

Platter Project

Steve Wilson

Producing turned work with beautifully figured grain is something we all want to do, but wood with figured grain isn't that easy to come by, is it? Well, one place to look for it that seems to be neglected is at the crotch of the tree. Even in plain grained wood the crotch will have interesting swirls, wavy grain and color. But, how to get started?



- 102-3180 Photo 1
 - Top view of the finished platter.



- 3143 Photo 2
 - A neighborhood tree was cut down less than a week ago and this crotch was left between curb and sidewalk. These open angle branchings work well for platter projects. This one is honey locust and measures 25" wide and 18" tall.



- 3144 Photo 3

- The first step is to saw the crotch straight through all three pith centers. To do this, block up the crotch with wedges, so that the pith on the trunk and the two branches are the same height up from the floor.



- 3145 Photo 4

- Strike a level line through each pith using a carpenter's level. This defines a flat plane to guide the chainsaw.



- 3147 Photo 5
 - Extend all the lines onto the bark, so that the near end can be sawed while sighting the other end of the bark.



- 3148 Photo 6
 - Keep to one side of the pencil line all the way around the crotch. Saw a notch about 1-1/2" across each of the four outside corners.



- 3149 Photo 7
 - Pick a corner and start sawing through and through. Sight the work line, but line the blade up with the next line or notch. With practice, a crotch can be sawn within $\frac{1}{4}$ " of flat.



- 3150 Photo 8
 - Not perfect, but a $\frac{1}{4}$ " dowel doesn't fit anywhere under the sawed surface with the crotch halves flat on the floor.



- 3151 Photo 9
 - With the halves flat side down on the floor, use a block or pencil holder to mark a work line all

around each piece. I'm allowing 2-5/8" for each slab. Saw notches as before and saw off the cheeks for additional platters or bowls.



- 3154 Photo 10
 - Four usable pieces.



- 3155 Alternate Photo 10



- 3156 Photo 11
 - Choose one of the slabs for this project, then stand the others and cover them with a plastic bag to keep them moist.



- 3157 Photo 12

- Choose the flattest side to mount a 6" faceplate. Place the faceplate on the slab, then move it around to get the best visual balance. If the faceplate doesn't sit steady, then use small pieces of veneer or plywood to support the edge of the faceplate. Use twelve $\frac{3}{4}$ " long flathead screws

to attach the faceplate. Use these shorter screws to avoid marking the actual platter bottom.



- 3158 Photo 13

- This piece swings about 25-1/4" diameter, so the headstock is moved down to turn from the tailstock end. Smaller platters can be turned over the bed. I've chosen the pith side as the bottom of the platter. The interesting grain is on the pith side,

so I'll get nearer to it as I turn into the top surface. Most of the turning on these larger platters is done at less than 300 RPM, but to begin, start the spindle with the rheostat set all the way down. Increase the speed slowly until the lathe begins to vibrate, then back off until the vibration stops. This is the best speed until some of the weight is removed.



- 3159 Photo 14

- First, establish a 6" diameter for the faceplate. This faceplate has a 1-1/4-8 thread for the spindle, so a 1-1/8" diameter stub will be a snug fit on this thread. This keeps the work centered when the bottom work is done. On this lathe, the threaded

portion of the spindle allows this stub to be about 5/32" long without pushing the work off the faceplate. So, turn the faceplate surface down this 5/32" smooth and flat. Now, leaving this faceplate surface alone, begin to rough out the top of the platter.



- 3163 Photo 15

- Some of this face work can be cut in the usual way with the gouge handle low and the bevel rubbing.



- 3164 Photo 16

- But, if the tool rest starts to bounce, approach the work with the gouge horizontal and the flute at 45 degrees. This puts all the force down on the tool rest, so that the bounce is reduced. This is a scraping style cut, so work slowly.



- 3162 Photo 17

- For this project an 84" radius template was chosen as a guide for the inside and outside curves. The bottom is roughed in leaving the thickness at a little over 1". The bottom also got a 6" diameter faceplate mount with stub pilot and a roughed in 9" diameter

foot ring. All the end grain gets a slightly thinned coat of aliphatic resin, including all the areas where the grain swirls to the surface. After the glue dries, this area gets a coat of wax emulsion sealer. This

piece now needs to dry in the garage for four months, so I'll continue this project with a larger walnut platter that swings about 31" diameter.



- 3165 Photo 18
 - This platter was roughed in and sealed about four months ago, so I'll true it up and remove the sealing coats except for the end grain.



- 3167 Photo 19
 - This important step allows the cell water to escape faster. I've trued this blank top and bottom, flattened the two mountings and thinned the platter to less than 1". Now, set this piece aside to complete the air-drying process. This can take a year or more, so to complete this mount a faceplate on the foot of the platter just to true up the project, I'll finish a smaller platter that has dried for over a year.



- 3168 Photo 20
 - This is a Norway maple piece that swings about 23" diameter. In this case I'm using a larger faceplate, but a 6" faceplate would work. First, mount a faceplate on the foot of the platter and true up the mounting surface on the top. Mount the faceplate on the top mounting and true up the bottom mounting and the foot ring if it's separate.



- 3169 Photo 21
 - Before going on with the turning, use a compass and a little geometry to layout the placement of the feet.



- 3170 Photo 22

- Saw the side angle of the feet down to the roughed in surface now, because the saw usually scratches this surface. Now, go on to finish turning the bottom. Careful work here will pay dividends later when blending the inner and outer surfaces of the bottom. Using the radius template of choice, measure down to the turned surface. Make the distance the same across the bottom. Sand the bottom to clean up any torn grain, turning lines and errors in profile. But, because of the work needed to remove parts of the foot ring, stop at 80 grit. Some of this clean up can be quicker using a scrapper made from a six-inch piece of used metal cutting band saw blade. 1-3/8" width works well, just grind off the teeth and grind a 3" radius across the blade at an 80-degree angle to form a light burr.



- 3171 Photo 23

- Mount the platter on the foot. Turn off the top mounting ring and thin the platter to 5/16 to 3/8 thickness. I'm using a 60" radius template for this platter. Scrap and sand the top surface to 600 grit.



- 3172 Photo 24

- I left the ends of the platter over long until now. Using a 94" radius template, mark the ends for trimming to a pleasant proportion, then band saw off the excess. Belt or disc sand the ends to a smooth curve and continue by hand to 600 grit.



- 3173 Photo 25

- Place the platter on a folded towel or two to protect the top surface. With a chain saw disc in an angle grinder, gently remove the center pilot and the material between the feet; avoid touching the sanded portion of the bottom or the roughed-out feet.



- 3174 Photo 26

- Use a 4-1/2" diameter, 50 grit disc gently to get close to the finished surface.



- 3176 Photo 27
 - Use a sharp chisel to pare the sides of the feet to size and down to the sanded surface.



- 3177 Photo 28
 - From here, continue to pare away the waste, leaving four clean feet.

In the next photo, there is a sanding block I find useful. Glue together two pieces of 12mm Baltic birch plywood 2-1/4" wide and 9-1/4" long. Use the radius template to define the inner and outer curves on this block, then saw the curves on the bandsaw. If you've got a platter to work with, put a sheet of coarse sandpaper, grit side up on the platter and refine the sanding block curve. Cut a 15/16" strip from a coarse sheet of sandpaper and attach it to the sanding block

with double sided tape. Now, refine the platter curve. With the sanding block this tall, fingers are kept from whacking platter feet.



- 3178 Photo 29
 - With the feet now cleanly defined, blend the foot ring remnants with the outer and inner surfaces to get the best surface and a continuous curve, then sand to 600 grit. After all this work, the platter is bound to teeter on two of the feet, so place a sheet of 220 grit paper on a flat table, grit side up

and stroke each of the two high feet until the platter sits stable.



- 3179 Photo 30
 - Finished platter, bottom view.

- 3181 Photo 31
 - Finished platter, profile.

BIO

Steve Wilson has been turning since the mid 70's, showing since 2010 and demonstrating and teaching since 2008.

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