

OREGON WOOD WORKS

SAFETY IS JOB ONE

BOB OSWALD

Why would I talk about some of the less than brilliant events in my life? To help you think a little more thoroughly as you approach a situation. When the little voice in the background says, "Wait a second, are you sure?", I want to help you listen to that voice.

Three near misses occurred this month, helping to remind me of greater forces at work. No injuries, just stark reminders. One event did not have that nagging feeling. It was just an act that, a second after it occurred, a jolt reality caught me.

I was turning a simple post, a part for the never ending bedroom furniture project. The four-inch post, three feet long, had reached the smooth stage, turned from an octagonal blank glued up the previous day. For some

reason that escapes me, I laid the fingers of my left hand, the tips, on the big tool rest of a full size lathe, with the work spinning. We have all handled spinning work before, checking for smoothness, sanding with strips of paper wrapped around the piece. We do it and it's ok. But we do it wrapping fingers carefully and consciously around the back of the piece, touching lightly at first.

This was different. Obviously, the piece is rotating toward the tool rest. The critical and unnoticeable parameter was a quarter-inch gap between the rest and the work. My finger tips touched the work and the tool rest simultaneously. In a split second I realized that if the gap was a fraction wider, or the

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NEXT MEETING — WEDNESDAY — FEBRUARY 15, 2012 6:30 PM

BARBO MACHINERY

4617 SE Milwaukie Ave, Portland, OR 97202

Barbo Machinery Company has been serving the Northwest since 1922. They offer a wide variety of woodworking and metalworking machinery including new, rebuilt and used tools. They deal heavily in large, heavy duty equipment for commercial and industrial shops but also have many small shop items.



Rand will give us a little insight into what Barbo can do to help you accessorize your tools, upgrade options you might not have considered. And always a favorite, for those still new to some of this technology, a brief introduction to the SawStop and some of the new cutting methods in modern planers and jointers.

Just a walk through this 17,000 sq. ft. showroom is worth the drive. I've been there a number of times and never tire of the different and heavy duty look of the equipment.

Directions: From the west, cross Ross Island bridge and turn south on 99E to Holgate. Be in the right lane on 99E to take the turn-through. Take Holgate a few blocks to Milwaukie and turn south one block to Barbo on the West side.

Social time begins at 6:30. Board of Directors meets at 5:30

THIS IS YOUR GUILD, 2012

BOB OSWALD

It's a landmark time for the Guild, a year with many new things happening, a quantum leap in several ways. It seems appropriate to launch the first newsletter of the new year by telling you about it.

After a training meeting this month, I was sitting at home, quietly in the dark, late one evening, gazing over the valley below, with a glass of wine. Thinking about the things on my To Do list for the guild, I had this realization about all that is going on. I am in the unusual position of seeing virtually everything that goes on behind the scenes, the spider web of activities that give you the Guild as you see it. Here is what I observe.

A New Website

Sorely needed for years, **Bob Oswald** developed a new website that will give us many great new capabilities. Built on an excellent foundation laid many years ago by **Dave Doughty**, still an active member with help from **David Dunning** who pioneered some of the concepts, we will convert to this site next month, February, 2012.

You will see a new look with a new focus on what we do. You'll have the ability to register for classes and shows on line. We can track and make more visible our community projects. Read more in "A New Guild Website" elsewhere in this issue.

501(C)3

The Guild applied for non-profit status last summer, 2011. The value of this status to the Guild is that it allows people to donate to the Guild and receive an income tax credit. We have had several opportunities, through estate situations for example, that would have helped the Guild.

The application paperwork is progressing through the Oregon legal system. The last letter from them indicated it's close now.

Gig Lewis spearheaded a discussion last year, a what if scenario about some day acquiring our own building. In his position, he has been receiving 'input' from parties interested in donating to the Guild. When we have formal non-profit status, it might be surprising how much support the Guild might receive.

Dot Org

This month, January, 2012, we acquired the ".org" name for the guild. We will continue to be dot-com as well, but as we talk with potential donors, it enhances our non-profit image to have that internet name.

Education

From one person a couple of years ago, **Gig Lewis** has developed a group of a dozen people to carry our education programs. 2011 saw around eighty education classes taught

and well attended on a large variety of subjects. The 2012 horizon looks equally ambitious.

The Basics series continues with four planned sessions this year. Thanks to **Dennis Dolph** for leading that effort.

You have seen reference in recent newsletters to "The Next Level". This series of hands on classes was developed by **Jeff Zens** and **Dennis Rodrigues**, both graduates of the Mastery Program at Northwest Woodworking Studio. These classes are intended to make sure that members taking classes at NWS are better prepared to be in the class. **Chip Webster** has taken the Education Chair position and will be coordinating those next level classes.

Julie Niemeyer has become involved as the lead coordinator for our special interest classes. Bless her also for taking on master scheduling for all three sets of classes. It's a much more massive job than most of our members realize.

In addition, quite a number of other volunteers are also finding, developing and coordinating our classes. Thanks so much to **Ed Ferguson, Chris Frazier, Tim Haller, Jenny Jecmen, Jim Madaras, Eric Madsen, William Moss, Julie Niemeyer, Dale Price, Mark Sherman, Ed Vachal and Kerry Walker**.

Professional Classes

We have had a larger than normal number of high level classes last year. Thanks to **Andy Chidwick, Darrel Pert, and Bill Bolstad** – world class people teaching some of our classes. You can expect more of the same this year. These are a "not to be missed" opportunity to learn.

Community Service

For every year of my time with the Guild, there has been some project that serves the community. **Ariel Enriquez**, current president, has always driven that effort and led many of those projects. We've added that to our focus this year. The new website displays community projects, allows people to volunteer and gives us a means to communicate with volunteers. And a blog page will let us keep you informed outside the newsletter, on an ad hoc basis, what is happening in the Guild.

Summary

A lot goes on behind the scenes, a spider web of activity, to provide the Guild services you enjoy. It is an exciting time. I'm proud to be a part of the Guild. Proud to work with so many great people. In eight years of membership and involvement, I've served with many people better than me. Good people, some now no longer with us. I feel like the Guild has never been as good as it is right now.

A NEW GUILD WEBSITE

BOB OSWALD

The Guild website has been in need of a face lift for a long time. The current site was very well designed, thanks to Dave Doughty, and has served us well for many years. With the growth of the Guild, particularly in the Education area, a major need has been a means for members to sign up and pay for classes on-line.

Some of you have wanted more access to forum type discussions and classified ads. We need to make our sponsors and professional members more visible. The list goes on.

A new website has been designed and is nearly complete. It is undergoing final shakedown testing, with training for some of the officers who will be operating the controls behind the face the public sees.

It will function much the way you're used to, supporting our focus on the newsletter, meetings, classes and shows. In addition, it will be much easier to customize as changes in our operation occur.

What's new?

- ◆ Cleaner home page to make it easier to locate and see the primary things we do.
- ◆ Register and pay for classes on line.
- ◆ Register and pay for booth space at shows on line.
- ◆ Our community projects can be announced and progress tracked. Easy to communicate with volunteers.
- ◆ A working forum with classified ad capability.
- ◆ Membership is now on anniversary date. For you currently in the guild, that will be set at January 30.
- ◆ Easy to create professional gallery pages.
- ◆ Automated reminder of next meeting.
- ◆ Automated reminders of dues renewal greatly reducing workload on the Membership people.
- ◆ Automated announcements and reminders about classes
- ◆ Members can choose what kinds of email to receive from the Guild.
- ◆ Site-wide and event searching
- ◆ Other small things that don't come to mind right now.

We will convert from our current host in early February. The process takes up to 24 hours, so there will be some disruption of service. You will be notified by email when the current site goes down. The final transfer of data will take place at a hopefully quiet time, perhaps a Sunday evening. You will then be notified by email when the new site is active.

It should all happen quickly and smoothly. I've been practicing for a month now.

When you log in you'll have the opportunity to tune up your profile a bit. See the article "Getting Started" elsewhere.

GATHERING OF THE GUILDS

BOB OSWALD

This is one of Portland's premier art events. Guilds from all over the Greater Portland area, representing pottery, weaving, metal arts, glass, beads and woodworking offer products for sale. Admission is free and the event is very well attended. The event has a large advertising budget that is well managed. It brings large crowds. This is the fourth year that woodworking has been represented. Customers are now expecting and looking for woodworking.



For the Professional:

Rent a 10x10 foot booth space. Multiple adjoining spaces are available but please make that commitment early to facilitate planning. A \$100 deposit is required soon to hold a

space for you.

For the Guild member hobby level:

The Guild is sponsoring one booth space to be used to display items for sale. These are pieces built by hobbyist Guild members. It's a perfect time to find out if there's a market for what you like to build.



For all Guild members:

The Eight Annual Intra-Guild show will be held here. It worked very well last year. Entry is allowed by any current Guild members. Categories will be Advanced, Intermediate and Beginner. Professional judges will be used and cash awards and ribbons will be awarded. And again, the George E. DuBois Best of Show Award awaits some talented person

For the High School Student:

Last year's participation by Gaston and David Douglas High Schools was extremely well received. Students had a chance to see professional woodworkers and display their projects to the public. And event attendees loved seeing the student's involvement. Many one-on-one conversations occurred.

For all levels above, contact Gig Lewis at gigin-da@comcast.net, 503-646-7056. To reserve a booth, please send a deposit of \$100 to Gig Lewis, 13755 SW Bonnie Brae Court, Beaverton, OR 97005. ASAP

LAROCUE ON THE LOOSE

FRANK LAROCUE

Alignment Pins

I use these pins for all kinds of alignments that require re-alignment of existing screw holes: Table slides, chairs that are screwed together, handles on chests, anything that has screws that hold things together. Easy to make and makes life a lot easier. Have you ever driven in a screw that was in the wrong place and created a new hole that had to be fixed???

Photo #1 shows the assembled lineup pins. I used 3/4" dowels about four inches long, drilled with a 1/8" bit two inches deep. Drive the rod into the dowel. The pins are 1/8" stainless steel welding rod six inches long. Round the exposed tip with a file or a grinder to a blunt point. I do this as I do not want to scratch the mating surfaces looking for the screw hole. It makes locating the screw hole easier also.

Photo #2 shows the pins being used to align the slider screw holes before I screw them into place.

Photo #3 shows the pins being used to locate the screw holes in the skirt and holding it in place while the screws are being installed.

Photo #4 is an overview of the skirt being positioned with the lineup pins.



Campbell Soup Cans

Photo #1 shows how to store your strap clamps in a can.

Photo #2 has my sanding belts hanging on cans and dowels stored on the wall. Larger cans were used for storing the cut-off dowels below.

Photo #3 shows one wall in my paint room with cans for storing masking tape and hanging up the masking paper.

Photo #4 is a 10 ounce can and a 1 ounce measuring cup. One can and one measuring cup equals a reduction of 10 percent.

Photo #5 Has a set of ear muffs and more masking tape storage.

Photo #6 For storing blade cleaner, stiff brushes and a clamp above table saw.



Photo #1

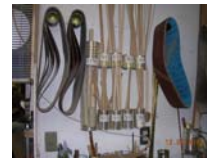


Photo #2



Photo #3



Photo #4



Photo #5



Photo #6

Power Cord Storage

The photo shows the cord looped over a wood hook. When you pull on the end, with a gentle tug, just the right amount comes off the hook.

The cord winds up laying flat on the floor, no kinks or loops because the cord comes off the hook in a flat manner.

This is how OSHA requires a cord to lay if they permit cords on the floor at all.

I use this for storing my garden hoses, (no kinks or loops), my shop air hoses and my welding leads. Imagine, every cord and hose laying on the floor without kinks or loops.



BOARD MEETING MINUTES

BOB OSWALD

The board of directors of the Guild of Oregon Woodworkers meets monthly before the general meeting. Minutes of this meeting are available on the Guild website at

www.GuildOfOregonWoodworkers.com.

Click the "Board Minutes" entry in the left hand menu.

NEW MEMBERS

BOB OSWALD

A welcome to the Guild to new members Ron Morrow, Fred Null, Sue Willette and Bob Whitney. We're happy to have you with us. Be sure to say hello at the next meeting. We like to know who you are.

THE NEW WEBSITE, GETTING STARTED

BOB OSWALD

First, don't do anything.

- ◆ Look over the new site without logging in. Like the old site, you don't need to log in to see most everything.
- ◆ To register for classes as a member, you must log in.

Logging In the first time

- ◆ Log in with your email address. If you don't know your email address, contact the Administrator on the home page.
- ◆ Use "*Forgot Password*" link in the login section. Passwords are sacred and they are not transferred from the old site. The instructions should be easy to follow.



Once logged in:

- ◆ You will see an additional menu choice at the left, bottom, Members Only.

Tale the time to edit your profile.

- ◆ In the upper right of the screen, by your login name, Click **View Profile**
- ◆ Note the Edit Profile button and four blue hot links.
- ◆ Edit Profile
 1. Add any additional information you desire. *Photo, contact* is intended to be you. *Photo, project* is a piece of work which will display on the professional member page.
 2. Two email options (*Free & Sales* and *Job Opportunities*) have been set to ON when your member data was transferred. These are random mailings about good deals that come along or those jobs-for-a-customer that you've seen in the past. If you do not want to receive them, uncheck the boxes.
 3. How did you hear about us? Even you long time members, we would be most grateful if you can remember how and click the appropriate box. We are doing membership studies these days and this would be useful information from all of you. There are several choices—let me know if you think there should be another choice.

Custom fields

- Free & Sales
- Job Opportunities

- How Did You Hear About Us?
- Internet
 - Referral
 - Gift
 - Friend
 - Woodworking Show
 - KPAM

- ◆ Privacy
 1. These settings have been configured as standard for the Guild. You can change your own if you like.
- ◆ Email subscriptions
 1. There are three different system emails. You can choose not to receive two of them, reminders and announcements. You will always be notified of expiring membership. I recommend leaving them on for now to see if they are ok for you.
- ◆ Invoices and payments
 1. When you sign up for classes, your invoices as well as your payment history will show here. If you've registered for a class and have not paid for it yet, you'll see an appropriate yellow flag. Those are private only to you.

Professional Members

- Add a photo of your work under photo, project .
- Add a photo of yourself under photo, contact.
- If you would like a gallery page, contact me about details. Your first step would be to design one using Word to get the words, photos, and look-and-feel.

The board is looking forward to a smoother running operation this year. We hope you find the new site useable and friendly. Let the Administrator know if you have suggestions or problems. This site has been designed using a commercial off-the-shelf system that supports database style websites. It's been in use for six years and has over 4,000 users, so we expect it to perform reliably for us. However, I can adjust and modify behavior in some areas if it is necessary.

I'm sure there will be some challenges adapting to this new site. Thank you in advance for your patience and help, and for being members of the Guild.

THIS ARTICLE will be a good reference next month.

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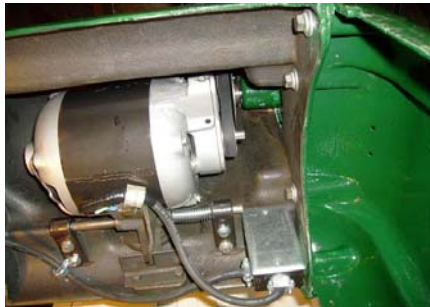
GARY MOSHOFSKY

The body and leg castings were assembled in my basement. The table, trunion and over-arm were installed.

Next I installed the motor, cross-head assembly and belt. The cross head assembly was filled with non detergent motor oil to the bottom of the fill hole. An angle bracket holds a metal junction box under the hole for the toggle switch. It was wired for 120 volt operation, adding a power switch. I fired it up and it ran fine



Next for the fiddly bits, like making a knob for the spring carrier lock from some spare parts. Some clear vacuum hose and brake line at a car parts place made the dust blower work. I still have to make a lower chuck from some O-1 tool steel and harden them. I am waiting on a friend uncovering his metal lathe to get that



done. Also I still have to make the hold down. I bought a brass pinion gear from McMaster Carr to make a raising mechanism. I don't know if it will work, as the missing one was steel.



Here are the totals to restore the machine:

Lots of time	\$N/A
Yates W70 Scroll saw	\$150
Paint	\$20
New cross-head slide manufacture	\$53
Corona ox hair and boar bristle brush	\$20
Ball Bearings, oil seal, and belt	\$37
Bronze Sleeve bearings	\$28
Air hose and tube	\$12
Pinion gear	\$22
Cord and electrical supplies	\$25
Miscellaneous hardware	\$19
Total	\$386

And I still have to buy some O-1 tool steel for the chuck and strip and repaint the wood shelves that fit under the saw. But it is basically done at this point.

BUY—SELL CLASSIFIEDS

SHARE WOODWORKING—SHOP SPACE

Looking for a wood-worker to share a 1500 sq. ft. shop in NE Portland near 28th and Sandy. Fully equipped shop – 2 table saws, band saws, jointer, planer, etc. etc. We're in the Barker Bldg. – a community of a dozen small wood shops on the second floor.
 Monthly rent\$300 + utilities
 Contact : Elliot 503-502-8019 Alan 971-230-4141

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CLASSES

Understanding Handplanes

Instructor: Alexander Anderson

February 25, 2012. 9:00 AM to 4:00 PM.

\$60 for members including lunch. Sherwood High School

Hand planes are an often misunderstood tool. They are frustrating when un-tuned or in the hands of a novice. Alexander will help bring up your level of comfort in plane-craft. What you learn will apply to power tools as well!

- ♦ What to look for when searching for antique planes, and new planes as well.
- ♦ Keeping a sharp edge on those blades.
- ♦ Planing technique, from the feet all the way through the body to the hands. Using the whole body to move the plane.
- ♦ Reading the grain of the wood, and understanding its language.
- ♦ The different angles with which a plane cuts a shaving away from the wood, from low angle planes to scrapers.
- ♦ Wood planes and metal planes will have their merits presented in this class.

“Fundamental sharpening skills: Plane Irons, Chisels and Card Scrapers” is a prerequisite for this class. You are required to bring your planes for the hands-on portion.

Contact Ed Vachal to register at 971.275.3962 or edvachal@gmail.com.

Knife Hinges

Instructor: Dennis Rodrigues

March 17, 2012. 9:00 AM to 1:00 PM.

\$65 for members. Location TBD.

Well-made and accurately installed knife hinges can add an elegant touch to a finely crafted cabinet door. Come learn about these hinges and how to install them for a classic fit. The course will include a general overview of door types and hinge options. Fee includes lunch and a set of quality brass knife hinges (value: \$24).

To register, contact : Ed Ferguson, edbikes@comcast.net, Send checks with class name on the face of the check to Ed Ferguson, 11517 SW 27th Avenue, Portland, OR 97219 This class will require the use of a palm router, marking knife and chisels.

Tools List:

- Marking knife
- 6" woodworkers square
- Sharp chisels – 1/4", 1/2"
- Small mallet for chisel work
- Small screwdriver for #3 Phillips wood screws
- Pencil
- Safety glasses and ear plugs

PROJECT CLASS: Hall Table

Instructor: Bill Bolstad

February 4 & 5, 2012 \$190 for Alder

Location: Bill's shop in Jefferson

This class is part one of a two part project designed to be an “ensemble.” You will cut and assemble (using mortise and tenon construction) an Alder Hall Table approximately 15” w. X 30” h. The length will vary from 36” to 48” depending upon where you will eventually place this table. You will also create a space for a drawer, plus you will learn how to modify the basic structure to match any furniture style you wish. You will also have an option to purchase some other type of wood for the top. Bill will quote you a price for a different type of wood top.

Consider signing up for part two, the “Hall Mirror” class below to have an “ensemble.”

Contact Ed Vachal. edvachal@gmail.com or 971.275.3962 to register.

PROJECT CLASS: Hall Mirror

Instructor: Bill Bolstad

May 19th & 20th, 2012 \$160 for Alder

Location: Bill's shop in Jefferson

This class is part two of a potential “ensemble” consisting of a Hall Table and matching Hall Mirror. Bill will help you modify the basic structure to match any furniture style you wish. Bill will also demonstrate how coving is created, how to make a corbel; as well as half-lap joints, and miters done both on a chop saw and table saw. You will construct your Hall Mirror frame using Alder and supply your own mirror (approx. 24” X 30”).

Contact Ed Vachal. edvachal@gmail.com or 971.275.3962 to register.

(Continued from page 1)

piece a little bit rougher, I have the horrible feeling that my fingers would have been sucked down into that gap. That would have been a really bad mess.

Dodge a bullet, a big one.

It's very sobering sometimes, how easy it is for bad things to happen.

The wood shop is a very dangerous place. Snakes hide in every corner. Be careful.

I'll tell you about the other two next month.

LAST MEETING: GRK FASTENERS

BOB OSWALD

How not to use glue. It was an enjoyable meeting, a diversion into the mechanical fastener world, the alternative to some of our traditional joinery. On the other hand, mechanical fasteners are very handy when it comes to high strength and doing production work. To keep costs of fine furniture to affordable realms, to apply your artistry to the form and function, you must spend less time hand cutting those mortise and tenon joints.

GRK started in the 80's in Germany. Wanting to move more into the North American market, they settled in Thunder Bay, Canada in 1990. Again we have the high performance German engineering going into fasteners.



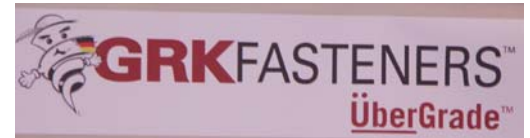
The meeting was led by "Titch" Titchen, Territory Manager and he gave a nice summary of the variety of fasteners and their application.

Screws, from the tiny #4 to carriage bolts over a foot long. Samples galore went out the door for members to try out at home.



Titch and Susan

Susie Place, Regional Manager, a most enthusiastic



lady who obviously believes in her product, filled in details and discussed specific application until we ran out of time at the school shop.

Time and again we heard about hardened steel, self tapping as primary features. Just put the screw against the surface, tap it firmly to make the point puncture the surface, and drive it home. NO pilot holes required. The unique cutting action of the threads literally saws its way into the material, wood, melamine, you name it. No blow out, no crushed fibers. Concrete was about the only exception that requires a pilot hole.



Susan mentioned over and over, no popped heads, no spinout.

You can run that screw into place, have a problem, back it out and run it again. And it will properly and firmly seat where it's supposed to.

Again, another interesting Guild meeting, filled with new information, bringing you, our members, incrementally closer to the "Greatest Woodworker in the World" status.

Thanks to GRK for a great discussion, and for all the sample driver bits. A whole bag of different sizes for everyone. Color coded to match some of the hardware, in a poorly lighted work situation, the color is a LOT easier to recognize than the size of that tip.

Show and Tell

Tim Haller built a hand plane from a kit recently. He commented a couple of times that it cut a continuous strip a few thousandths of an inch thick, twelve feet long. Impressive.



Jim Hall likes turning super thin, small and very complex little vessels on his Rose engine. He brought a couple more stunning examples.



Marcus Flanders brought two jewelry boxes, beautiful wood, great craftsmanship.



MATCH MAKER OPPORTUNITY

LARRY WADE

I would like to get a few other people together to each build the piece of kinetic art pictured here. Kinetic art moves and uses a pendulum to drive the mechanism. This design is from a renowned artist and wood worker named Clayton Boyer. All of his works, including short videos of some in action can be seen at



www.lisaboyer.com/Claytonsite/Claytonsite1.htm

I purchased the plans, and intend to make the piece, but was wondering if there are others who would like to build their own at the same time, and work as a small group to share experiences and perhaps find a mentor from the Guild who has done it before. This particular project is scroll-saw intensive, but there are other projects that I would like to do that involve different tools and skill sets. I want to experiment with the idea of using self-starting, autonomous groups to both learn and get things done. If you have an interest in this project, or think you would like to get involved in other small group projects, send an email to me at larrywade@comcast.net

SHARPENING, PART III

JEFF ZENS

In the previous two articles we've been working on flattening the back of a cutting tool. If you have created a consistent scratch pattern across the tool's back, stretching from side to side and from the bevel up about an inch or so, your tool is now as flat as your shop's reference surface. Now it's time to polish.

Why Spend the Time?

The best arguments I can advance to explain why polishing the tool is important come from two sources. The first one is the definition of the sharp edge: the intersection of two flat, polished planes. Logically this makes sense. Logically, the quality of a cutting edge is a product of the quality of the bevel and the quality of the back.

Visual proof of this statement can be found in micrographs of cutting edges. Fine Woodworking readers will recall an article written by Aime Ontario Fraser in the July/August 2002 issue that graphically illustrates this point. You can take my word for it, or go back and look at those photos. The point of Ms. Fraser's article was to compare honing systems. My point is slightly different: when you look closely at the photos, understand that all the scratches you see in the tool steel transfer directly to your work piece. So the finer the scratch pattern on the steel, the more refined a surface the steel will leave behind.

In practice, the final proof of this concept comes from comparing the surfaces obtained from well-polished steel and from a fresh tool, right out of the box. It isn't a fair fight.

Step-by-Step

So how to get that shimmer, that silky-smooth surface right from the tool? It's all in the polish. And here, let me interject that this concept of polishing the back of the tool is called honing when you do it to the bevel. Bevel or back, the end result should be the same - flat, scratch-free steel.

If you're using silicon carbide paper to flatten, the steps are fairly straightforward. Moving to progressively finer grits, erase the scratches left from the previous flattening operation. To make this a lot easier, change the angle at which the tool is moved across the surface of the abrasive. For example, at 220 grit, hold the tool so the flattening scratches are parallel to the tool's cutting edge, and are at a right angle to the tool's sides. Continue doing this until you have flattened the tool as described in the previous post. Now change abrasive, moving to 320 grit. This time, move the tool so the scratches are at a 45-degree angle to the sides. Flip the tool over after a few strokes, and you will see two very clear patterns of scratches - the 220 grit scratches with the 320 grit pattern overlaid at a 45-degree angle. Now go back to work and erase all of the 220 grit scratches. If you have really flattened the back of the tool, you'll notice that the time you spend with the 320 paper is considerably less than the amount of time it took to flatten with 220. Once

you're done at 320, move to 400, and so on. Don't cheat, and don't skip grits. Get all of the coarser grit scratches polished out each time you change grits. Remember that you will only do this once for the back of each cutting tool and that the results are certainly worthwhile.

Again assuming that you're using paper for the backs of your tools, progress through the grits up to 2000 grit if you can find it. At 2000 grit, the back of your tool will be a mirror, and if you've stayed true to your reference surface, it will be just as flat. This is a good time to interject a reminder: we're after two flat, polished surfaces. Flat but not polished is better than polished but not flat. There are a lot of ways you can polish a tool without flattening it. A buffing wheel with Tripoli and rouge polishing compounds is a good example; so is the leather stropping wheel on a Tormek. Either of these will give you a mirror polish, but neither will improve the tool's performance alone. I still use a Tormek occasionally, but the stropping wheel is only used to buff carving tools.

If you're using stones to obtain the polish, work through the grits you own. My shop setup consists of 800, 1200, 4000 and 8000 grit synthetic Japanese water stones. Because these stones are fairly soft, they need to be flattened, which I described in Part II or this series. If you're doing a lot of work with the stones during a flattening session, you may need to flatten the stones more than once. To maximize the time between flattening, use the entire surface of both faces of the stone. The idea of changing the angle at which you move the steel across the stone is the same. Because the jump between grits is larger, you will spend more time on each stone relative to the time you spend on each paper grit. So the downside of flattening with water stones is flattening the stones themselves - and the additional time you'll spend on each. The up-side is that one good set of water stones will last you a lifetime. Silicon carbide is marginally faster, but needs constant replacement.

To summarize: flatten until you can see yourself in the back of the tool. No errant scratches. Stay true to the flat reference surface you use; don't rock the tool, keep the steel absolutely flat on the abrasive.

If you've followed these steps, your tool has one flat, polished surface. You have one more to go - but you're way more than half-way to a keen edge.

Next Time: Grinding the Bevel, and the Straight Scoop on Angles

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