the next issue.

EDITORS CORNER:

We had a great show of TOADSTOOL's, (our Presidents Challenge for November). There were many shapes and sizes; definitely a lot of imagination and creativity went into these little critters. Keep up the good work.

I find that creating something small and fun, is a good way to hone your skills (with your parting tool) or just as a warm up before starting on that next bowl or what have you.

For the persons inquiring about how to turn burls, I would suggest warming up on something small because the next little while is pure tension, absolute concentration and possible danger (I like this part).

You do not Turn slow, it has to be fast and you have to use very SHARP Tools. I Turn between 1800 and 2140 on my lathe.

I have never used a bowl gouge on a Burl, I mostly use a 1'' bowl scraper and I slide it back and forth across the tool rest slowly, until I have the shape I want. You get used to seeing the blurred edges. The speed depends upon your lathe. I have the Nova 3000 with a 1½ HP motor and it runs on 220. When I did the Demo at KMS, I used there Nova 3000 with a 1 HP motor and runs on 110. I set the pulleys to my settings and it ran a lot slower than mine. You want a smooth cut when applying the tool into this piece of steel, if you take chunks out of the burl, you're going to slow, and you could also break or split your burl.

Cont…

When it comes to sanding, Turn slowly and use a small sponge with your sandpaper to help cushion the blow that may incur if you get to close to the edges. My first Mallee Burl, I was sanding to fast and I slipped, three fingers got nailed, the extreme pain told me that I still had these fingers attached so I didn't have to look in the sawdust pile for my Pinkies.

If you have a good surface and need only minor sanding, then sand it by hand. I have found that the Burls are so hard that they don't scratch easily. It is the shape of the Burl that would dictate how you would sand it. If your hand sanding fails, as the last resort an electric palm sander works great on the difficult areas. If it needs sandblasting to remove the bark (after the top and bottom are turned to your satisfaction), then mask off the all finished areas, then blast away to your hearts content. You may need to re-sand around the edges if you blasted away on your masked areas.

These burls come in all shapes and sizes, so use your own common sense on what you are going to do with it and how you are going to mount it on the lathe. Mine have all been unbalanced to start, which causes a lot of vibration. Common sense also applies to the speed you turn it on the lathe. I learned from trial and error. I have turned more than a dozen burls and love it.

One point to remember: You never know what you may encounter when turning burls. The small stones, dirt and gravel are the unexpected treats, the holes and cracks are free and add character.

From the Editor:

If you have any articles that you would like to have published in the next newsletter or any future newsletters, then e-mail to classic@direct.ca, fax: 604-462-9173 or mail it to Margaret Eisenman, 12670 Carr Street, Mission, B.C. V4S 1B9.

Just a REMINDER. We will continue to meet at the Mt. Lehman Hall for January and possibly February in the New Year.

At Ernie Newmans coaxing, Ed Pretty wrote this excellent piece on Fire Safety for the workshop. Thanks Ed. I'll bring in some extra copies to the Dec. 13th meeting for the members to take home with them. It's 5 pages long but definitely educational.

I have also e-mailed Kelly so that he may post it to the Educational section on the Website.

The following pages on **Fire Safety in the Shop**

Fire Safety in the Shop, or….
Smokey the Bear meets Red Green.

The other day, a friend and I were discussing all kinds of issues associated with shops in general; machine placement, floor area, need for this or that machine and so on. The conversation eventually led to shop safety and ultimately to various fire hazards that can be present in a home shop. After discussing a few things that were old hat to me but had never occurred to him, my friend suggested that I write an article on fire safety. My first thought was "Why bother writing about something that is just common sense? ", but then if some of this stuff is news to him then it may be to others. With that I decided to write this piece in the hope that even the smallest bit of information might save someone's shop (and themselves) from disaster.

So far, in over 30 years as a professional firefighter, I have had lots of opportunity to see good old Mr. Murphy at work. Trust me, if you can imagine it, it has happened. Over the years, I have attended fires in both commercial and home shops. Sometimes accidents happen and sometimes people are just plain stupid. In all cases, the loss to the owner, whether great or small in someone else's eyes, is devastating.

I could keep this article short and sweet by stating the obvious, advising everyone to put up "No Smoking" signs and advising everyone to get an extinguisher and calling it quits, but I think the majority of you have figured that one out. The not-so-obvious is usually what trips someone up in these enlightened times and that is what I will discuss here.

"Sources of ignition"

In the fire biz, we talk about "sources of ignition". Sometimes they are obvious to the eye, yet invisible to the mind – like pilot lights. Sometimes they are insidiously subtle – like static arc. We all like to sharpen our tools with grinders that make a shower of sparks. Some of us have cutting and welding equipment in the same area (uh, just ignore the first 10 feet of my shop as you walk in, OK). At one time or another most of us have used Watco Oil or some similar product (Similar? How?): this is the famous "oily rag" situation explained. I'll discuss them all.

Sparks from grinding and welding are visually pretty obvious, but consider how close your grinder set-up is to the lathe or other producers of large amounts of bone dry, finely divided, highly flammable, organic (stuff that burns) material. Those little buggers tend to go a lot further than you may think. If you don't believe me, grind a tool in the dark and watch the shower. If distance is a problem, try a deflector (a.k.a. piece of plywood) or turn the grinder toward the wall. The real problem is to keep the shavings cleaned up (ya, right). Common sense says to sweep up and dispose of suspect shavings outside before leaving the shop.

There are sparks and then there are sparks: static discharge can produce some dandies. Many of us have vacuum systems to assist us in the "cleanliness-next-to-Godliness" thing. To be installed properly, such a system must have metal ducting that is both bonded and grounded, but for ease of installation (not necessarily cheaper) we often use PVC pipe. All that air rushing by tends to create an electrical charge on those things that it passes over – or through. Metal conducts electricity nicely and therefore tends to shuck off any electrons that happen along right away. If the system is grounded they find their way harmlessly to terra firma. Plastic, on the other hand

doesn't conduct well at all, so those same electrons tend to build up until there is bunch of them. They still want to get to terra firma but with no easy path, they finally take the big leap all together (strength in numbers). This can result in a pretty spectacular arc and, voila!, one of these pesky ignition sources is born.

There is one thing to keep in mind when sparks are involved. At work we maintain a "fire watch" for 2 hours after a fire is deemed to be completely extinguished: as professionals, "rekindle" is not in our language. That time period was chosen because it usually takes about that long for a small ignition source to progress to a noticeable fire. Thanks to welders in sawmills, we usually get to go play about two hours after they have done their thing if they have not done their spark chasing after wrap up. So if you are doing "hot work" where sparks are being produced, maybe consider taking another peek before turning in for the night.

Dust explosions

While in the general area of shop cleanliness, let's talk about dust (we're talking sanding dust here). This stuff is even more finely divided, bone dry, highly flammable, organic (stuff that burns) material. When suspended in air, this stuff starts to act more like a flammable gas than a flammable solid. Explode? You bet – and if it doesn't explode it can burn real fast over a large area. Picture the concrete grain elevators that live along the shoreline in North Vancouver. In the early 70's a series of dust explosions resulted in a final blast that took the tops off of four that stood side by side. That's a little larger scale than most of our shops, but the same principle applies. It is common to have a smaller initial explosion – kind of a "whoof" – that stirs up the dust laying everywhere, creating a perfect atmosphere for the big bang. Boom… then Ka-boom. If there is a correct dust/oxygen ratio floating around in the shop, it might as well be natural gas. A pile of dust on the floor is way too rich, a haze from a few minutes of sanding is probably too lean. A continuous operation that produces fine dust or sweeping up the shop on Sunday can get the mixture "juuust right", and one of those not-so-obvious ignition sources does the trick (vacuum system perhaps?). There's a plug for dust control if I ever saw it.

Ah, chemistry

Hopefully the next section will not be too painful because it's important. My intention is to explain why things burn so that you can decide what to do or not do as the case may be. Please excuse the elementary approach, but Bill Nye finds it more effective as do I. When something burns, whether solid, liquid or gas, it is the gaseous form of the product that burns – even wood. Flammable liquids burn when they give off vapour. Some flammable liquids (like gasoline at about minus 46 deg.f.) give off vapour that burns at normal ambient temperatures. Others don't give off vapours until much higher temperatures (like diesel at about 104 deg.f.). This is called the "flash point" if you are looking up information on the product. Flammable gases exist as a gas naturally so are ready to go pretty much all of the time. Solids, of course, require a whole whack of heat to give off vapours so are significantly safer. Hopefully by now you have noticed that I have emphasized the difference between a vapour and a gas. Don't forget to keep flammable gases and vapours from flammable liquids separate in your mind.

Probably the most prevalent of the villains in our world are the vapours from flammable liquids. Flammable liquids cause us much grief because, unusual in the chemical arena, they abide by a rule. The vapours that evolve from the liquid are always heavier than air. The thing that causes such a problem is that the vapours tend to stratify in low areas rather than dissipating, thus allowing enough stuff to build up to light up. (By the way, the "heavier-than-air-rule" doesn't always apply to flammable gases: having fun yet?). Anyway, the same rule that causes the problem also

allows us to avoid catastrophe. Because we know that they will likely be hanging around the floor, we know that we should extinguish pilot lights in the area and eliminate all those other pesky ignition sources, like grinding, as well. If you have a wood stove in the shop – think a bit about how long it takes for that thing to really go out. Best of all – get rid of the flammable liquid if possible.

Where is this significant? First of all, store the gas for the mower and the BBQ propane (it's a flammable liquid – trust me) where there are no ignition sources - especially at floor level. Next, if you have a furnace or water heater in your shop area, avoid using any solvents with flash points lower than room temperature (that info is available in a Material Safety Data Sheet – MSDS for short). Keep this in mind when using finishes (especially lacquers) or adhesives that have "driers". The real sneaky one is contact cement. For you French Polishers, watch out for methanol (methyl hydrate) because it follows the heavier-than-air rule and you can't see the flame: pretty cool stuff. I reduced one problem in my shop by installing an overhead furnace when I built it so that the pilot light is up high. Of course heavier-than-air vapours can be stirred up by movement (Aarrrggghh!!! Make it stop!), so the best thing to do is what the manufacturer says: eliminate all ignition sources and provide good ventilation. I could emphasize all this with both humorous and tragic war stories but these are best served with beer(s) and a couple of other firefighters.

By the way, MSDS's are available from whoever sells the product.

Oh no! More chemistry

Sorry to stay in the chemistry end of things but there is another relatively minor area of concern as far as home shop owners that still should be discussed. We tend to use various chemicals in our lives and some of them don't like each other (or, really like each other, as the case may be). The possibilities are endless – as I have found over the years – but a common possibility in our shops could be oxidizers. These can be in the form of acidic corrosives (battery acid is a good one – lots of "O's" in H_2SO_4), any fertilizer with "nitrate" in the name or any strong bleaching agent (Javex doesn't count). Watch out for things with "-ite" and especially "-ate" at the end. If these things come in contact with bone dry, finely divided, highly flammable, organic (stuff that burns) material, they tend to cause a reaction that generates enough heat to start a fire. Not common but it happens, so keep the chems in their (proper) containers and on the shelf.

As promised, "oily rags" explained

Ever since I can remember, I have been told that "oily rags" are a fire hazard and I think that's pretty standard. It would seem that we generally understand that there is a "spontaneous combustion" situation involved here. So, what is spontaneous combustion? Generally it's a situation where heat builds up very slowly (or sometimes astonishingly fast) from a chemical reaction creating enough heat to ignite the material in question. The chemical reaction that takes place is oxidation – just like the sulphuric acid on wood shavings. The difference is that it is usually biological in nature. Wet hay is a classic: the hay gets wet, starts to rot (oxidize), and the heat generated starts a self-accelerating cycle leading to ignition. The oil in "oily rags" is not petroleum based oil, but a vegetable oil such as linseed or tung or similar. In their raw state (arranged in such a way as to be easily heated – like on a crumpled rag) these contain bacteria that will work on the organics in the oil creating a slow oxidation process just like the hay. If the oil is boiled, the bacteria is killed and doesn't present near the problem, although not eliminating it all together. Watco is notorious for this problem because it contains a certain amount of raw

linseed oil. Not to slag only Watco, there are lots of others out there with the same problem.

This is a curious problem around the shop. I have been to a fire in a cabinet shop on Sunday night that took all weekend for the rags in their van from the last job on Friday to take off. I have been to a house fire where the husband did his yearly "watco-ing" of the cedar paneling, dumped the rags out on the porch, cleaned up, grabbed a beer, sat down to watch the game and "whoosh" – roaring blaze on the porch. I have tried to produce a controlled fire in this way and have not been able to do it. There is obviously a very specific combination of ambient heat, humidity and the way the combustibles are arranged that allows this to happen. While you are working with the stuff, don't place the rags on the bench all bunched up. Open them up and hang them on something so they can't heat up. That way, when the phone rings and you forget them, they don't get to do their thing. Once you are done, there is only one way to eliminate this problem when using an oil finish: dispose of the rags in a sealed metal container reserved for that waste only. Ideally, outside the shop is best. There are special containers made for just that purpose, but a paint can (with lid) works well, too. Putting them in a container filled with water works but that can be pretty messy. If you can burn them in the fireplace – great. If you have to put them in the garbage, wait until you put it at the curb before adding the rags.

Getting it out once it's started

OK. Let's defy all logic and say that a fire gets going in the shop. My first advice is to alert everyone in the house/shop and then either call the fire department or get someone else to do it right away. Don't forget your address. Then go after it with an extinguisher and/or hose. I know you are going to think it's best to attack the fire right away, but if you try and fail, calling the fire department somehow gets forgotten: yes, it's happened. If things get out of hand, make sure you close the door as you bale out. If you think I'm full of it, pass on the phone call, attack the fire and win, call the fire department anyway. Fires tend to extend themselves unknowingly and, anyway, the insurance company likes to see a fire report.

Fires in wood, cloth etc.(class A) can be put out with water or regular dry chemical. Flammable liquids (class B) require "dry chem" or CO2. Energized electrical (class C) required CO2 . My recommendation is a minimum 5 lb ABC type dry chem extinguisher. The ABC type of dry chem is the most effective for all; just turn any power off if electricity is involved at all (always do that anyway). I would not recommend CO2 at all, even if you have one now. Expensive to buy and maintain and very ineffective. Have a water hose connected and within reach of the shop. If you have a pressurized water extinguisher, that's handy; just keep the pressure up. Definitely do not try to fight a flammable liquid fire with water as you will only spread the misery around.

Mount any extinguishers right by the door for easy access (and quick get away if things go south). Every year or so, take a rubber mallet, turn the extinguisher upside down and thump it until you can feel the dry chem "slosh" back and forth. If a dry chem is discharged even a little bit, it must be recharged as the powder screws up the seal and it will leak down.

If you buy a dry chem extinguisher, get one with a metal head: you can't refill the ones with a plastic head. And here's a good one – without anyone watching, read and understand the instructions before the fire.

Cheapest of all: get a 1 to 5 gal. pail or similar with a closing top that you can reach your hand into, go to Save – On and fill it with bulk baking soda. That's all regular dry chem is, and it works the same. Good plan for the kitchen but on a smaller scale – unless the cook is prone to burning dinner a lot. The stuff in the extinguishers is treated with silicone to flow nicely and not clump up. The ABC powder is different stuff completely and there is no cheap alternative.

Finally – the end

My objective is simply to give food for thought and perhaps some little known background. Most of the stuff here is all about common sense, available information, general shop cleanliness and some proactive thinking. I have no problem sharing this information as it does not jeopardize my job security one tiny bit. Over the years I have learned that I have a good job, in large part, because "some people just need lookin' after". By definition, a woodturner doesn't fit into that category, so you should all be a little safer and my day job will still be there tomorrow.

Ed Pretty