



Waterwheel Project



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If you think this project is too hard for you but would still like to have a nice looking waterwheel. Check out the beautifully crafted waterwheels at www.ironhorsecitymax.com.

Spencer would be happy to custom make one just for you. His unique style of waterwheel really sets his apart.



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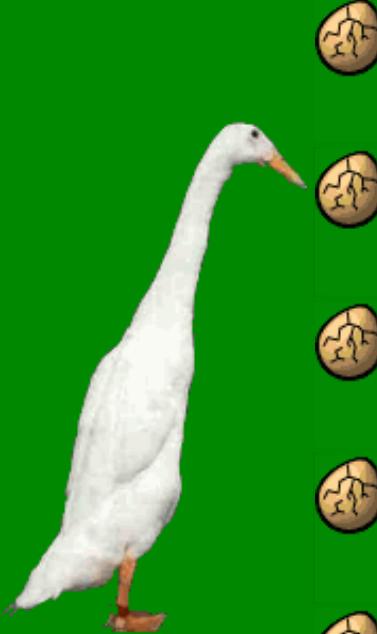
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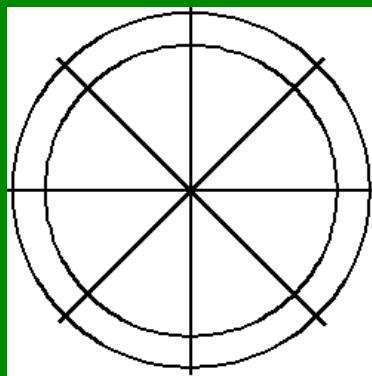


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STEP 1

We will start out by cutting the side pieces. I call these pieces "segments". I am making them out of clear 1" x 8" cedar.

First the Layout:



The first thing you need to decide is how big you want to make the wheel, mine is 5' 6" in diameter and is made up of eight segments. I knew that the segments would be 7 1/2" high because I wanted to use 1"x 8" cedar. I used the computer to lay it out and printed a full size pattern of one of the segments.



The layout and cutting of these segments is VERY critical. Any variation in the angles will really show up when you try to mate them.

NOTE: Cut enough segments for BOTH sides of the waterwheel.



Cut the angles first. I can't say it enough that you need to be very accurate with the angles of these cuts.



I used the paper template I made from my computer layout to draw the radius on top of each segment. Next you'll cut the to radius. You can use a band saw,saber saw or cut them by hand.



Once all the pieces are cut, lay them out and make sure that they fit well together and there are no large gaps between segments. If there is a gap you can go back and re-cut them but make very tiny adjustments.

STEP 2

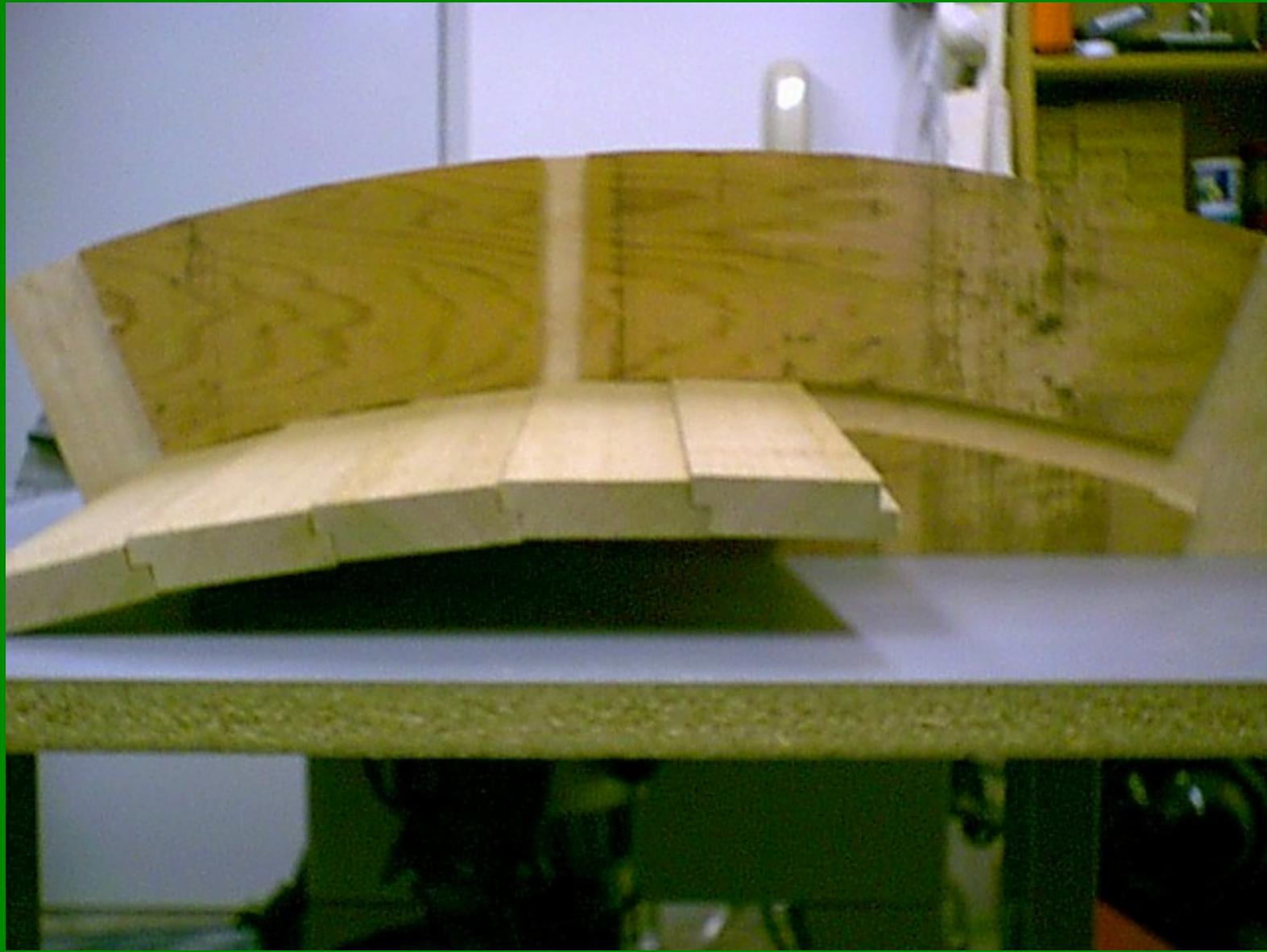
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STEP 2

We now need to route and dado some slots for the bottom of the waterwheel. The bottom will be made out of 1" cedar also so the slots will need to be a little bigger than 3/4".

The waterwheel bottom is put together like a wine barrel so you need to cut slots for the boards to go into. Here is what I'm talking about.



You want to set up the router with a fence so that you can follow the curve of the segment. Set the router to 1/4" depth using a straight cutter. Set the fence so that the notch will come close to the bottom of the segment on the end. I had to reset the fence and make a second pass because my router blade was only a half inch. The slot needs to be a little bigger than the thickness of the boards so they will fit on a curve.

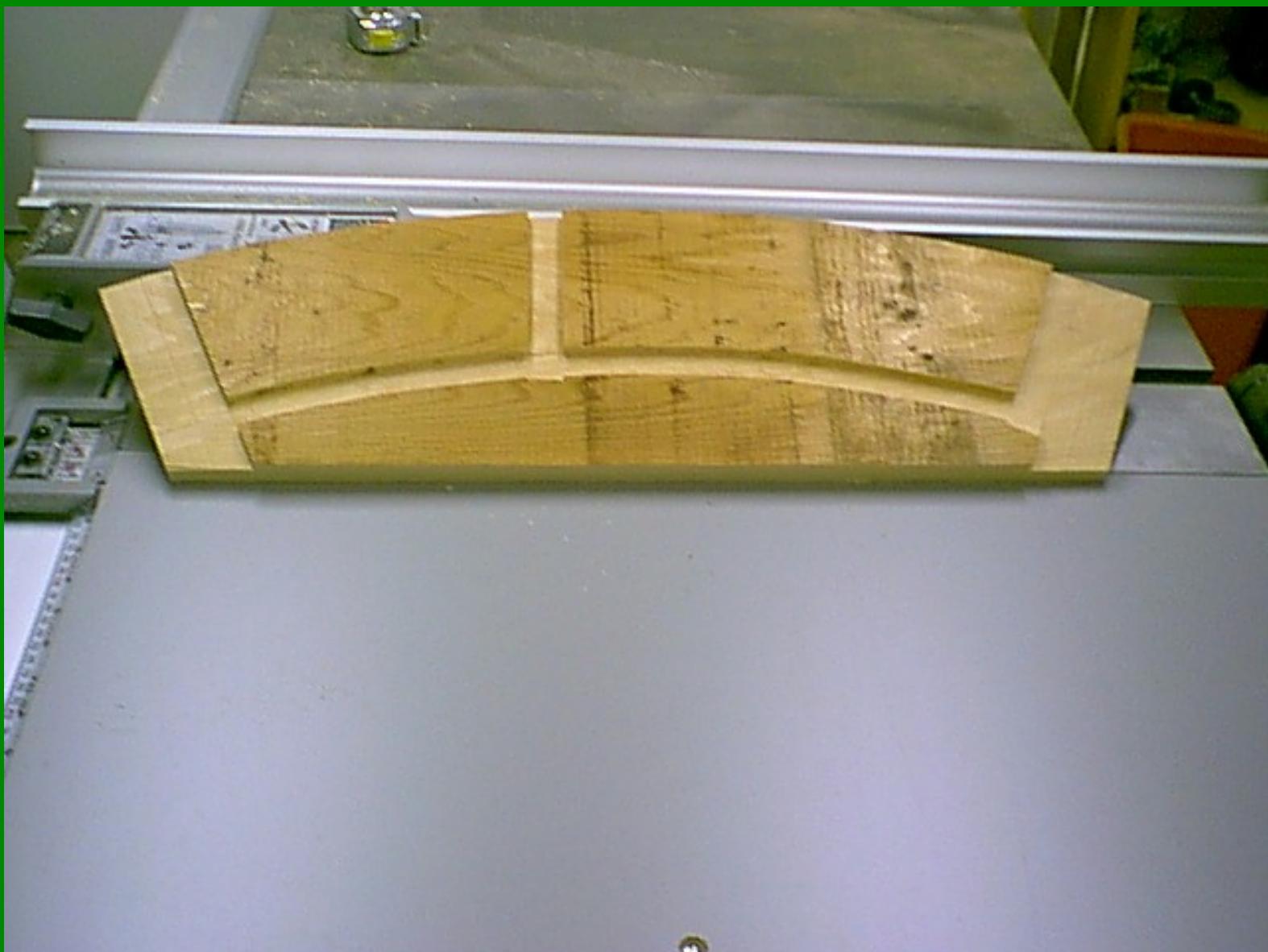


Once you've cut the slot you need to dado the notches where the 2x4 spokes and the 3/4" paddles will go. The spokes will fit half on one segment and half on the other so you will dado a 1 3/4" slot, 1/4" deep, completely across the segment.



Next you will dado the paddle slots. These need to be 3/4" wide, 1/4" deep and cut only through the routed slot, not all the way through the segment. These paddle slots should be spaced evenly with one paddle butted up against a spoke and the other halfway in between. I kept the same angle for the paddles all the way around so they matched the spokes.

Here is a side view of the finished part. I realize they are a little complicated but they are the key to the whole project.



STEP 3

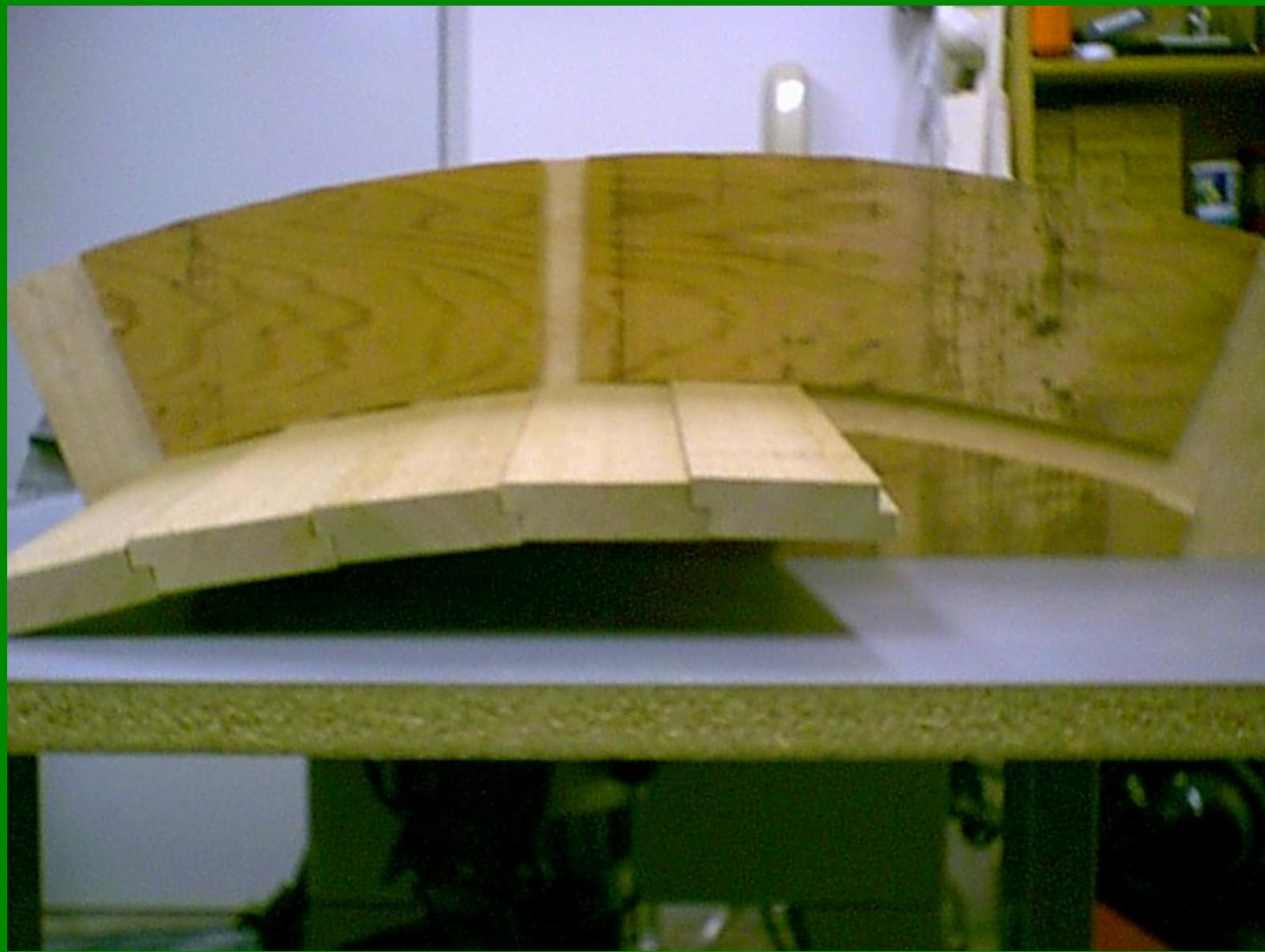
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STEP 3

The Bottom Boards:

The waterwheel bottom is put together like a wine barrel so you need to cut those boards. You will also dado the edges so that they will mesh with one another. Here is what I'm talking about.



We are going to cut out the bottom boards that are really simple. I want to make my 5 1/2 foot diameter waterwheel about 12 inches wide so I cut them 11 inches long and 2 3/4 inches wide.

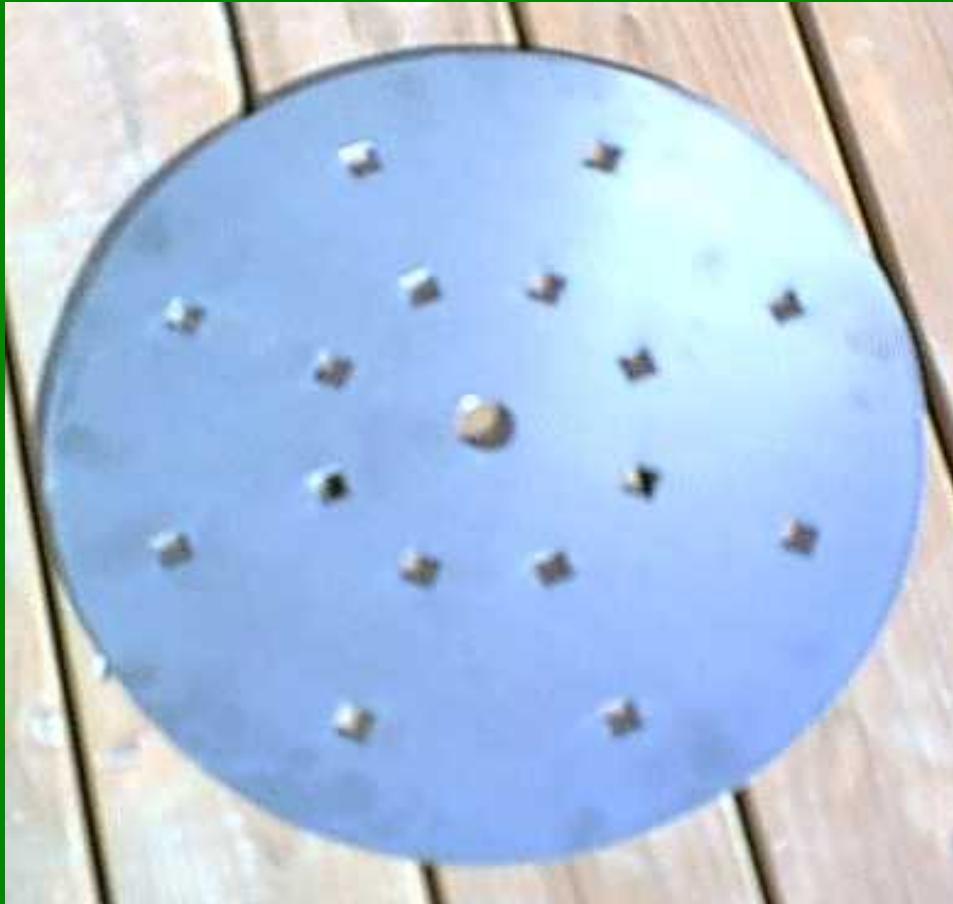
I set up my dado to cut half the thickness of the board and wide enough to cut a 1/4 in notch along the edge. You can see in the picture how the notch is cut on opposite sides of the board so that they will interlace with one

another.

That's all there is to it now just repeat it another 72 times. It took 73 pieces to go around my waterwheel.

Now would be a good time to place an order for the steel center hub. My hub is made out of 1/8 inch CRS. I had it fabricated by our friends at Rusty Cat Creations in Seattle, rcreate@aol.com. They did a really nice job on this and they do really nice metal yard sculptures. He used an NC plasma jet cutter and did a very accurate job. You should be able to find someone in your area to do the same.

My center hub is 18 inches in diameter. The center hole is 1 inch to accommodate the 1 inch steel rod the whole thing will ride on. I had the boltholes cut square for 1/2 inch carriage bolts. The hole pattern is at the same angles as the segments. The outer holes are 1 inch in from the outside edge and three inches apart. Here's what the finished plate looks like.



The hardware required for the hub is 32 each:

- 1/2"-13 X 2 1/2" Zinc Carriage Bolt
- 1/2" Zinc Lock Washer
- 1/2" X 2" O.D. Zinc Fender Washer
- 1/2"-13 Zinc Hex Full Nut

I also picked up enough 1/4" threaded rod to make 16 pieces long enough to hold both wheel halves together. Also 32 each 1/4" nuts, fender washers and lock washers.

That ought to keep you busy for the week, in between shopping, wrapping, gift making, partying and everything else you have to do.

STEP 4

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STEP 4

The Spokes:

I made my spokes out of treated 2x4's but you can make them out of any good, straight 2x4 material. I chose treated lumber to help prevent warping once this whole thing gets out in the weather.

Since the diameter of your waterwheel may be different than mine you need to cut the 2x4's to fit your wheel. I cut mine to XX inches, to fit my 5 1/2 foot diameter, which included about a half inch extra that I will remove later. Cut 16 pieces, 8 per side.

Now you have to figure the angle that the center of the 2x4's will be cut to so that they will fit on the hub. This was a tricky part for me and I ended up cutting them a couple of times to get them just right. Here's a picture of how they will all fit together when complete.



I used the miter on my table saw but that's probably not the safest way to go. If you do, be really careful.



Now drill two bolt holes in each spoke to fit the holes in your hub.



Next we countersink the holes to accommodate the square portion of the bolt that will stick through the hub.



Now that we know exactly where the spokes will mount you need to cut them to length. I made them so that they sat about a 1/4" inside the outer circumference of the wheel.

The final step in making the spokes is to dado a groove for the bottom boards to fit in. I made mine a 1/4" deep.



STEP 5

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STEP 5

Assemble The Spokes:

This is where I discovered that I hadn't cut the points on my spokes just right and had to go back and trim them up a little. I hope you don't have that same problem.

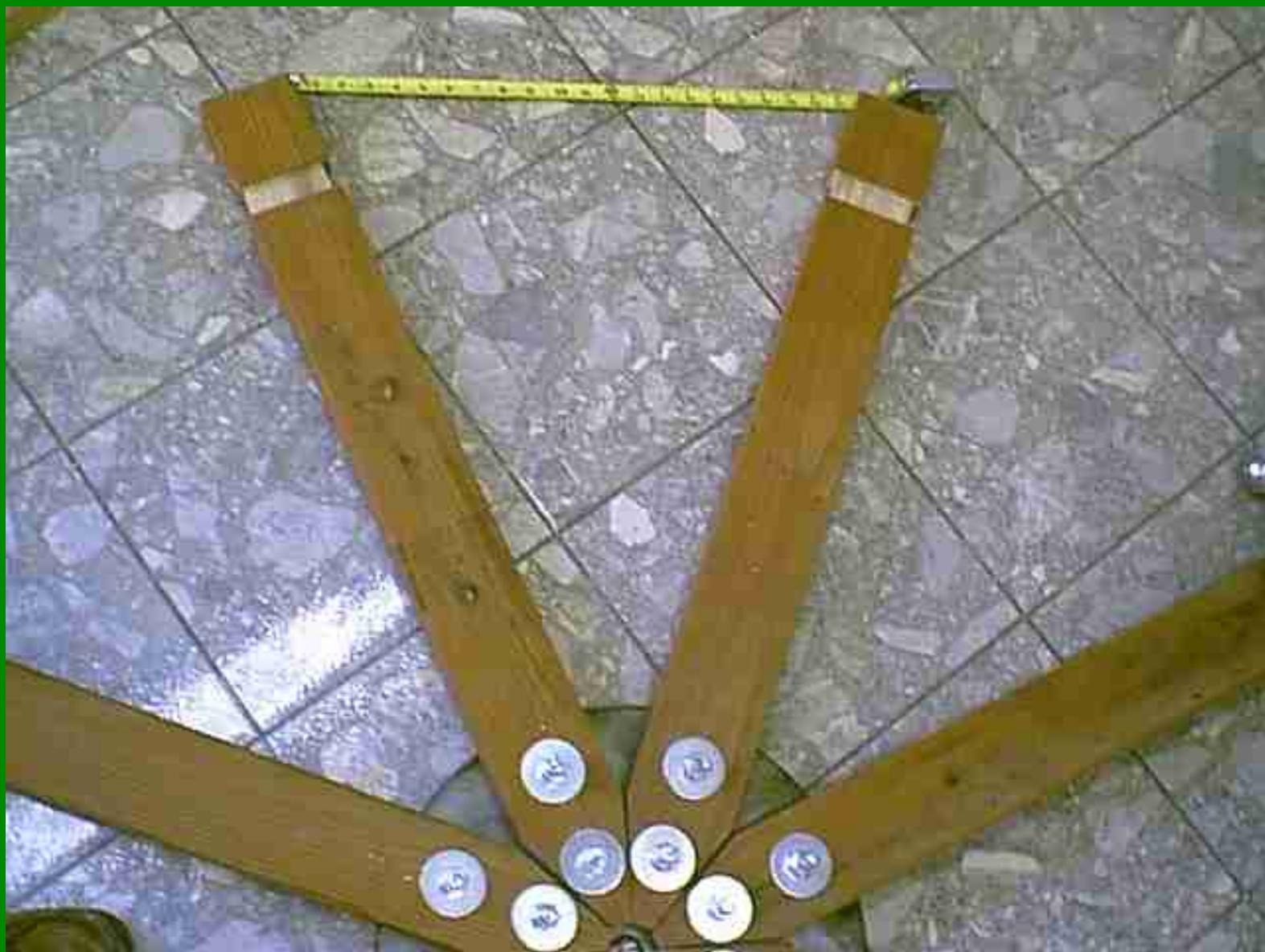
The assembly of the spokes to the hub is relatively simple. You just put the bolts through the hub and 2x4 with the countersink in the 2x4 toward the steel plate. This is so that there is a place for the square shoulder of the carriage bolt to go. I use a large flat washer, split lock washer and nut in each hole.







DO NOT tighten the nuts yet, just make them finger tight. The spokes need to be loose so you can make some fine adjustments. I laid it out flat on the floor and with a tape measure, measured from spoke to spoke to get them as evenly spaced as possible.



Once I had the spokes aligned exactly I tightened the nuts up a little but not tight yet. Next I laid out my side pieces to check the final fit. I had to tap a couple spokes with a hammer to move them ever so slightly.

Once I got every piece exactly where I wanted it I torqued the nuts down and then repeated the process for the other side.

STEP 6

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STEP 6

This week Step 6 - Assembling The Sides:

The first thing we need to do is drill some holes for the screws that will hold the sides on.

We are going to drill two holes in each end of each segment. To do this I made a simple paper template to mark each end of each piece. These screws will be going into the spokes so I marked them in the middle of the cutout and evenly spaced.



Drill the holes for the size of screws you'll be using and countersink them so the screws will be flush. I used 2", #6, flathead, exterior screws. Be sure and keep the matching segments together because each side is a mirror image and the segments need to match.

Lay the hub assembly down with the outside up.



Lay the sides in place all around the wheel and get them as even as possible. I had to go around quite a few times to get it just perfect.



Go around and install all the screws. I hope you have a power driver because this could get really old really fast by hand. Now repeat the process for the other side.

STEP 7

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STEP 7

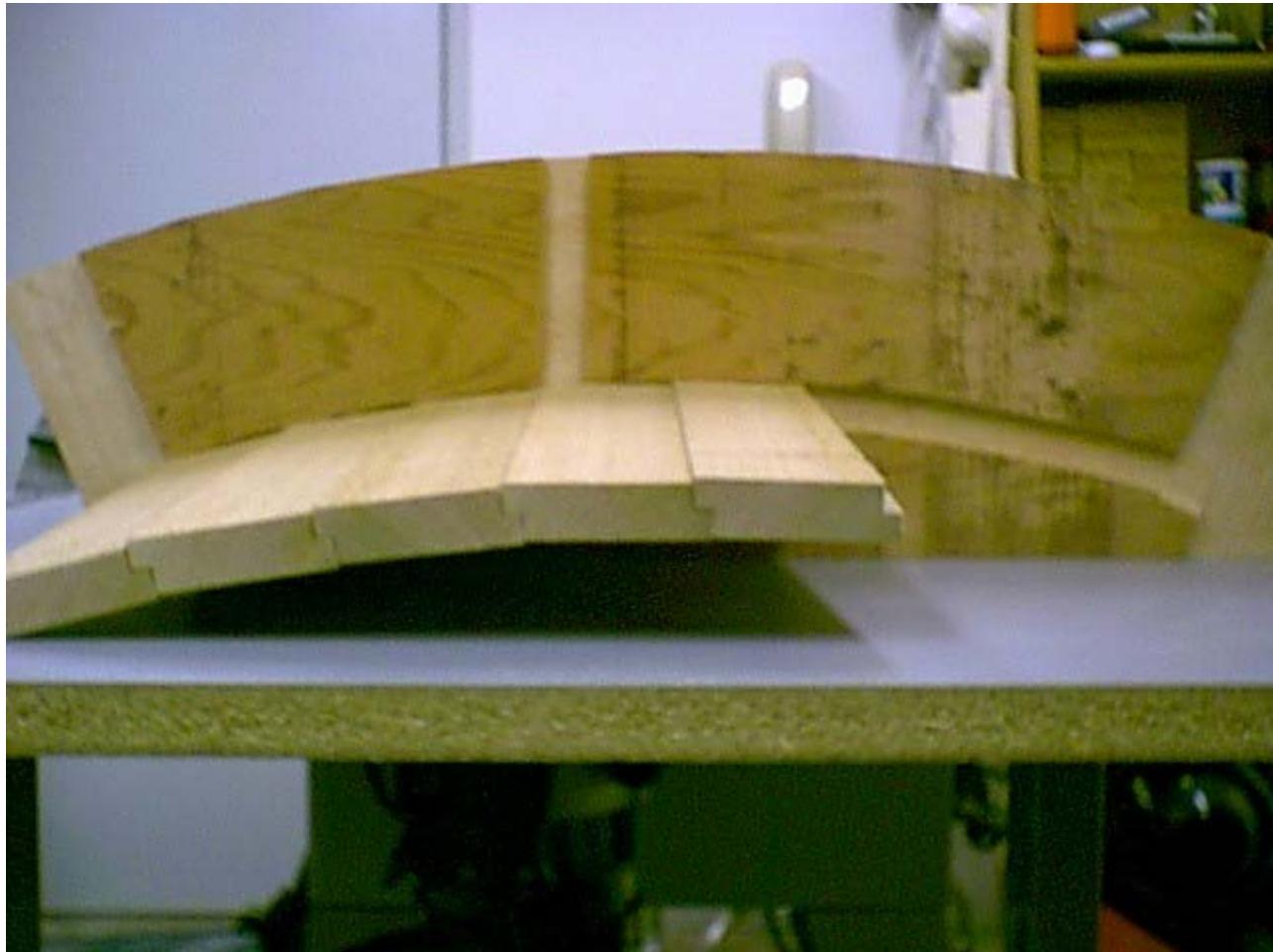
This week Step 7 - Finishing the Bottom Pieces:

This gets to be a little tedious and unfortunately I don't have many pictures of this step so I hope explaining it OK.

Lay one side of the wheel down with the grooves facing up.



Start placing the bottom boards in the slot that goes around the wheel overlapping each one.



As you go around the wheel you will come to the 2x4 spokes. This is where it gets tricky. At each spoke you will need to custom cut each bottom piece to fit around the spoke. You also need to cut the opposite end in a mirror image so when we mount the other wheel side it will fit.

This gets to be pretty tedious but take your time. This is the step that will make it all fit together in the end.

Again I'm sorry I don't have any more pictures of this step but I think you get what I mean. If you don't just drop me a line and I'll help you through it.

Wow, what fun!

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STEP 8

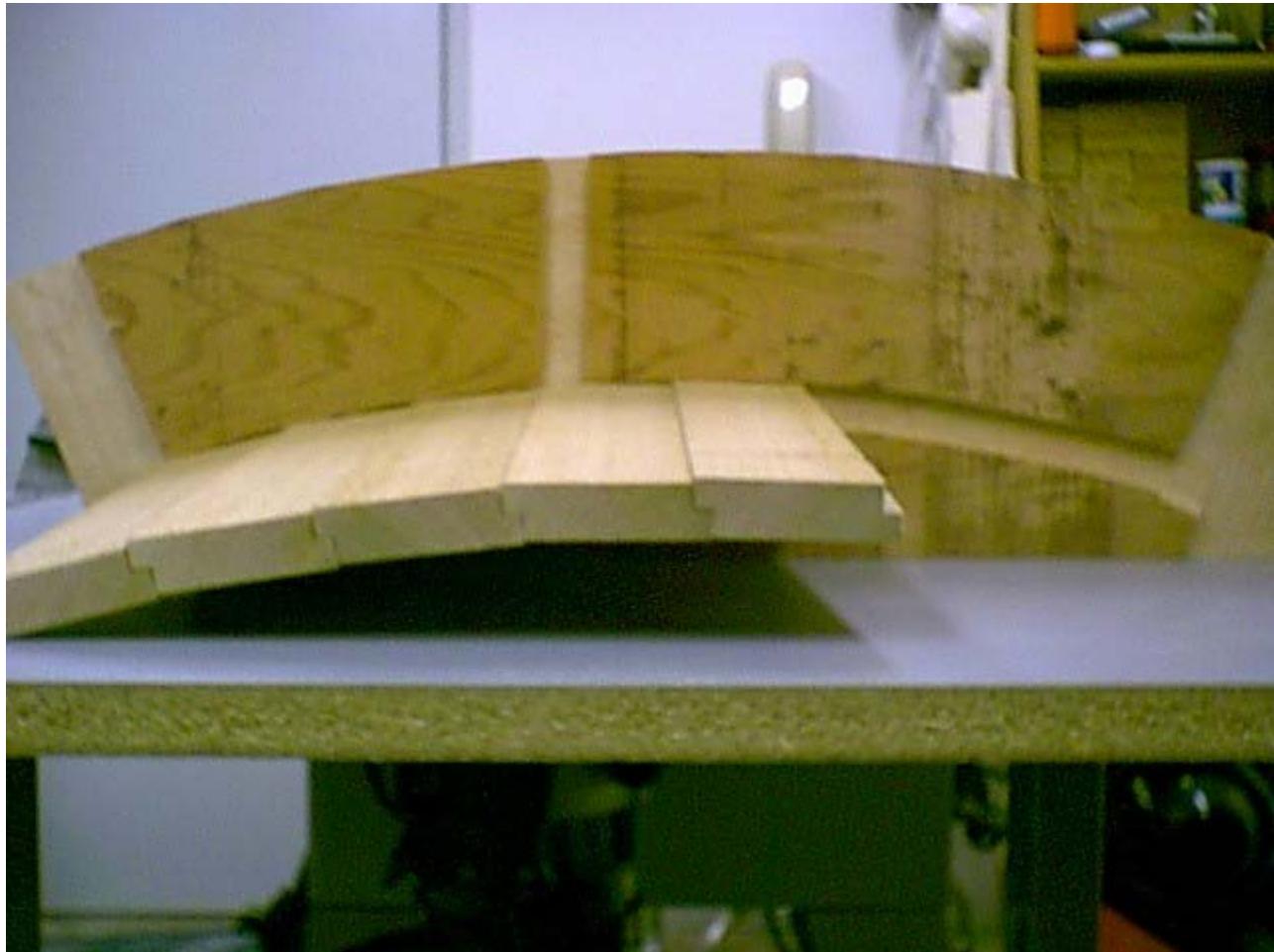
This week Step 8 - Final Assembly:

This is where the whole thing comes together. I was pretty nervous at this point but if everything is cut right it goes together fairly well.

Lay one side of the wheel down with the grooves facing up. Install the 1/4" threaded rods into the spokes with a large flat washer and nut as shown below.



Place the bottom boards in the slot that goes around the wheel overlapping each one. Actually these should be in place from the last step.



Take the opposite side of the wheel and carefully place it onto the threaded rods to help line things up. Start pushing the bottom boards that are sticking up into the slot around the top wheel. Line up the spokes as close as possible by looking through them to the other side.

This gets to be pretty tedious but take your time. I had to go around several times jiggling and shaking things quite a lot.

Once the boards are seated put a large flat washer and nut on the top side and tighten them up a little bit. I waited until I had the wheel standing up to really tighten things down.

Now stand the wheel up and evenly tighten the nuts on the threaded shafts.



You should now have something that is starting to look a lot like a waterwheel. We are getting close to the final steps so hang in there.

STEP 9

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STEP 9

This week Step 9 - Paddles:

In order to make the wheel go around we need to make some cups to catch the water. This is pretty easy by just adding some paddles to the wheel.

Using 1" x (what ever you have) cedar cut rectangular pieces to fit in the grooves that were cut early on in this project. They should be pretty obvious since they are the ones with nothing in them. They should be pretty snug since you don't want the water to go around them.



Put the paddles in the slots and screw them down with two screws from the bottom. When you are all done it should look something like this,



That should complete your waterwheel construction. Next we need to figure how to install it and make it work. If by any chance you have tried to make your own waterwheel I would love to hear from you and see some pictures. If you are working on one and run into trouble or have questions just drop me a line and I'll try to help.

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STEP 10

This week Step 10 - Installation:

All that's left to do is install the wheel, build a little sluice, turn on the water, sit back and enjoy.

Since I'm tying this into my storage shed I will only need one stand. I made mine from a 6X6 landscape timber. I mounted crisscross 2X12's for the base.



I used four really long lag bolts and washers to mount the timber to the base. I added a piece of 2X4 and 2X12 to each end of the base to make it level.



Next I put the base into my pond and made it plumb using rocks and sand.



Next I took the steel shaft mounted one end into a Pillow Bearing, sat it on the support, squared it up and with a level marked the hole location on my shed. I drilled a hole through the shed and mounted a 4X4 between the studs on the inside. Remember to use the pillow bearing on the inside to set the height of the 4X4.



I marked the shaft while I had it in place so I would know where to weld the wheel. I put the shaft through the wheel hub and welded it in place.

Next I built a little ramp to help move the wheel into place and just rolled it up. Put the shaft through the wall and mounted a Pillow Bearing on each end.



I ran lag bolts through both Pillow Bearings and that was that.

Next I built a sluice which was nothing more than a cedar 1X10 with 3" sides. I used silicone sealer to help hold the sides on and keep them from leaking. I made a couple of simple brackets to mount it to the shed.

To power the waterwheel I installed a small water pump in the pond. I mounted a "T" on the pump with a hose out the top and a gate valve off the side. I use the gate valve to control the water flow. I bonded the hose into a hole in the side of the sluice and turned it on.

I've discovered that it really doesn't take much water to turn the wheel around. I have it throttled way down and rotates about right. Here is a finished picture of it in this weeks snow.



If by any chance you have tried to make your own waterwheel I would love to hear from you and see some pictures. If you are working on one and run into trouble or have questions just drop me a line and I'll try to help.

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There are few things as relaxing as the rhythmic sound of splashing water after a hard day. A turning water wheel is not only beautiful to look at but it also provides a gentle motion and sound to relax by, not to mention the admiration of friends and family when they see it in your yard.

We offer our wheels in 2 different styles and grades. The inner spoke wheel is our signature wheel and is only available in the deluxe grade. Made using a unique design the wheel eschews traditional water wheel design instead using only 1 center spoke for each section instead of the traditional 2 spokes for every section. The traditional outer spoked wheel is available in both the deluxe version and now in the basic version for those on a tighter budget.





To the left and below are some of our center spoke deluxe water wheels while above is one of our outer spoke water wheels.

Yes, some of these wheels may cost more than you like but you are getting a custom hand made product at a price lower than any other comparable water wheel that I know of and will last many years.

Spencer Boyd

Check out the beautiful water wheels and stands we make here at Iron Horse Creations and I'm confident that you will agree that we are selling a durable and beautiful product at a fair price.



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RunnerDuck Projects

I try to present these projects in a way that you can build them with little or no direction. But since not everyone writes and reads the same way interpretation can sometimes be difficult.

If you have any questions about any of these projects don't hesitate to drop me a line and I'll be happy to help.

Duck Master

These projects require the use of power tools, hand tools and chemicals. Please use all precautions provided with the manufacturers tools and products. Use common sense and think about what you are about to do before you do it!

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The Waterwheel Project

This project is pretty involved but as you can see from the picture it is very rewarding. This waterwheel is 5 1/2' in diameter and 12" wide. It is only ornamental and does not grind grain or generate any power.

If you think this porject is too hard for you but would still like to have a nice looking waterwheel. Check out the beautifully crafted waterwheels at www.ironhorse.citymax.com

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[Cold Frame Project](#)



Cold frames are a great way to get a start on the spring planting season. This cold frame is very simple to build and should last a long time. It is 2' X 4' and made mostly of cedar. There are some modifications that were made at the end of the project you may want to check out first.

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Raised Beds Project



Raised beds are a great way to garden. They raise the plants up so they are easier to get at and it's easier to control garden pests. These raised beds are very simple to build and are made from 2" X 12" with 4" X 4" corner supports. Part of the project relies on the previous cold frame project so you may have to flip back and forth.

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Greenhouse Project



Build your own greenhouse, it's easy and it's fun. This project took about three weekends to build. I used a lot of the same techniques used in the cold frame above. Mine is attached to another building but you can make a free standing one just as easy. Use these instructions as a guide and you should do just fine.

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Beanpole Project



Spring is here and it's time to plant your garden. If you are growing beans you are going to need a beanpole. This is a really simple project that looks nice and works good.

You can modify these plans very easily to change the width of the base or the height of the pole. Be creative and have fun.

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Landscape Project

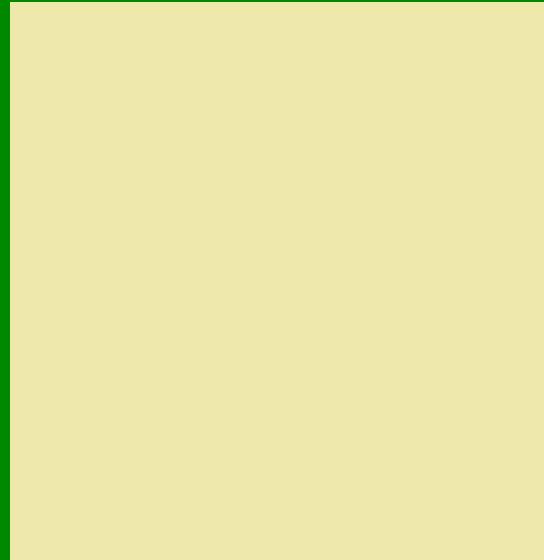


Landscape a new or existing area can be a real challenge. We hope our landscape project gives you a few pointers to help make the job a little easier. We'll share with you not only the "how to" but also our mistakes. This project includes a waterfall, pond, gardens, grass and bridges. We hope you enjoy this very large project.

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Weed Whacker Stand

A weed whacker is one of those tools that is always in the way because they are hard to store. You can't stand them up very well and when you lay them down you always trip over them. This simple little stand is easy to build and solves the storage problem once and for all.



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Zen Garden



Zen Gardens are relaxing, spiritual, interesting and down right fun to play with. This is a very easy project and makes a great gift.

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Extension Cord Holder



We all have extension cords laying around that have bad ends on them. This neat extension cord holder makes great use of these old cords. Extension cords, especially long ones, can be a real mess to string out and coil back up. Also plugs on the ends can become damaged by just yanking on the cord to unplug a tool. This is a good project to untangle those cords and fix the old damaged ones.

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Squirrel Feeder



Winter is upon us and some of the little critters out there need some help. This week we are going to build a squirrel feeder to make the squirrels winter a little easier. I made this project from scrap wood since it's going to just hang outside. This is a great project to help introduce you child to woodworking.

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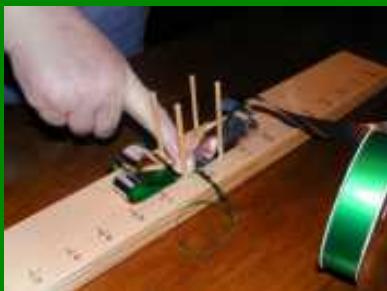
Woodpecker Door Knocker



We are always looking for projects that parents can help their kids make. Not only is it fun but the children can learn a lot of skills. This Woodpecker Door Knocker project is just one of those projects. The skill level is low and the results are really rewarding. They are fun to hang on your house and also very nice as a gift.

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Bow Maker



Making bows can always be a challenge especially keeping them centered and together until you get them tied. We think that this little device will make that task a little easier.

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Wooden Decorative Candles

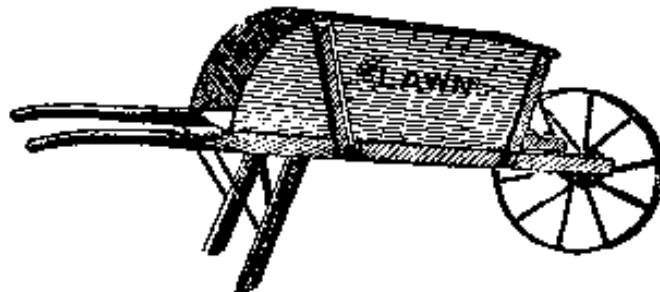


These Decorative Wooden Candles are fun to set around for decorations or for gift giving. They are easy to make and are a fun family project.

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Old Fashion Lawn Wheelbarrow Planter

Lawn Wheelbarrow.



This project will build a Lawn Wheelbarrow Planter fashioned from a 100-year-old design we found in a 1902 Sears and Roebuck catalogue. Here is the 100-year-old ad.

No. 24R9706 This is the handsomest and best lawn wheelbarrow made. They are fitted with steel wheels, 16 inches in diameter. These Wheels are constructed on the latest improved model of the bicycle. Size of front 12 inches by 19 inches; sides 12 inches by 28 inches; bottom 21 inches by 27 inches. Weight, 40 pounds.

Our special price for this wheelbarrow..\$2.35

Good luck buying even the screws for that price!



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Indoor Mailbox



When we have outgoing mail we usually lay it on the hall table which doesn't look very good and sometimes gets lost in the shuffle. To help resolve this problem we came up with a neat little inside mailbox. It's simple, good looking and functional.

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Car Computer Stand



I realize that this project is not for everybody but there maybe some of you wanting to mount your notebook computer in your car. I searched the web for a computer stand for my car and everything I found was over \$150. A lot of them were targeted at police and emergency vehicles and therefore got top dollar. I went to the hardware store and just sort of looked around until something jumped out at me.

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Bread Slicer Guide



We mentioned that we got a new bread maker for Christmas and have been making wonderful fresh bread every week. One thing that we've found to be inconsistent is the thickness and evenness of our slices. This handy little bread slicer guide made that problem go away.

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Toy Rubber Band Gun and Target



Here's a fun little project you can do with your kids. My dad helped me make one of these when I was a kid and I think it was to keep me from using my BB gun on everything.

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Flying Duck



This is a wonderful project suggested by Ann one of our newsletter readers. We found an old and broken one to make a pattern from and then modified it a little. This project looks deceiving simple. There is a lot of tedium in getting the wing holes in the right place and the right weight. Once you get it right it looks great and is a real conversation piece.

[BACK](#)

Easy Chair Mouse Table



This is a really easy project that will probably take some creativity on your part. There are a number of ways you can approach and design this project but I'll share what I did to get you started.

[BACK](#)

Plant Name Stake



Since it's time to start planting it's a good time to identify those plants for later. It's always frustrating when showing someone your garden and not being able to tell them what the plants are. This project will solve that problem and make your garden look nice.

[BACK](#)

Napkin Holder



Picnic time is coming soon and eating outside is always fun. One thing about eating outside that isn't fun is when the napkins blow all over the place. This handy napkin holder will prevent that from happening and looks nice too.

[BACK](#)

Picnic Caddy



Last week we made the [napkin holder](#) for those upcoming outdoor picnics. Continuing on with that theme this week we will make a Picnic Caddy. It's a handy caddy to carry all your picnic supplies to the table.

[BACK](#)

Greeting Stakes



These Greeting Stakes make great house warming gifts. They can be made mostly from scrap pieces of wood found around your wood shop. They take a little creativity but the results are very satisfying.

[BACK](#)

Book Rack



These adjustable bookracks look nice and do a good job of holding books in place. They don't hold a lot of books but they are easy enough to make that you can make several. This would make a great gift for someone who's into reading or has lots of recipe books that they like to keep close at hand.

[BACK](#)

Do It Yourself Bio Pond Filter



Now that the sun is coming out more we are starting to grow lots of algae in our fishpond. We were going to put in a filter last year but just didn't get around to it. We've been scouring the Internet for a good bio filter design for our fishpond. We've been talking with lots of people that have bio filters as to what works and what doesn't. We took what we think is the best of each and created this easy to build filter system.

[BACK](#)

Toy Boat



Toy boat, toy boat, toy boat! How'd you do? This week we have a wood project for the kids that will need an adult's assistance. We made these toy paddlewheel boats as kids and played with them in the big pond we had at the back of our property. You can have that same kind of fun with this easy to build paddlewheel boat. Make these with your friends and have boat races.

[BACK](#)

Condiment Picnic Table



This condiment picnic table is a great way to serve your ketchup and mustard for those summer picnics. This is a fun little one-day project that will make your summer dining table look extra special.

[BACK](#)

Veggie Hod



This is a neat basket to put your fresh picked veggies in. Once they are in the basket just turn the hose on and rinse them off. All the dirt goes to the ground and you are left with nice clean veggies.

[BACK](#)

Plastic Bird Feeder



This project started off as a kids project but it soon turned out to be much harder than expected. It still would make a great kids project but with lots of adult help. This bird feeder replenishes the food to the birds reducing the frequency that you have to refill it.

[BACK](#)

Crumb Catcher



How many times have you gotten in trouble because you buttered some toast and left a pile of crumbs behind? Well this simple project will make that problem go away. This is a fun and fairly simple project that can easily be built over a weekend.

[BACK](#)

Wind Chimes



Well ring my bell!
This is a really simple project that you will get lots of enjoyment out of. Not only is it fun to make but fun to listen to when the wind blows.

[BACK](#)

Wooden RunnerDuck



What better project for us than to create a wooden RunnerDuck for your garden. This duck is great to put in any garden or yard. The good news is you don't have to clean up after it. The bad news is that it won't eat your slugs.

[BACK](#)

Deck Rail Planter



This is a wonderful way to show your summer flowers around your deck. These planters are easy to build and can be made from scrap wood. Like many of our projects you easily make them to fit your situation. We made our planter to fit a long narrow plastic planter and go over a 2" X 6" deck rail. You can make yours to fit any size planter or make it a planter all by its self.

[BACK](#)

Garden Tool Carrier



It seems like there is always something you need to haul with you around the yard when you are doing gardening. Here's a handy little carrier for just that purpose. Ours is a little small but you can make it any size you like using these easy instructions as a basic plan.

[BACK](#)

Child's Growth Picture Stick



Now that our grandson is growing it's fun to measure his height to see how fast he is growing. This growth picture stick not only tracks his growth but provides a space for pictures so you can see what he looked like at a certain height.

[BACK](#)

Old Fashioned Wall Box



This project comes from Marilyn's dad Frank who actually built it many years ago. I have no idea where he got the plans but it's a simple and nice looking design.

[BACK](#)

Plant Name Tags



Most people think about tagging their plants when they get them or when they plant them in the spring but think about this. In the fall you start pruning back plants and the leaves fall off others. They stop blooming and it gets really hard to tell what they are. Put nametags on them now and then if you want to move them in early spring you'll know for sure what you are moving.

[BACK](#)

Paper Towel Holder



Our camper trailer just doesn't have a good place to mount one of those plastic paper towel holders so I decided to make one for the counter. This is a simple project that requires a little imagination.

[BACK](#)

Three Legged Heart Stool



Here's another one of those simple projects that look great and the results are especially fun for little kids. This simple little stool gives children a place to sit and join in with the adults when everyone is sitting around having a good time.

[BACK](#)

Cranberry Scoop



Cranberries are in season and you will need a scoop to make sure you get every last one. Well not really, this is a decorative scoop that is based on some designs I've seen of old cranberry scoops.

[BACK](#)

Runner Duck Push Toy



It's time to get out in the wood shop and start making those great Holiday gifts for your kids and grand kids. This weeks project is simple and yet will give hours of pleasure to that special little someone in your life.

[BACK](#)

Toy Sled



Continuing with our Holiday toy making, this sled is really a wonderful little toy. It's great for pulling your favorite Teddy Bear around in the snow, or just hanging on the wall.

[BACK](#)

Place Card/Ornament/Coaster



This project is a Three Fer project. You get three for the price of one. We are going to make a place card for the dinner table, a Christmas tree ornament and a coaster. This is really simple and just in time for that Christmas dinner or party.

[BACK](#)

Toy Pickup Truck



I know it seems a little late for toys but just because Christmas is over doesn't mean that there aren't some little kids out there with birthdays. This would make a great gift for that special child that likes real toys, if you know what I mean. Nothing nicer than a hand made toy.

[BACK](#)

Candle Holder



This project is for a wonderful little candle holder. We made it from a scrap piece of Walnut that we had lying around. It will take some imagination (or not) to really make it unique.

[BACK](#)

Door Harp

I always wanted to make a door harp but just have never gotten around to it. I tried to find plans on the web but everyone was selling them. I decided to design my own and share it with you. I hope you enjoy it as much as we do.



[BACK](#)

Heart Picture Frame



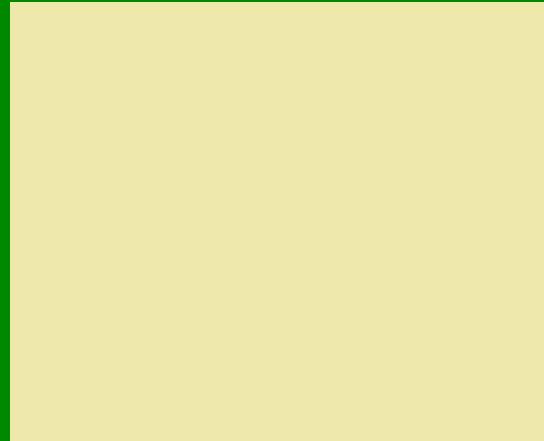
For Valentine's Day or any special occasion this really nice heart shaped picture frame. It's fairly simple to make and is a very nice gift. You may want to make several.

[BACK](#)

Tooth Fairy Keepsake Box



Some people don't believe in the tooth fairy but if you do here's a great place to put your tooth and for the tooth fairy to put your reward. When the day comes that you're not loosing any more teeth it makes a great little keepsake box.



[BACK](#)

Flower Cart



Spring is so close you can almost start smelling the flowers, actually around here you can smell the flowers. You are going to be needing a flower cart pretty soon and this should be a good one. This project will probably take two or three weekends but it should be well worth it when it's all done.

[BACK](#)

Wine Barrel Trellis



It's getting close to spring and time to start planting all those beautiful annuals. We love sweet peas and clematis and this trellis will show them off in grand style.

We made our trellis really tall. You can adjust all the dimensions down if you want a shorter trellis.

[BACK](#)

Saw Blade Holder



I have some pretty nice saw blades for my table saw but unfortunately I just keep them in a pile in my cupboard. Not only does it make it hard to find the one I'm looking for but I'm sure it's not good for the blades. This box should do the trick to solve both problems.

[BACK](#)

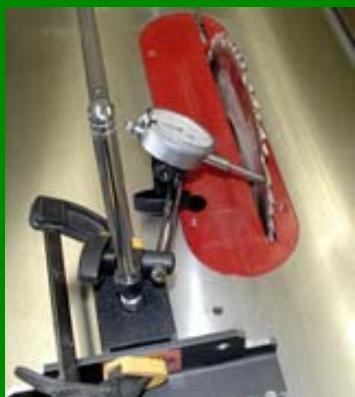
Spring Place Holder/Recipe Holder



This is a pretty easy project that complements Marilyn's place/recipe card project, [April 4th Newsletter](#). The idea is to make lots of these for gifts when people come for brunch or dinner. The holder can be used for table place setting and then later for a recipe card holder.

[BACK](#)

Tool Tune Up



One of the things that often get overlooked is the condition of your power tools. We get to working on projects and after a while start to wonder why those miters just don't quite come together. Pieces that used to fit seem to be off a little bit. Well it could quite possibly be that your power tools are starting to drift a little bit.

[BACK](#)

Cupola



Oh boy a new project! We got a weather vane for Christmas and have been trying to figure out where and how to mount it. We finally decided to mount it on our wheelhouse on top of a cupola. Of course the first thing we need to do is design and build a cupola. After researching many sites on the web we did not find any free plans for one so we had to make our own. We hope you enjoy this project and the free plans that come with it.

[BACK](#)

Chorreador de Café



A what you say? A Costa Rican coffee maker. It's funny how some of these projects are developed but this one came to us in a round about way from one of our readers, Michael O'Reilly. We were exchanging emails about Costa Rica, since we own a little piece of property down there, and he sent me a web site to check out. While surfing around that web site I stumbled onto an interesting site about Costa Rican coffee. We are coffee drinkers, roast our own beans and often buy coffee beans from Costa Rica. Any how we took the picture they showed and made our own coffee maker.

[BACK](#)

Cedar Planter Box



I love projects like this because it cost me almost nothing. I made it all from scraps that I had lying around. Cedar fence scraps made up the bulk of it.

[BACK](#)

Duck Family



This is a cute little project that will make your garden look like a fun place to be. It comes from Marilyn's dad Frank who made these many years ago. They are simple enough that the kids could help make them for Father's Day. If they do help be sure to supervise them to keep them safe.

[BACK](#)

Purse Birdhouse



Marilyn got the idea for this at a you-paint ceramics store that had a ceramic purse/vase. I did the design and all the building and she did all the hard work of making it a piece of art. We think you'll like this little project.

[BACK](#)

Bird Feeder



Even though there is lots for the birds to eat this time of year it's still a lot of fun to feed them and watch the different species. If you put out different types of seed you will get different types of birds. Mix it up and see who comes visiting.

[BACK](#)

Gizzie (Sun Tracker)



This weeks project has had my interest for some time now. It's sort of a scientific instrument that's more fun than science. I first saw this device when my brother Ron got it for a birthday present. A friend of his made it from plans he found in a German book on things that measure our environment. I've since lost the title of the book but will try to find it for you. It's all in German and since I don't read German it was a little difficult to figure out. The book called it a Heliograph Mit Laborkolben but I call it a Gizzie.

Basically it's a device to record the suns path by burning a track onto a piece of paper. It works really good. This is a great device to just have sitting around the house for a conversation piece.

[BACK](#)

Bronze Mesh Planter



At first I wasn't really wasn't very excited about the way this project looked when I was finished. I was hoping for a more dramatic look from the bronze mesh. As it turns out it's pretty cool because as the light changes the planter changes appearance. The more direct sun that shines on it the more you see the mesh the more shade there is the less you see of it. It's sort of like one of those fancy paint jobs you see on a car that are always changing color.

[BACK](#)

License Plate Birdhouse



We've been seeing these at street fairs and Saturday markets around the area and since we had an old license plate we decided to make our own. They are simple and a good way to use up an old license plate.

[BACK](#)

A Small Stool



Marilyn made a suggestion that we needed a small foot stool in our camper trailer. That got me thinking that it needed to be small and light. As it turns out this stool would be great for a small person sitting next to the campfire or it would look great on the deck with flower pots sitting on it. How every you use it we think it will be a nice addition.

[BACK](#)

Folding Table



Marilyn thought it would be nice to have a little folding table for when we are camping. A place to sit our frosty mochas when we wind down from the days activities. Not only did the table need to fold up but it also need to be light. I think this simple design accomplished both.

[BACK](#)

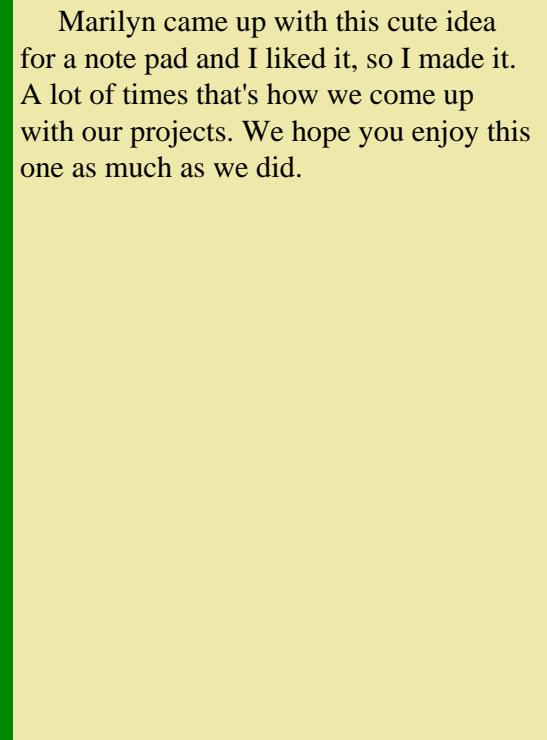
Recipe Box

This is a neat little weekend project that makes a nice gift or just a good place to store your own recipes. We used Poplar for our project and I'm not sure it was such a good idea. It has a real tendency to warp. If you are going to paint your recipe box then plywood might just be better.



[BACK](#)

RunnerDuck Note Pad



[BACK](#)

Recipe Box Bookends



A couple of weeks ago we made a really nice little recipe box. Well this week we are making two and turning them into bookends.

[BACK](#)

Hexagon Bird Feeder



We've had this bird feeder for a very long time and it's finally succumbing to the elements. Since we are going to replace it we decided to turn it into a project for you. We like it so much we figured you might like it just as we. The nice thing about it is that it has screen in the bottom so that the rain can run through and the bird seed will dry out really good after the rain.

[BACK](#)

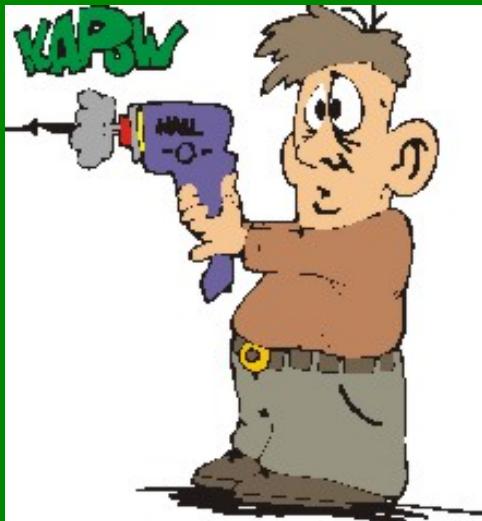
Plywood Carrier



One of the more awkward things to handle around the shop is big sheets of plywood. With my bad shoulder it's almost impossible but with this handy device it's a breeze. Put the plywood in the notch, pick it up with the handle and balance the top with your other hand. Now that's a lot better than the alternative!

[BACK](#)

Shop Safety



We thought this might be a good time to remind you about safety in the wood shop. Winter is coming and there is a good chance that you'll be spending more time working on those holiday projects and all those neat wood projects you just never could get to all summer long. It's always better to take a few minutes and think about safety then it is to spend a lifetime in pain.

[BACK](#)

Beam Scribe



This Beam Scribe is a great little addition to your tool kit and it also makes a nice gift for that woodworker in your family.

[BACK](#)

Candle Gift Box



What a great idea, a gift box that converts into a candle holder after the present is removed. This is a simple project to build and even more fun to give.

[BACK](#)

Table Saw Sled



Table Saw Sleds are great for making accurate cuts. They are also really good for making set ups for repeatable cuts. We think you'll find this an easy yet great addition to your woodshop tools.

[BACK](#)

Centering Tool



Here's a handy little tool for marking the center on the edge of a board. It will work on just about any thickness of board.

[BACK](#)

Shoe Shine Planter



Flower planters placed around the yard are always fun, especially when they have a little character to them. We think this shoe shine planter does just that.

[BACK](#)

Teapot Birdhouse



In the spring it's time to start thinking about those little birdies. They are going to be looking for a nice place to set up house and we think this one is pretty neat. It's a complimentary project to the teacup bird feeder we had in our May 16, 2003 newsletter, www.runnerduck.com/05-16-03.htm.

[BACK](#)

Garden Tool Organizer



If your garden tools are anything like ours then you will spend some time digging them out from behind other tools. We've designed this organizer to hold your long handled tools to make them easy to find.

[BACK](#)

Strawberry Planter Tree



It seems like space is always a problem when planting a garden. Well how about going vertical? This nifty strawberry planter does just that. This project requires a compound miter saw because of some of the compound angles you'll have to cut.

[BACK](#)

Universal Potting Tray



We weren't sure what to call this project because it can be used for any number of things in the garden. Since we designed it around the plastic potting trays and it can be set up to carry tools in the tray we thought potting tray was appropriate. Because you can flip both the top and the bottom over we figured it was universal hence, "Universal Potting Tray".

No matter what you call it we think you will find this useful when you are moving your seedlings from the greenhouse to the garden.

[BACK](#)

Planner/Miter Saw Stand



This project was inspired from an article I saw in one of my woodworking books. Unfortunately I couldn't find the book again so I made my own plans. If you have a small shop like mine then every square inch of space needs to be optimized. This miter saw/planner stand helps serve that purpose. It will get my planer off of the bench and not take up much more area than my miter saw currently uses. It also gives me a couple of really nice drawers to store things.

[BACK](#)

Garden Chair



Marilyn saw a plant stand like this at a craft fair and decided that she needed one but had her own idea of what it should look like. She sketched out what she wanted hers to look like and I designed it in my CAD program. The next day I made sawdust and came out with a rather nice looking garden chair plant stand. The design is sturdy enough to sit on but I wouldn't suggest using it for a sitting chair. The idea is to place potted plants on it. Maybe a nice vine plant near the back to climb up the back rest would be nice.

[BACK](#)

Marble Pinball Game



Both Marilyn and myself got to play with pinball games similar to this one. We combined what we both remembered about them and came up with this one. We made it for our grandson Camden for Christmas and he was thrilled.

[BACK](#)

DVD Storage Cabinet



The design features of this DVD Cabinet are three drawers to hold DVD's and a large open space in the bottom to hold the subwoofer of our sound system.

This was my first endeavor into making a piece of furniture. There was a lot more to it than I first thought. I copied from existing pieces of furniture that we have so that it would match. The biggest challenge was matching the stain. All in all I'm pretty pleased with the way it turned out and I think you can make one too.

[BACK](#)

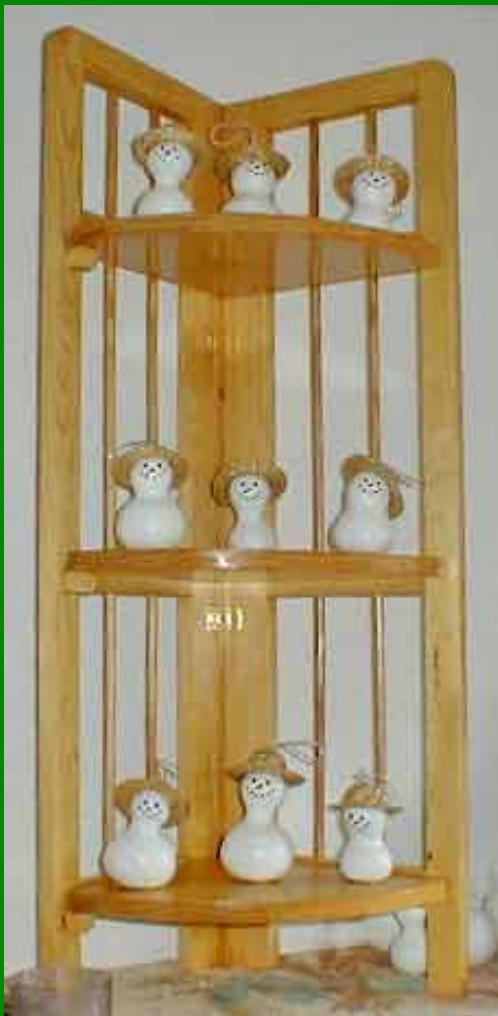
Sandpaper Storage Cabinet



I had a real problem with storing my sandpaper. I would just pile it up in the cabinet and every time I wanted a particular grit I would dig through the pile. I finally got tired of this and did something about it. I designed and made this handy little storage box. There is now a place for each different grit as well as storage for different shapes of sandpaper and sanding belts.

[BACK](#)

Folding Shelves



This project was sent to us by Joe in Michigan who has previously contributed to our newsletter with his Stool project. You may remember that nice little stool from our [September 10th, 2004 newsletter](#). This project is a nifty folding shelf that looks nice and folds up to be stored.

Marilyn is really good at decorating the house for different occasions. She has lots of neat stuff that she puts out for Valentine's Day, Easter and other holidays. Sometimes it would be nice to have a shelf to put the extra stuff on and other times it would be nice to have the shelf out of the way. This project fits the ticket perfectly.

[BACK](#)

Garden Stool



Have you ever had one of those wood projects that just didn't come together? Well this project was the project from hell. The good news is that I learned a lot from it and I hope that you can learn from my mistakes too.

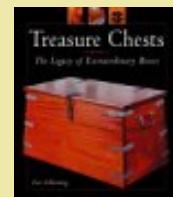
This project started out simple enough. Marilyn wanted a garden stool to set on while she works in the gardens. I figured out the dimensions and went to work designing it.

Well it's made out of 3/4 cedar which is just not strong enough for the narrow details like the tops of the handles and the overhang on the ends. They started breaking off as soon as I put any pressure on them. As you can see in the finished picture I adjusted for the broken weak spots. I chose cedar because I wanted it to be light weight. It seems to be working OK but I don't think it looks as nice.

[BACK](#)

Treasure Chest

Marilyn bought me a wonderful Taunton book on treasure chests called Treasure Chests by Lon Schleining.



(CLICK)

I guess it inspired me to try and tackle my own treasure chest. I've had a large chest for many years that was patented September 3, 1887. I think it was built shortly after that. It's in pretty bad shape but still functions as blanket storage. I really wonder what tales it must have to tell.





The design of my chest uses the lines of the old chest. Mine is only 12" X 7" X 8 1/2". I used a vacuum form mold to make the curved top and dove tails for the joinery. I hope you take the time to make this nice little chest and also check out the Treasure Chest book, you'll love them both.

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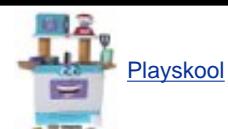
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Thanks, Cheri

What a Wonderful Publication! This is a breath of fresh air in our home. I am so impressed with the kids crafts, projects and other sites you have or refer me to. This publication will be referred to all the parents and just down home folks I can reach.

Diane S.

Any road up as we say over here in England can I say how much we enjoy our monthly visits from you on the great wide web. How you keep it going beats me. It is just Great.

Thanks and the kindest of regards Peter

Ken and Marilyn, Loved your news letter this month. Sent a lot of stuff from it to my 9 year old grandson who just loves to get email from his mamo.

Thanks, Connie

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