

# OREGON WOOD WORKS

## THE PRESIDENT SPEAKS

ARIEL ENRIQUEZ, PRESIDENT

**W**e all know what “driveway moments” are, right? It’s the occasion when you’re nearing the end of commuting home from work an interesting story coming across the radio grabs your attention and, without thinking twice about it, you make the decision to stay right in your seat until it’s finished, even if your engine is already cooling off because you’re now parked in your own driveway. I had one of those a couple of days ago.

NPR was doing a story about the wringing and gnashing that’s taking place back in Washington, D.C. amongst the good people who want to keep everybody safe; i.e. the Consumer Product Safety Division (CPSD). Now let me say, typically a report emanating from those nervous Nellies isn’t a grabber for me. This one however was regarding a topic near and dear to everyone who works wood for a living. Can you guess what it is? That’s right, table saw safety; specifically the coming rules for manufacturers of those machines.

By now we’ve all heard of the case of

the idiot who, with no training, no fence or guards, managed to remove several fingers from his own hand using a Ryobi table saw. Some ridiculous jury awarded said bozo a small fortune because of it. The whole case was quite an eye opener. Now I’m not saying that all injuries are the result of idiots at large, but the vast majority of them are caused by A) inexperience or B) inattention to the task at hand. How this becomes the tool maker’s responsibility is something you’ll need a personal injury lawyer to explain. I can’t explain it.

During the report, the CPSD rep cited a figure of 3,500 table saw accidents costing some form of serious injury every year in this country. Personally, I think 1 injury is too much to accept and everything should be done to stress job safety in our work. That’s the single best preventative to these accidents. Not legislation. So what’s the best safety tool?

The single best safety tool we will ever have is the one we carry between our ears. No one will ever convince me otherwise. Add to that good training, paying

*(Continued on page 5)*



### Inside this Issue:

<i>LM: OMSI Workshop</i>	2
<i>Perpetual Calendar</i>	3
<i>Great Toy Adventure</i>	4
<i>Making Toy Wheels</i>	6
<i>Wheel Sanding Jig</i>	6
<i>Bandsaw Circle Jig</i>	7
<i>Toy Wheels: Finale</i>	8
<i>Jointer Installation Jig</i>	9

**NEXT MEETING — FRIDAY — OCTOBER 21, 2011 7:00 PM**

## PATTERN MAKING

Franklin High School, 5405 SE Woodward Portland, OR

\*\*\* NOTE: This is a Friday evening at Franklin High School \*\*\*

Gary Martin has designed and built patterns for metal castings, tools and equipment for more than 30 years. This includes specialized parts for industry (some up to 25 tons) and working scale model engines for hobbyists. He is also an instructor at PCC and will soon provide seminars and workshops at his shop. Visit [www.martinmodel.com](http://www.martinmodel.com) for details on the model kits and equipment he provides.



Directions: Crossing the Ross Island Bridge eastbound, take SE Powell to 55nd, a left turn lane a couple blocks past the light. North to SE Woodward 1/4 mile to the end. Left on Woodward a block; the shop is on the corner on the right.

Board meeting at 5:30.

# SEPTEMBER MEETING: OMSI WORKSHOP

BOB OSWALD

The OMSI workshop, it's a treat of magnificent proportions. Much more than a "woodshop", it houses capabilities for machining, welding, electrical, transportation packaging, graphics design, you name it. If it's a tool or skill required to build an exhibit, this shop and the people in it can do it.



On entering the door, your first impression is one of *space*. Three story ceilings and acres of room. Three Powermatic table saws greet you, with outfeed

**Cabinet & Wood Shop**

tables capable of handling oversize full sheets of plywood.

Todd Kehoe, our guide and manager of the shop, talked about the specific capabilities of the shop, the exhibition development process, transporting and qualifications to work there. A full tour, and fascinating.



**Machine Shop (Engineering)**

The OMSI shop is one of the largest in the world. They



do all of OMSI's work of course, but they also build exhibits for museums all over the world.

An exhibition is a theme that includes



**Some of many work areas**

many, many exhibits, such as DaVinci a while back and the soon to be released Body World, which, Todd exclaims is a "must see".

An exhibition can take up to five years to develop. It starts with a grant, in OMSI's case typically from the National Science Foundation. The first year can be spent in R&D, research and development. Given the theme and approval from the grantor, the team is assigned a project manager, a full time OMSI employee. The team



researches the subject in great detail, learning all they can find about it. Then the project moves into concept, what kind of displays to build and how to convey the message, another year or so. And then on into manufacturing. They build *everything* at the shop. A little welding, powder coating and printing



**Life of a Dollar, in design**

is farmed out where it involves specialty work better suited to others.

They have a twenty four person paid staff and about twenty five volunteers. Skills include electronics, cabinetry and metal working, and a host of ancillary capabilities that it takes to produce an entire exhibit. Challenges presented to every member of the team include developing an exhibit, trying to find ways to present the idea so that a third-grader will comprehend the message and not bore a senior citizen. How to use color and motion to convey the message. Try not to rely on electrical energy, using it wisely but not excessively, to "stay off the grid" where possible, another message they try to convey.



**Pinball style display**

How to make it durable, manufacturable, transportable, modular, encompassing all the technologies of the shop. Every item must be incredibly durable. An exhibition may live for many years, traveling all over the world. Museums world wide who work together, pretty much follow a three-month cycle, switching to a new theme. So the exhibits must be packed up and transported to another site, perhaps a long ways away. A lot of wear and tear occurs. They often come back to the OMSI workshop for refurbishing, a process that can take several months, before hitting the road again.

A question from the audience, "I imagine you have to design to withstand the rigors of children?". Todd replies, "Never underestimate the destructive power of a 7-year old girl!"

Everything's big scale



**Everything's big scale**



**Crated and ready to go**

## PERPETUAL CALENDAR

LARRY WADE & BOB OSWALD

My wife's grandfather was a carpenter in the 1920s and 30s and he made the perpetual calendar shown in the picture. It was passed down to her brother and it proudly sits in Omaha. I've been intrigued with it over the years, took a bunch of photos and dimensions and tried to reverse engineer it, but have not and will not take it apart. The month setting is a simple wheel moved by hand on a simple base. The interesting part is the day of the month. Each flip of the upper part causes a wooden tile to slip into place and the next consecutive day is displayed. (I think it works in reverse but I can't remember for sure).

I have a bunch of photos and dimensions for this perpetual calendar and someday I hope to try to reconstruct it. I think I figured out how he caused the date wood chips to work, using the appropriate number of thin (1/8") rectangles with a spare 1/8" to give just enough room for the next date chip to fall into place.

He had no power tools and it had to be made with precision. Here he was, a poor Depression-era carpenter eking out a living as an itinerant renter in exchange for fix-me-up labor and picking crops on the side, and he made this.

**Construction Details** From a variety of Larry's photographs, we pieced together the dimensions and construction. You might enjoy building one. If you do I'm going to bet you find that there's as much work making something this small work well and be square as there is in a piece of furniture. It's a good exercise in patience.

All stock is 1/4" except the top of the base

- Box Front/Back 4 1/4 x 2 1/2
- Box sides 4 1/4 x 1 7/8
- Box top/bottom 2 1/2 x 1 7/8
- Box window 1 1/4 x 7/8
- Base front 7 3/4 x 1 3/4
- Base side 3 1/2 x 1 3/4
- Base top 7 1/4 x 3
- Support legs 3 1/2 x 1 1/2 (before scroll)

The window on the bottom facing you has a matching window on the top on the back side, so that when the box rotates one-half turn, the back window is now the new front window.

Miter the box and the base corners. The top of the base is inset into the metered base sides.

You can hand paint the numbers on the slabs. Office



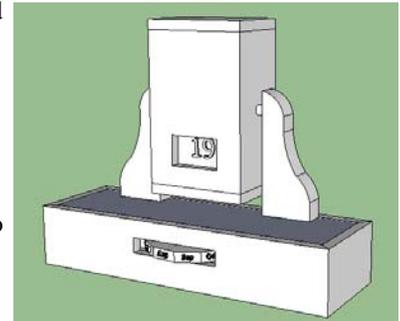
Depot has a product, 3M's 3500-M that you can print on an ink jet printer. Transparent background, looks great.

Numbering sequence is important. One face of all the slabs would be numbered consecutively from 1 to 31, odd numbers only. Then with them arranged

left to right in ascending order, put 2 on the back of 19 and proceed to the right with even numbers. There will be three blank tiles. You can be creative here. Put the phases of the moon, full, half, crescent if you like. Or sun, moon and stars.

Note: The slot in the base is a bit wide in the drawing compared to the real photograph. That slot should be beveled on the inside sides so that the wheel fits close as it protrudes through the front. My model, which I built before realizing it, has a 12 sided disk that does not lend itself as well to the elegant look of Larry's. I didn't have the ambition to make it over having already built a few other parts a number of times to get the proportions right.

Operation is simple. Rotate the top away from you one-half turn. You should hear the next tile click into place.



Modeled in SketchUp

The dimensions of the box and date slabs are quite important. The slabs are light and must fall freely into the empty slot. After you cut the slabs, each one should be carefully sanded to at least 220 grit. All edges must be rounded gently and very smooth. Any fuzz will cause it to hang up.

The imaginative woodworker could modify the base and put another wheel in to denote the day of the week.

Attach the components with screws, box legs and wheels, to make assembly easier. Take care drilling the pivot holes for the box. A slight misalignment shows up graphically.

I love rolling it once a day and hearing "click".



Bob's completed model

# THE GREAT TOY ADVENTURE

ARIEL ENRUQUEZ

The guild is about learning for its members. And it's also about promoting woodworking, about community service, about being that positive influence an organization like ours should be.

We need, want and implore you to help make 2011 the most significant year the Guild has ever experienced. How? Simple, go to your workshop and build a couple of simple wooden toys to donate.

The Guild has committed to the Sunshine Division of the Portland Police Department, to deliver wooden toys for their Christmas distribution program. A dozen or so Guild early birds met with Ariel at his house last week, and talked about the project. And a dozen or so of us are committed. Between us, we think we can build a couple hundred toys. At least that's the bar that Ariel set. Very achievable,

But, but, but, the power of numbers keeps surfacing. With an organization as large as the Guild of Oregon Woodworkers, if everyone helped just a little, the end result this year could be tear-jerkingly overwhelming.

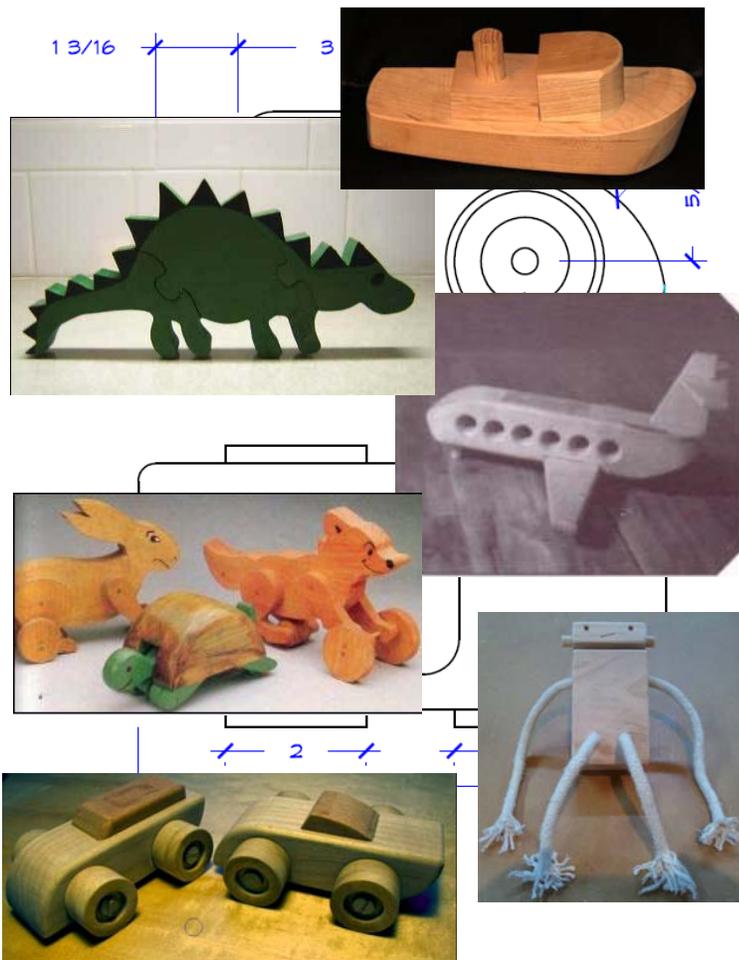
So this is a challenge of tsunami proportions—if every member built five toys, we'd have well over a thousand. I'll leave it at that. Please won't you join the Guild, *your* guild, and make an incredible statement this year?

The Rules are pretty simple: no small parts or grain directions for pieces that could break off and be a choking hazard. Any wheels would not use axle pegs, but be glued to an axle that protrudes all the way through the model. You'll notice in the samples shown, a lot of toys that are very safe, made of large, simple shapes. And finish is simple, NONE, although converstaions with the Portland folks say that mineral oil si ok. Wood types - stick to Oak, Cherry and Maple and it couldn't be safer.

Here are a few examples from the early committee of folks who responded to Ariel's call for volunteers.

Work in your own shop, work at your own pace, just be done by 11/1.

Bring the toys to a meeting or call and we'll arrange pickup.



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## NEW MEMBERS

BOB OSWALD

A welcome to the Guild to Tracie Mahon, Cain Christen, William Moss and Ken Wong.

We're happy to have you with us. Be sure to say hello at meeting. We like to know who you are.

## PRESIDENT (CON'T)

attention, coupled with daily diligence in best practices, well maintained equipment and a management that cares about their people first; those are the critical elements for a safe job site. Not some edict from a bureaucrat. Where I work those guidelines are like a credo to us and it works. Where I work, we're currently beyond 5 years since our last time-loss accident. It works!

Keep your fingers out there!

## GUILD ON THE INTERNET

BOARD OF DIRECTORS

A video was recently discovered on a social internet site about a woodworking teaching situation. The Guild's name was prominently displayed, implying of course that this was sanctioned by the Guild. It was in fact not approved by the Guild. The situation was reviewed in a recent Board meeting, is being dealt with, and we are sure will be handled just fine. However, it reminds us about responsibilities using other people's or company's names without permission.

Please Note: It is not allowed to use the name of the Guild of Oregon Woodworkers, it's officers and board members, or any member where the Guild's name is used, to publish information in any form on the internet or any other publication without the written permission

## Introduction to Sculptural Woodworking

With Andy Chidwick

Nov. 9 & 10, Wed/Thu-5:30-9:00pm

Sherwood High School

\$145.00 members only (includes dinner and materials)

A great opportunity to learn the specialized art of sculptural woodworking in this intensive workshop offered by sculptural woodworker Andy Chidwick of Chidwick School of Fine Woodworking. In this hands-on class you will gain a greater understanding of this unique art form and will learn practical skills that you can apply to any future woodworking project. You will learn many of Andy's techniques such as: freeform routing, power grinding, convex shaping, concave shaping, profiling, throwing a line, sand shaping, cold lamination, precision joinery, etc.



Contact Dennis at damd@xprrt.net to sign up.

## Classes

### Measuring, Marking and Layout with Jeff Zens

Date: Saturday October 1st 9:00 am to 1:00pm

Location: Franklin High School

Cost: \$25.00 (\$35.00 non-members)

Accurate layout is critical to strong, attractive joinery. Learn a number of easy-to-use techniques to make your layout more accurate, and help you to create gap-free, long lasting joints. Learn a set of layout tools that will add to your precision. Contact Chip Webster - 503.780.8812, jdwebster3@comcast.net to register.

### Build a Necklace Box with Bill Bolstad

Date: Saturday & Sunday October 22nd & 23rd from 9am to 4pm

Location: Bill's Shop in Talbot OR

Cost: \$150.00 (includes \$50.00 of materials)

Bill has built over 100,000 boxes as a professional woodworker. This box (similar to #110 on his website Bolstadboxes.com) is vertical on a stand, and opens like a refrigerator. It holds necklaces, earrings and chains size approx. 7 X 7 X 18". The box will be ready for final sanding and finish at the end of the class. This class is suitable for beginning Woodworkers. Contact Gig Lewis at: giglinda@comcast.net (503) 646-7056

### Make a Wall Cabinet with Dennis Rodriguez

Date: Saturday & Sunday October 29 & 30

Location: Franklin High School

Cost: \$150.00 for members. (includes \$50.00 of materials)

Build a 10x13x24" alder cabinet carcass with a frame and panel hinged door and a French cleat hanger. Optionally, build a small drawer for the cabinet. This could be a great addition to your shop or a great Christmas gift.

Intermediate level students should be comfortable using the table saw, router table, plate joiner and drill press.

You may need: chisels, bench plane, block plane, sanding block, tape measure, small square, pencil, ear plugs, safety glasses. Contact: Ed Ferguson at edbikes@comcast.net or

## GUILD OFFICERS FOR 2012

ARIEL ENRIQUEZ

### The election is coming! The election is coming!

It's hard to believe but October's nearly here already. For the Guild this means one very important piece of business. As required by our bylaws, the nominations for officers seeking election for the following year must be announced at the general meeting in October. Elections are then held at the November meeting.

I encourage all of you to attend October's meeting and have your voices heard. When we all share the load, the progress gets a whole lot better.

# MAKING TOY WHEELS

BOB OSWALD

With the toy building project and season upon us, wheels comes up in a number of projects. There are a variety of solutions from the simple to the extended options. Buying them, of course, is the easiest option and an inexpensive source is BearWood.com.

Simple wheels can be made in a few different ways. An easy option uses a hole saw, which does a pretty reasonable job. Be sure to cut at a slow speed. You will already have the axle hole. Note that hole saws are dimensioned for their OD. You'll need to clean up the outside on a sander. Also a plug cutter (Lee Valley Tools) cuts a beautiful disk but you have to get an axle hole drilled in the center.

But assuming you'd like to build your own, or at least know how to, the articles that follow lead you through a more sophisticated process that will produce nice wheels. The jigs shown here work better for larger wheels, 3-inch diameter or so. And of course they work equally well on any

larger disk.

The method I prefer is :

1. Cut 3 1/2" square blanks with the table saw
2. Drill a hole about half way through for the hub with a Forstner bit.
3. Drill a 1/4" diameter axle hole through the Forstner pilot
4. Cut these blanks round with a bandsaw jig
5. Sand the outsides true and clean with a sander jig
6. Add hub and tread detail with a wood lathe. You can produce commercial quality wheels with little extra effort on the lathe.



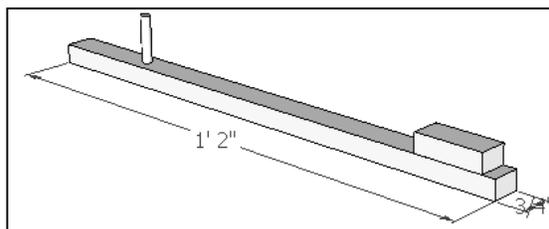
It's a bit of work, but once you get rolling (pun intended) it's surprising how quickly time goes by. The jigs are not difficult to make and will serve you well for a long time.

# WHEEL SANDING JIG

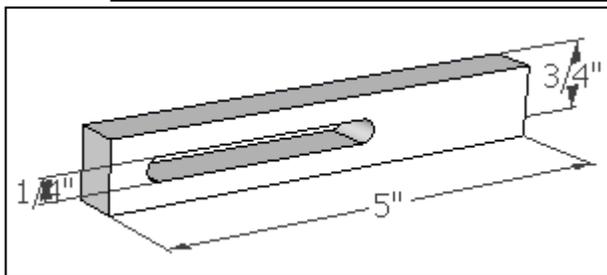
BOB OSWALD

Truing up wheels cut on the bandsaw could be done on the lathe or a sanding disk. Using a lathe requires the skill to make each wheel be the same diameter. A simple jig on a sanding disk can assure that repeatability in making the wheel smooth, round and a consistent diameter.

The jig has three components; a miter bar with pivot dowel, the



**Wooden Miter Bar: ~14x3/4" with 1/4" dowel**



**Sliding Stop Block: 1/4" slot for bolt**

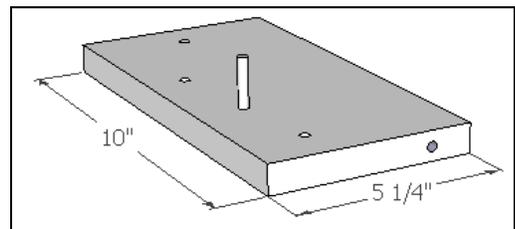
base with axle and threaded side hole, and the sliding stop with thumb screw.

The jig is designed to allow you to swing the base back from the sanding disk and place an un-sanded wheel on the 'axle'. Then rotate the base until the wheel touches the sanding disk. At this point, lock the stop screw in place at that

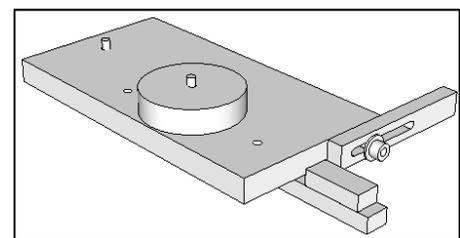
depth or a little deeper.

Multiple axle holes in the base allow for different size wheels. The axle needs to be positioned so the wheel hangs over the edge about 1/4".

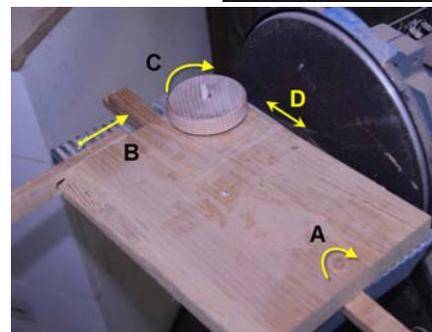
In the photo, pivot the base on A until the wheel contacts the disk. Rotate the wheel C. Move the base



**Base: ~5 1/4x10" with 1/4" holes**



**Assembled jig with wheel in place**



left and right (D) to keep from overheating any one area of the disk.

Continue to rotate the wheel, slowly pushing the base into the disk, until the stop (B) is firmly closed and the wheel is round.

# BANDSAW CIRCLE JIG

BOB OSWALD

A circle jig for the bandsaw is pretty basic, a pivot point some distance from the blade. But the requirements for good operation are important. Step one in making it useful is to make the location of that point adjustable, so you can do different diameters. This jig can go to an 18" radius. That's a huge disk. To use it does require the support of an out-feed roller.

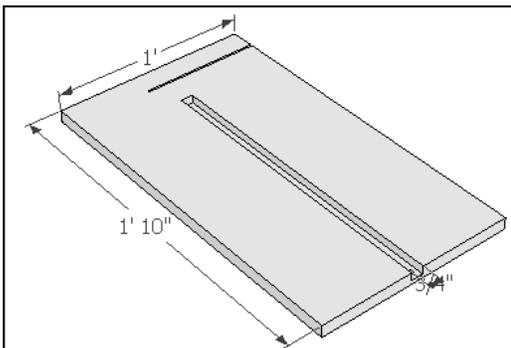
But the real key to making this jig top notch is the ability to position the pivot front-to-back to compensate for the blade drift angle. Without this ability, the disk/wheel will never be round. The blade will either creep into the wheel or out from the center. In either case the disk will not be a smooth circle and will require excessive work to make it round. And it will be smaller than the starting diameter.

Properly tuned, you can spin a 3/4" oak blank almost as fast as you can turn it and get perfect closure at the end of the cut.

This jig has three components.

## The Base

A scrap of 3/4" plywood or melamine MDF makes a stable base. It needs a groove cut into the top side as shown to mount a piece of T-track, flush with the top surface. The T-track will slide in that groove.

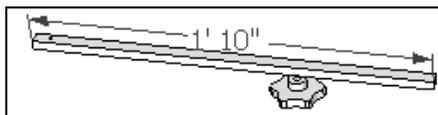


Base with T-track groove & knob hole

## The Sliding Pin Bar

A piece of T-track with a T-bolt and knob. A hole drilled in the middle of the base groove, near the outside edge, allows the T-bolt to be inserted from the top.

The pin should be changeable for different situations. The ideal is a 6-32 screw hole near the blade end, threaded. One pivot would be a screw sharpened to a point and threaded up from the bottom. Another is a 1/4" dowel (or any diameter), with a 6-32 screw threaded into one end so it can be screwed into the bar from the top side.

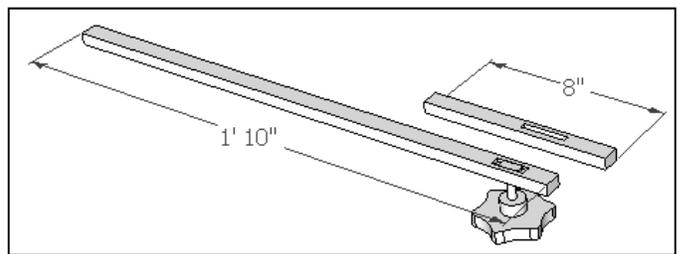


Radius setting T-track

## The Miter Bar & Stop

This bar is standard miter stock, made of wood. The sliding stop block is the key element. A slot in the block allows the stop block to be positioned front to back. When you put a wheel, typically square, on the pivot point, the base must be slid away from the blade, towards you, to allow the blade to enter the far edge of the wheel. While holding the disk, you push the base forward into the blade until the stop bumps against the bandsaw fence rail.

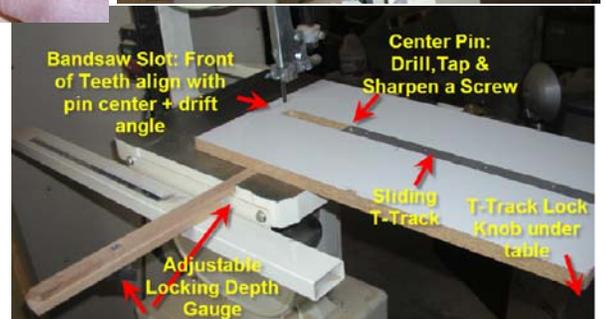
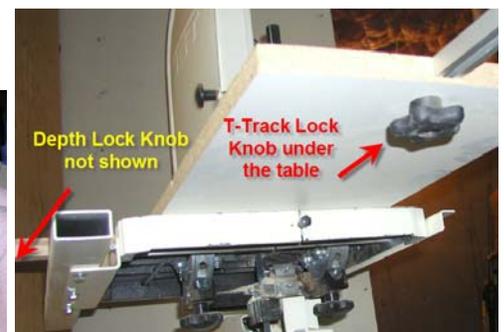
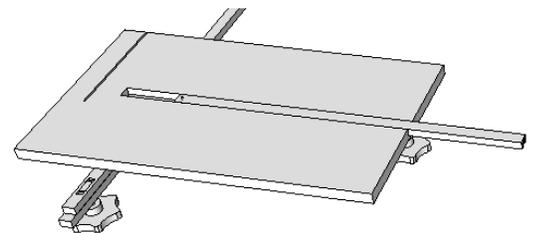
Adjusting the position front to back where the stop con-



Miter bar and sliding stop bar with locking knob

tacts the fence rail allows you to tune the jig for that blade's drift angle. If the blade creeps toward the center, the jig must go a little deeper into the blade. The pivot point is too far forward.

On a project where a 24" diameter disk was cut too large, this jig trimmed off a very thin 1/32"



## TOY WHEELS: THE FINALE

BOB OSWALD

The lathe is the final stop in making a wheel look quite professional. Mounted on the lathe, each wheel can easily have tread, a hub, and a tire rim added. It's very fast at this point as the wheel is already round and smooth.

There are probably several ways to mount the wheel and several tools to do the shaping, but in simple terms, here are a few approaches.

Note: In the following photos, a completed commercial wheel was used to illustrate the process. Also, this is far from a treatise on turning. For correct technique and many other tips on turning, you should read the books and/or join a Portland area group with more skills. The Cascade Woodturners and the Pacific Northwest Woodturning Guild are a couple of resources, as well as people in the Guild of Oregon Woodworkers.

### Round tire edges and treads

Rounding the edges, a "simple" matter of softening the sharp edge with one of many different lathe tools.

The treads are easily formed with the "V" point of a parting tool. I used to measure and mark three treads. Time and improved technique allows me to simply "eyeball" them. Cut the center tread first, and then cut one on each side. Do this after you round over the edges as the visual positioning of the outer treads changes.

### Hub and rim

The wheel will have to be held in a chuck. Commercial chucks are somewhat expensive, but well worth the investment. There are also home made chucks that will work. Look for data on "jam" chucks.

The hub is best made by drilling with a Forstner bit before turning on the bandsaw jig. If you choose to do it at the lathe, a Forstner bit in a Jacob's Chuck on your tail stock also makes quick work of it.

The rim is a little "bead" at the edge of the hub. A real wheel is round on the side. It's narrow at the tread, swells outward from air pressure, and then turns back in at the hub. Take a look at a commercial one for ideas. This little detail makes the tire really come to life.

### The invisible back side

I leave the back side flat and plain. The ambitious person, or if you're building to scale, would turn hub detail on the back side too.

### Between centers

A lot of turning is done with a spur drive on the headstock and a live center on the tailstock. Centering the wheel on the points can be a little demanding with



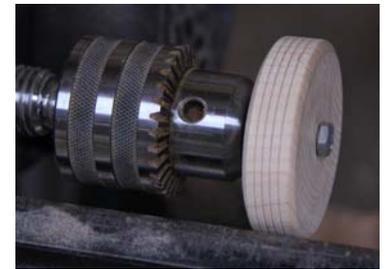
an already existing 1/4" axle hole. A solution here is to insert a 1/4" dowel in the hole that's flush with both faces of the wheel. You will want to drill a small pilot hole in each end of the dowel to facilitate centering it on the drives

### 4-Jaw Chuck

A more expensive solution, but in the long run every lathe should have a good chuck. You'll find that there are different, interchangeable jaws to accommodate different diameters. The chuck has a limited adjustment range, and this range is accommodated in steps by changing jaws. They all come with a "typical" size and you buy additional jaws to accommodate your needs. Some jaws are reversible, so they can turn either a small or a large diameter by reconfiguring the chuck.

### Jacob's Chuck and Shaft

Lacking the more expensive 4-jaw chuck, part of the wheel detail, the treads and round over, can be turned with the wheel mounted on a bolt and held in a Jacob's chuck. A nut is secured on the chuck side to hold the wheel on the bolt.



If you bored the hub before cutting the wheels out on the bandsaw, you can easily turn the bead and tire edge detail.



I've made hundreds of 3" wheels using the jigs and methods here. It looks daunting at first, to build, for example, five 18-wheeler trucks. But you get in a groove, and you do improve your skills. And it feels so good when you're finished.

## A PLACE TO DISPLAY

GARY LARKINS

Here is a question that might be of interest to the general membership. Does anyone know of a gallery in the Portland Metro area that will sell our woodworking projects? I am looking for a gallery, other than The Real Mother Goose, as I don't have the capacity to make enough units to satisfy their requirements. I mostly make one-off builds. I used to belong to a co-op up in Port Townsend Washington and enjoyed the experience of meeting the public and on occasion selling something I had built.

Contact Bob Oswald, please, and we can develop a bit of a list of opportunities for our general members. Next issue.

## JOINTER INSTALLATION JIG

LARRY WADE

I restored a 1950's small 4" jointer. Installing the blades started with a jig using ceramic magnets, from a *Fine Woodworking* article. That method ultimately did not work for me. So the usual dial indicator method with a little modification to make it easier to ride the top of the blade worked. It's a time consuming process, but it works.

I like restoring old machines, wanted a bigger jointer, ended up with a 1948 aluminum bed, 6" jointer, and restored it. It was built in Portland (Palmer Weeks brand), probably originally sold by Barbo but aluminum never caught on and they didn't make many.

The head and blades are steel but, since the bed is aluminum, the magnetic base for my dial indicator didn't work. Another way to set the blades was necessary.



Glass plate with glued magnets

Building off the FWW article with ceramic magnets, this idea came to mind. Use plate glass with powerful neodymium magnets (Ace Hardware). I had the glass cut to the width of the jointer bed and used CA glue to attach two of the magnets near the edge.



Blades 'stuck' to magnets

Wanting as much holding power as possible, each magnet shown in the photo is actually a stack of three. The first one is glued to the glass. The next two just stick to each other.

With the blade loose in the slot, the plate glass is slid over the blade and the magnets pull the blade up onto the bottom of the glass and hold it there. The magnets are a VERY POWERFUL set of extra hands and they solve one of the biggest

problems with the dial gauge method, holding the blades in place.

Use two squeeze clamps to hold the glass plate in a stable position. There are a few other standard steps, finding top dead center, making a mark on the bed to align the blade to, and using a wood wedge to hold the cutter head in place while the bolts are tightened.

It worked very well, and it works for steel jointers too.

## MORE SUMMER PROJECTS

GARY LARKINS

Speaking of summer projects, here are a couple of photographs of Adirondack chairs and their foot stools that I built at the beginning of summer along with a post and panel chest project that I have been working on and off all summer.



## For Sale

Trend Airshield Air Circulating Face Shield, retails for \$320; PLUS, 3-pack of air filters, retail \$22; PLUS, 1 pack Clear Visor Overlay retail \$30; PLUS Extra Battery, retail \$35. Will sell all for \$200, less than half price. Contact Gig at [giginda@comcast.net](mailto:giginda@comcast.net)

Pagenwood Restoring, located in Multnomah Village, is moving to a new home shop. They are liquidating all their antique and collectible inventory, including lots of old woodworking tools (including many planes). The sale lasts until everything is gone, with descending prices...until the end of the year.

Located at 7783 SW Capitol Hwy., Portland, OR. 97291, (corner of S.W Capitol Hwy & 35th).

Hours... 9 to 5, Tues.- Sat. Phone #503-246-6777.

## 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](http://www.GuildOfOregonWoodworkers.com).

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

*The Guild of Oregon Woodworkers is a group of professional and amateur woodworkers like you, committed to developing our craftsmanship and woodworking business skills. The Guild offers many benefits for members, including:*

- *monthly educational meetings*
- *monthly newsletter*
- *mentoring program to help members develop their skills in specific areas*
- *discounts*
- *woodworking shows*
- *network of business partners (the key to our development as members and as a Guild, providing additional learning opportunities)*
- *and a network of support.*

## GUILD OF OREGON WOODWORKERS

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**Northwest Woodworking Studio** 503-284-1644, [www.northwestwoodworking.com](http://www.northwestwoodworking.com)

**Rockler Woodworking** 503-672-7266, [www.rockler.com](http://www.rockler.com)

**Oregon College of Art and Craft** 503-297-5544, [www.ocac.edu](http://www.ocac.edu)

**Woodcraft** 503-684-1428, [www.woodcraft.com](http://www.woodcraft.com)

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