

NOTE: Every Page and Video is Sequential. To Watch the Video Mentioned on a Page, Look Below the Page. Some Pages have More Than One Video.

Build A Sculptured Bowtie Stool

with charles brock



This book is part of the *Build Sculptured Furniture* instructional bundle series.

It is an electronic only educational tool that accompanies full size physical plans and links to online video tutorials.

dedication

This book and video are dedicated to Sheila, Emily, Steve, Keri and Ava. Thanks for your love and support!

special thanks to

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Build A Sculptured Bowtie Stool with Charles Brock
To be sold only as a Bundle of Companion Components:

Build A Sculptured Bowtie Stool with Charles Brock Video Links
Build A Sculptured Bowtie Stool with Charles Brock E-Book
Build A Sculptured Bowtie Stool with Charles Brock Full-Size Patterns

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WARNING!

Woodworking can be very dangerous. It is your responsibility to take the proper precautions and to use appropriate judgment.

- 1 Never work in the shop while tired, sleepy or under the influence.
- 2 Use all guards that come with power tools when possible.
Guards have been removed in the DVD and in the book for visual clarity.
- 3 Wood dust is a known carcinogen and can cause allergic reactions.
- 4 Appropriate shop glasses should be worn at all times.
- 5 Read the manuals that come with your tools and follow their directions.
- 6 Read the book and view the entire video before performing any of the tasks demonstrated or described.
- 7 Never perform a task seen in this video or described in the book that makes you feel uncomfortable.
- 8 Never wear loose clothing or jewelry while woodworking.

Inspiration for the Sculptured Bowtie Stool

Thanks for choosing to build the Bowtie Stool (1.1 below). Its purpose is to be used anytime a full size chair would be too much. A very good friend took one look at the stool and said, "That would be perfect for putting on my socks and shoes." I made two for a customer who uses them as fireside stools. My thought was to build a small lightweight stool for playing the guitar with a backrest that provides lumbar support. The result is a contemporary stool or small chair that seems to provide interest with its uplifting, original lines.



I also wanted to create a stool utilizing the key elements of sculptured furniture such as a deep, coopered seat, Maloof style seat to leg bridal joinery and uplifting sculptured lines. Originally, my purpose was also to keep it simple. I saw the piece as a gateway project for fine woodworkers who wanted to build a sculptured project but didn't want to commit to the time or the rigor of a rocker or low back chair.

Well, I was successful with the inclusion of sculptured chair elements in a project without the time commitment of the rocker but this is not an easy project. There are only six parts to this chair but each part has rigorous joinery and fairly complex lines. As you read along through the guide, look for the orange and white play buttons that will take you to a video guide of that section.

making your sculptured bowtie stool a reality



As a teacher and fine woodworker my goal is to help you with your dream to build the Sculptured Bowtie Stool. This mini bundle should give you the knowledge and confidence to build the stool utilizing the ebook with video links (look for the play button!) and the full-size patterns. Utilizing these instructional materials you should be able to:

- 1. Select and order wood for your project.
(see figure 1.4)*
- 2. Cooper and sculpt a seat.*
- 3. Select Materials*
- 4. Bandsaw and shape the front legs.*
- 5. Bandsaw and duplicate the back legs.*
- 6. Cut and assemble the signature seat to leg joinery.*
- 7. Bandsaw and fit the backrest.*
- 8. Assemble the stool with the proper glues, screws and plugs.*
- 9. Shape the contemporary lines into a flowing Bowtie Stool that will demonstrate your woodworking artistry.*



figure 1.2



tools

I am asked this question about the rocker and low back chair all the time. Can you give me a complete tool list? I would like to say, "All of them"! This is the best list I can give.

You will need a fairly complete furniture making shop consisting of: A good table saw with accurate fence, miter gauge, crosscut sled and dado sled. A jointer, planer, router (an accurate router table with a fence and starter pin is a plus), Festool Domino or a biscuit jointer, various clamps, carving rasps, spokeshaves, power sculpting and carving tools (Foredom and Grinder w/ carbide wheel or Festool w/ 24 grit paper), measuring and marking tools, etc. If you have what I am using in the pictures and video you have the best shot of building this stool. There are many substitutions that can be used as workarounds.



Top: figure 1.4, Bottom: figure 1.3

make your full - size patterns

The patterns are the most important component of your materials. You should transfer them to a more durable material for tracing and/or duplicating the parts from the pattern. I use various materials for my permanent patterns depending on the method I will use for duplicating the part. My recommendation for pattern material is 1/8" luan plywood for the half seat, front leg profiles (side and front), backrest profiles and the back leg front profiles. You might decide to duplicate the back leg side profile using the router table and a spiral duplicating bit (RFT5200 from Whiteside). For this method you will need a piece of Baltic birch plywood 1/4" thick or better.

NOTE: The video link shows use of a 1/8" thick plywood pattern for duplicating. It barely supports the pilot bearing and I consider this too dangerous to recommend. "Don't do as I do, do as I say"!

choose your stock

The stool shown is walnut. Walnut is easy to cut, carve and is forgiving. The stool could also be executed in other hardwoods. The stock chosen should be dense enough to give strength to the front leg. Since this is a small piece, it may be a great time to invest in the small amount of figured stock that would make this piece stunning to a viewer.

When I go to the lumber yard, I take my patterns and a piece of chalk to mark out my parts on the stock as selected (See figure 1.4 on pg. 5). In the picture I label the stock with the following codes:

SB Seat Board

FL Front Leg

BL Back Leg

The Back Rest comes from extra stock.

Let's start by building the seat!



The coopered seat is made with 5 seat boards. Boards 1 and 5 have rabbeted notches that will receive the front legs. Boards 2 and 4 are beveled at 13 degrees on their outside edges to meet with 1 and 5. Board 3 is the centerboard with 13 degree bevels on both of its edges while hosting the angled, rabbeted notches that attach to the back legs.

the coopered seat

The radical coopering of the seat allows the outside edges of the seat to have an uplifted appearance plunging to a low pommel highlighted on the front of the seat. Let's get started!

1. Prepare 5 Seat Boards (**SB**): (Minimum Dimensions)
All stock must be 4 Square and Square on Both Ends

SB No. 1	1 7/8" x 2 3/4" x 11" (same as SB 5)
SB No. 2	1 7/8" x 3 3/8" x 14 5/16" (same as SB 4)
SB No. 3	1 7/8" x 7" x 14 5/16"
SB No. 4	1 7/8" x 3 3/8" x 14 5/16" (same as SB 2)
SB No. 5	1 7/8" x 2 3/4" x 11" (same as SB 1)

2. Mark your seat profile (with the pattern) on the boards butted together in their proper orientation. (butted together laying flat)
3. Mark your bevels. (See Picture 2.1 on pg. 8) Also mark your boards 1 through 5 on the top and front.

Mark the locations of the seat to leg joinery with an "X" for reference on boards 1, 3, 5.

4. Cut the 13 degree bevels on each edge of SB #3 and on the outside edges of SBs #2 & 4. There are two methods:

1. Cut them with a glue line rip blade at the table saw (See Picture 2.2).

2. At the jointer use a contrasting pencil to draw diagonal lines on the edges to be jointed at 13 degrees. Tilt your jointer fence 13 degrees setting it with a sliding bevel or (as in the picture) a magnetic digital angle cube (See Picture). Count the number of passes required to remove the lines on the first edge. Repeat that number of passes on all other boards. Note: Each pass should make a parallel cut on the edge of each board. If not, your feed pressure or jointer setup could be causing the problem.



Video: Beveling Seat Board 3

5. Place the boards on a workbench in the proper orientation lining up the backs of the seat boards. Place a clamp across the seat to check the "SMILE". (See figure 2.3)
6. Mark the locations for your dominos or biscuits. (See the picture) Measurements are made from the back toward the seat front. Use a square to mark the locations across the seat. Note Boards 1 & 5 only have two dominos on one edge, while 2, 4 have 2 dominos on their outside edges & 3 on their edges that join with board 3.

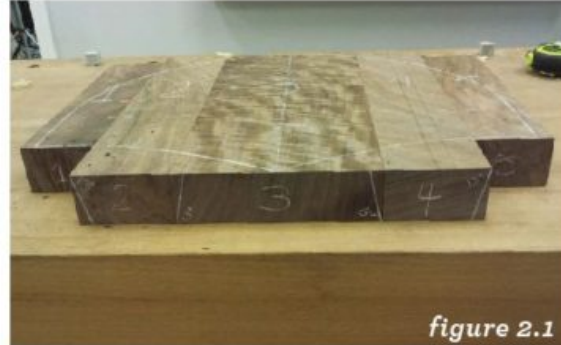


figure 2.1

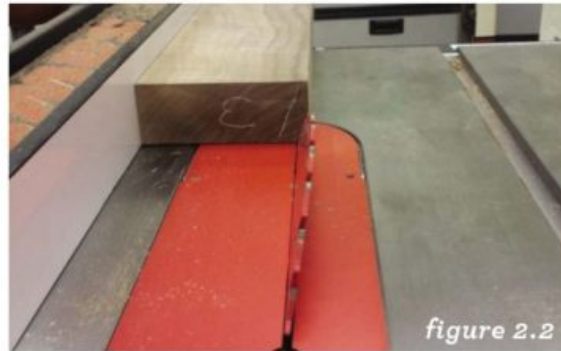


figure 2.2

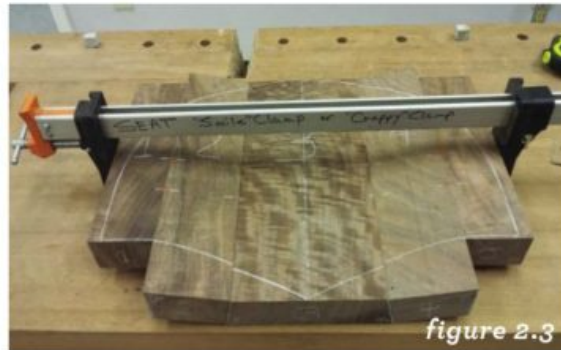


figure 2.3

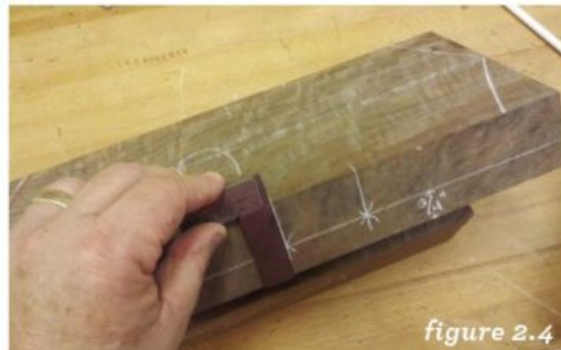
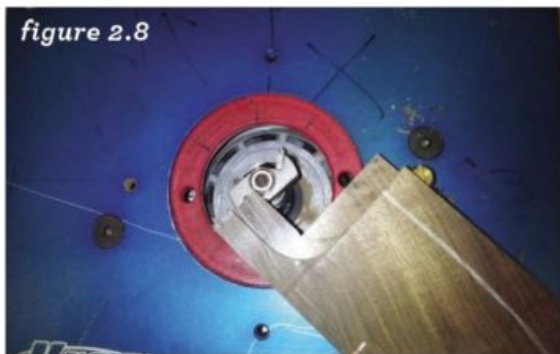
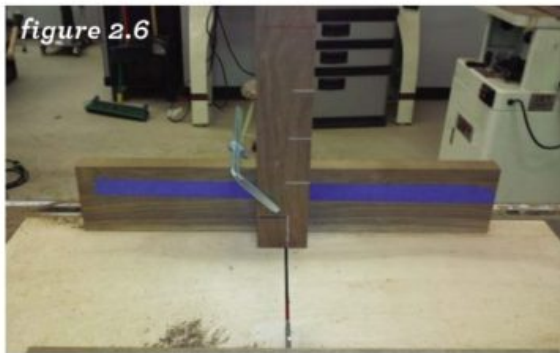


figure 2.4



7. Mark the locations for dominos with a cut line $\frac{3}{4}$ " from the bottom of each board. Using a square bring the domino location mark on the top of the seat board down the edge until it crosses the line $\frac{3}{4}$ " from the board's bottom. Just spread them out on each edge equidistant from each other and the front and back of the seat. (See figure 2.4)

8. I use an 8 x 40mm domino for this project. A 13-degree insertion of a larger domino could cause fatal "Domino Discovery" during the seat's sculpting phase. Please use caution!

9. Just spread them out on each edge equidistant from each other and the front and back of the seat. Use the Festool Domino's fence opened to the obtuse angle. Position it's fence on top of board #3 while aligning the edges of the domino with the targeted cut line.
Note: Be sure to test your domino on some beveled scrap for best results.

Make the fence and height alignments to cut all the 90 degree mortises on the

10. inside edges of SBs #2 & 4 and 1 & 5. Cut the inside mortises with the fence set at 90 degrees referencing from the top of the seat board. The mortises on the outside edge of boards #2 and 4 must be aligned and referenced from the bottom of the boards. (See figure 2.5)

NOTE: On the outside of the Festool Fence casting there is a horizontal flat on each side that aligns with the center of the mortise. Make the height adjustment so the top of the flat lines up with the cut line $\frac{3}{4}$ " from the seat board's bottom edge.

the seat joinery

Front Leg Seat Joints

1. Seat to Leg joints should be marked out first for the notches. Don't mark out for the rabbets, let those be determined by the router bit. The front leg notches are ($1\frac{1}{2}$ " wide x $1\frac{1}{8}$ "). Mark them with cut lines using a wheel type marking gauge and a square (see picture). Start by measuring $1\frac{1}{2}$ " in from the outside edge of SB #1 (for example) to mark the notch's width. Then measure $1\frac{1}{8}$ " from the front and mark the depth of the front notch.
2. To cut the front notches I use a cross cut sled and cut just shy of the full depth of cut in each direction. Take out the corner with a chisel. (See figure 2.6)

Back Leg Seat Joints

3. The seat's back leg notches require something different:



Click the icon to see a video guide to the back leg seat joinery!

1. Find the center of SB #3 and mark it all the way around (4 sides front to back.) This will all be sanded away so you can do this with the marking wheel if you like.
2. Use your table saw with a miter gauge to cut 13 degrees from each side of the back of SB#3's centerline. This should leave a point at the centerline.
3. To lay out the notches measure along the 13 degree cut from the centerline at the back of the SB (point) $1\frac{1}{4}$ ". Use a square to layout a cut line $1\frac{1}{2}$ " long.
4. Measure down 1" and cut a line $1\frac{1}{2}$ "



figure 2.9

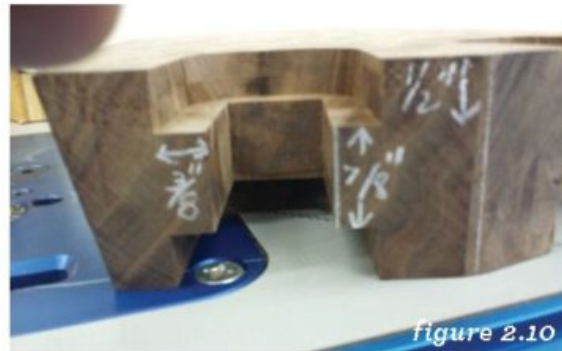


figure 2.10

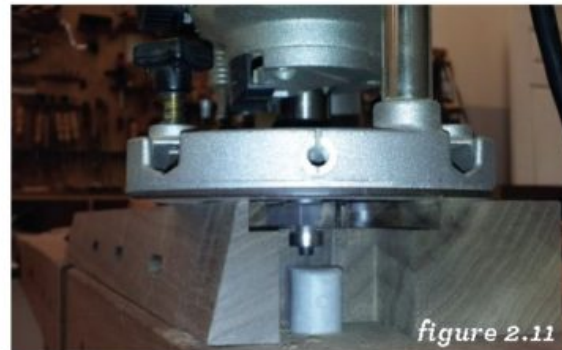


figure 2.11



figure 2.12

long. Cut a line joining the ends of both lines using a wheel marking gauge. That line is the bottom of the notch.

5. To cut the notches (1" wide by 1 1/2" deep) for the back legs in end grain, I have found that a dado blade on my table saw works great because it leaves a flat bottom. (See figure 2.7) This is important because trying to flatten the bottom of a notch in end grain is difficult. Mark it out and kerf it out with the dado. (For the proper orientation see the picture). It is a fairly deep cut so I use a 1/4" dado that is sold by Forrest as a 1/4" or 3/8" finger joint set. Sneak up on the first one to set your depth.

Note: I use two different sets of rabbet and rounding over bits to create the rabbets and matching leg roundovers.

6. Seat's Front Leg Notches are rabbeted with a Whiteside #1922 1 1/2" diameter x 1/2" deep bit. (See figure 2.8) The inside of the leg must be rounded over with a 3/4" Whiteside #2010 bit. These are the same bits used on the rocker and low back projects.
7. Seat's Back Leg notches are rabbeted 3/8" deep using a Whiteside #1918 (See figure 2.9) (referred to sometimes as a slotting or grooving bit) and the legs are rounded over with a Whiteside # 2009A bit. (See figure 2.10)
8. Believe me I wasn't trying to just sell more router bits (although that's not what my chauffeur thinks.) The front leg needs as much support as possible so the deeper rabbets give the leg more glue surface and more to hold onto. Because of the lack of a stretcher this joint

is the weakest part of the design and could break with a sitter working the joint hard side to side (leaning) and front to back (rocking.) The back legs are enclosed on three sides making them very strong while not having much thickness for making deep dados in their sides, hence the 3/8" deep dado.

9. Use either a handheld router or router table for rabbeting. (See figure 2.11) Rabbet the same depth from the top and bottom with a goal of leaving a seat tenon about 7/8 to 1" in thickness. I try to accomplish the process in two passes. Check to make sure the cuts are smooth. If you use a router table make sure to use a starter pin and always move the stock from right to left. Rehearse or visualize the travel of your cut so as not to become uncertain with a spinning router bit in play.

Finishing Up Your Seat

4. After all the joinery has been completed now is the time to dry fit the seat together. Use a clamp and make sure every joint closes. Also make sure the front leg notches and rabbets are positioned correctly so one is not ahead of the other. A red or white line (See figure 2.12) across the seat will be of aid during glue-up to check alignment. I place one on top and on the bottom.
5. Glue the seat up and set it aside while you craft a set of legs.

chapter three...

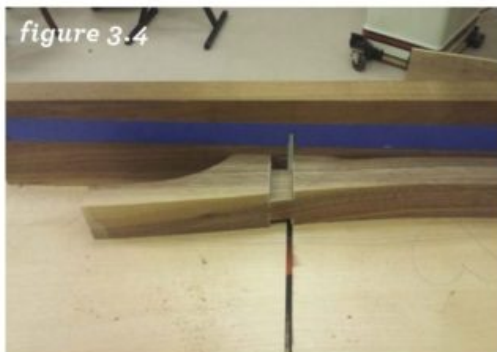
Crafting A Set of Legs



The compound curves of the front and back legs give this stool an organic appeal.

The signature joinery provides strength and adds to the monolithic look.

Decide on a right and left leg. Consider the grain orientation and where the grain's movement might highlight or enhance the compound curves from the front. Be thoughtful of short grain situations as they will weaken and diminish the wood grain's ability to flow with the stools lines.



the back legs

First let's layout the back leg and cut the dados on the seat joint stem. Here's how!

1. Use the side profile to lay out the back on your stock. The stock should be face jointed and planed to $1\frac{7}{8}$ ".

2. Trace the profile on the stock and band saw leaving the line (about $\frac{1}{16}$ ").



3. Trim the leg with a down spiral trim bit at the router table (See figure 3.1). The pilot bearing should ride the edge of the plywood pattern attached to your stock with wood turner's double sided tape. Make sure it is securely attached with tape at least placed every four inches along the pattern's length. This can be dangerous! If you feel any anxiety or apprehension just band saw, rasp or sand to the line. Make sure the seat stem is flat.

4. Fit the leg to the back leg seat joint by fitting the leg's width between the rabbeted notches on seat board #3. Plane the leg's thickness until it easily slides in without having to tap with a mallet. Not too loose and not too tight!



5. Mark out the bottom of the dado on the side of the seat joint stem by measuring $16\frac{1}{8}$ " from the bottom of the leg up to the seat front of the seat stem. Use a marking knife and make a cut line on the front and two contiguous sides of the back leg. (See figure 3.2)

6. Measure the thickness of your notched tenon on the seat with dial calipers. Using the inside dimension feature of the caliper, lay out the top of the dado



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6. Measure the thickness of your notched tenon on the seat with dial calipers. Using the inside dimension feature of the caliper, lay out the top of the dado

with cut line on all three sides.

7. Transfer the cut lines to the back of the leg and mark the back for the 3/8" depth of dado cut (the depth of the rabbet in the seat).

8. Use a blade that will make a flat bottom cut on the dados (See figures 3.3 & 3.4). If you use a ATB blade, the cut must be cleaned up with a router plane. (See figure 3.5)

9. Round over the two insides of the back leg stem with a 5/8" radius rounding over bit at the router table.

10. Fit the joint. You probably will have to tap it together with a dead blow mallet. This is not easy to fit. Use your dial calipers and compare each surface for congruency. If it does not fit, look for shiny spots on the parts joining surfaces. Fit tight dado shoulders by paring with a chisel. Dado depth issues can be adjusted with a router plane. Round over tweaking can be accomplished with 80 grit sticky back sandpaper on a sanding block.

11. When both back legs slide into place with little or no gap, do a little dance!

crafting the back leg compound curves

The back leg's side profile has a flowing curve below the seat and support for the backrest above the seat. The compound curves are caused by the application of a process that creates two front profile curves above and below the seat. Here's how to do it:

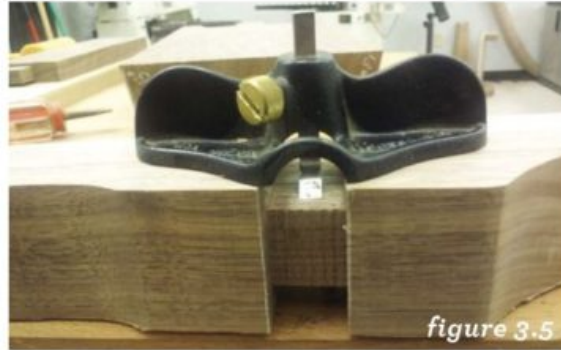


figure 3.5



figure 3.6



figure 3.7



figure 3.8

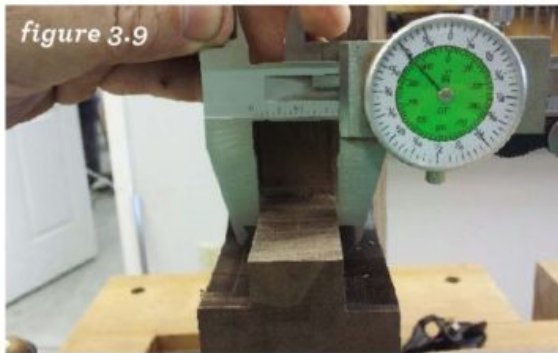


figure 3.9



figure 3.10



figure 3.11



figure 3.12

1. After all that fitting you are going to band saw into the back leg above and below the seat joint and glue the cutoff on the side opposite the cut. So the glue joint will be the jointed side of each piece. This gives you some stock that can be band sawn and shaped to make an additional curve. (See figure 3.6)

2. Use the back leg's front profile to lay out the band saw cuts. (See figure 3.7)

3. Clamp the glue-ups with anything that will work. I have a bunch of wide rubber bands that I double around the joint to hold them together. I also rub the surfaces together with a fresh amount of glue on each. This creates adhesion. (See figure 3.8)

4. Use the back leg's Upper Front, Upper Side and Final Lower Side (Front & Back Leg) Profiles to lay out the band saw cuts and finish the compound curves.

the front legs

They have compound curves and two sided dados that are glued and screwed to the rabbeted notches on seat boards # 1 and 5 (See figure 3.8). After crafting the back legs the front set will be easy. Here's how:

Front Leg Joinery

1. Prepare two pieces of leg stock 2" wide x 2 1/2" thick x 18 1/4" Long (If you don't have 10/4 stock then laminate). Make sure they are have 4 square corners.

2. Mark a right and left leg, also front and back, outside and inside. Look for grain that will enhance the flow of the com-

pound curves in making your choices, if possible.

3. Mark the top of your dado $1/2$ " from the top of the leg on the back and transfer your cut line all the way around the inside of the leg.
4. Use a dial caliper to measure the thickness of the seat front leg tenon. (See figure 3.9)
Mark the thickness across the back of the front leg and extend your cut lines to the inside.
5. After laying out the cut lines for dados on the back and inside of each leg, extend the dados to the front inside and back outside of each leg for the $1/2$ " depth of the dado. Mark the depth with a marking gauge.
6. Use a dado blade to cut the dados in leg on two sides. A cross cut sled will improve accuracy. If you use an alternating bevel blade (ATB) there will be ridges in the bottom of the dados, which can be flattened with a router plane, file or perhaps a small shoulder plane. These dados must match the $1/2$ " length of your seat tenons. (See figure 3.10)
7. The front legs will be screwed into place for reinforcement. Use a Miller Dowel Bit (1X or 1XJ) to pre-drill the hole in the front of the leg pinning it to either SB# 1 or 5. Placement should be centered up on the vertical edge of the seat's tenon and $1/2$ " from the bottom of the dado on the inside of the leg. (See figure 3.11)
8. Roundover the inside of the front leg joint with a $3/4$ " roundover bit. (See figure 3.12)

crafting the front legs compound curves



1. On the outside of each leg trace the Front Leg Side Profile Pattern #1. (See figure 3.13) Cut on the bandsaw and smooth to the line with a rasp.
2. Use the Front Leg Front Profile Pattern and trace the curve at the bottom of the front leg. This piece will be sawn off and re-glued to the leg on the outside.
3. Glue and clamp the cut-off to the outside of the leg. This will allow you to shape the compound curve, which enhances each front leg.

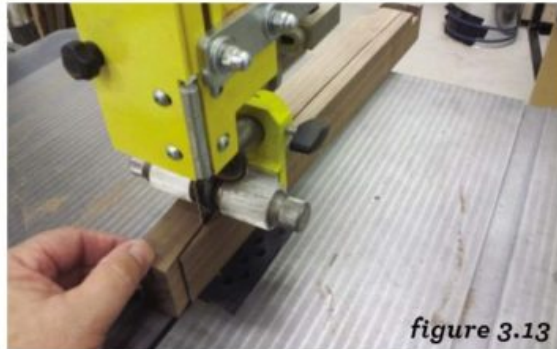


figure 3.13





figure 3.14

Note: Heavy-duty rubber bands can be used to advantage for clamping these irregular pieces. Spring clamps properly positioned can be useful also. Too much glue can cause them to slip. Stay with each glue-up until you are sure that they are not going to move.

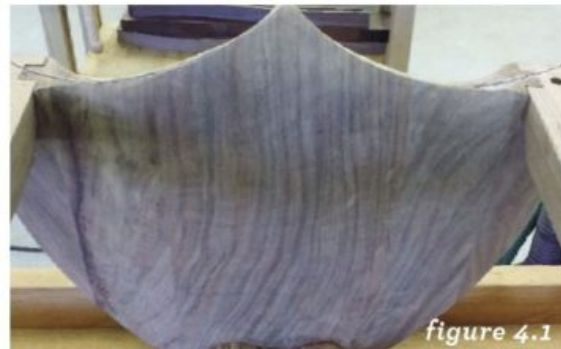
Shaping the Bowtie Stool

shaping the seat

1. View the video briefly describing some of the shaping tools I use. 
2. Watch the video orientation to shaping the chair consisting of the side, back and front views. 

NOTE: Many of these pictures were made shaping a larger Bow Tie Seat but the shaping is still the same.

3. I like to start on the bottom of the seat rounding over the coopered joints between SB's #2&3, 3&4. I like to use a grinder but have also had great success with a spokeshave. (See figure 4.1 of a Rounded Seat Bottom)
4. Continue to roundover SB's # 1&2, 4&5. Work to each side of the back legs from high to low making a rounding motion. (See figure 4.2)
5. Move to the front of the seat. (See figure 4.3) I am working on a larger version of this seat so disregard the $7\frac{3}{4}$ " radius, but the concept is still the same. Draw two radii about $\frac{3}{8}$ " inch apart from just inside the front leg joint to the pommel. Do this on each side of the pommel. You will use a grinder to round the top down to the first line and round up from the bottom to the lower line.



<https://vimeo.com/61931882>

<https://vimeo.com/61932488>

6. Under the pommel I like to first flatten the point at about 45 degrees and then use a bull-nose burr in my Foredom flex-shaft tool to grind out a little concave hollow under the pommel. Draw a diamond stretching from the pommel's point about four inches back and forward on each side to intersect with the front bottom edge of the seat about half way between the pommel and the front leg joint. This is highlighted in red in the picture. (See figure 4.4)

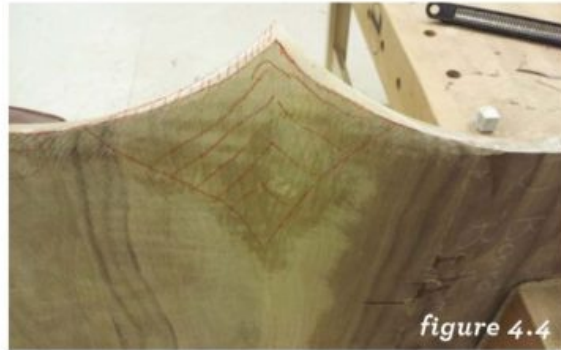


figure 4.4

7. Without cutting into the seat to leg joint, hollow out underneath the seat just inside the front leg where the red "x" is located in figure 4.3.

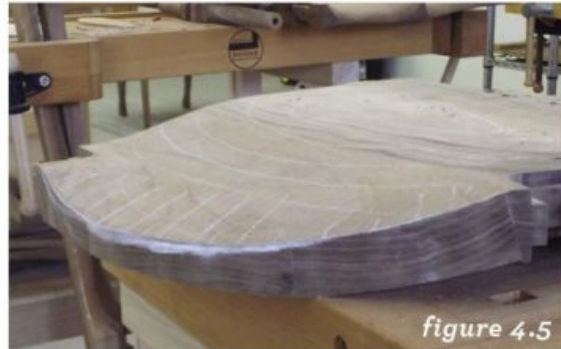


figure 4.5

8. One of the most beautiful aspects of the stool or chair is the lift on the outside of the seat. Starting on the bottom edge of the seat at the back leg joint draw a sweeping line that results in an arch along the side of either SB#1 on the right or SB # 5 on the left. The top of the arc leaves about 3/4" of edge grain at its highest point. (See figure 4.5) The picture shows the result of drawing this arc and rounding to it. I like to bevel about three degrees off of the remaining flat to keep it from looking too square.



figure 4.6

9. The coopered joints on top need to be rounded so the chair's top makes a smooth transition. It also has to be rounded in front between the pommel and the front leg. Use a grinder across grain followed by smoothing with the grain from back to front. (See figures 4.6, 4.7, 4.8)



figure 4.7

10. Bandsaw the little radius between the back leg joints. You may round over top and bottom and then carve a little convex hollow between the joint on top. (See figure 4.9)

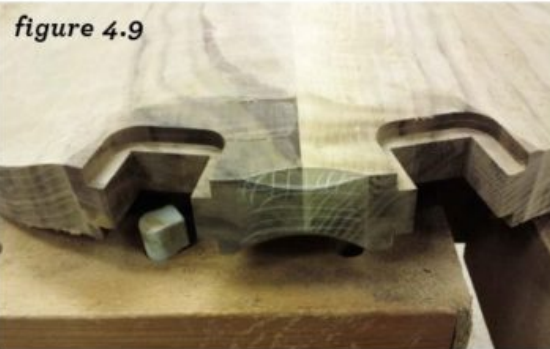
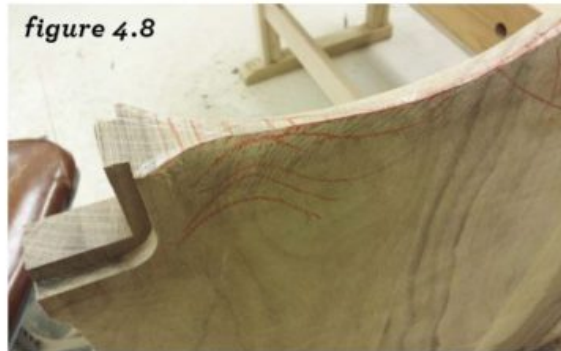
shaping the legs

You can do a great deal of the leg shaping and sanding before assembly. After you glue the legs on it is very difficult to shape and sand between them.

1. Assemble the legs to the seat but do not glue. Trace the top and bottom of the seat to leg joint onto the legs. This will help you remove material in the right places on the legs and not from the joint area.
2. I used a 5/8" Rounding over router bit to start the lower leg roundovers. It didn't work all the way down on each leg but use where feasible to make the work easier.
3. Just round over, smooth and shape the legs under the seat level with rasps (See figure 4.10) and a spokeshave.
4. Draw a foot profile on the bottom of each leg to give you a shaping target.
5. Use the Back Leg Upper Side Profile Pattern to trace the cut-out above the seat on the back leg. Use your bandsaw for the cut. This is the back leg material above the joint at the seat level. Now sand or rasp this flush with the top of the seat.
6. Shape the emerging backrest stem so

that a line flows all the way down from the backrest to the seat top line.

7. Underneath the seat you can cut a slight radius into the side of the leg so that the seat and leg lines flow together under the chair or just let them cleanly butt each other.
8. The inside and outside seat to front leg joints need to flow from the seat into the leg with a nice radius.



the backrest

The backrest is both lower lumbar support and a convenient handle for transporting the stool. As part of the design it extends a big arc starting at its tip and making a “C” as it moves down the back legs and toward the front of the chair when viewed from the side.



1. Trace the Backrest Front Profile Pattern on your stock and bandsaw.
2. Use the cut-off from band sawing the top of the front back rest profile to make a pattern for the top front and back profile. Make it about 3/4” thick.
3. To install the backrest you first need to make sure the tops of the back legs are even. If they are uneven, a great way to even them up is to use a flat board long enough to be used as a sanding block on the tops of both of the legs at the same time. Cover one side with 80 grit sticky back sand paper. Use a pencil to shade each top and sand. When you have removed all the marks it should be even. You should also work them with the sanding block until they are level. (See figure 5.1)
4. Referencing your centerline on the seat and on the backrest (See Picture 5.2) line your backrest up so it sits in the center on top of the back legs. Draw some reference lines for drilling 1/2” deep holes for 3/8”X 1 Inch Dowels. The holes need to be drilled by hand (Power Drill) carefully and perpendicular to the tops of the back legs.



5. Insert dowel Centers in the holes and line up the backrest. Give the backrest a tap and find the locations for drilling

your mating holes. Drill them 1/2" deep with the same 3/8" brad point drill bit.

assembly sanding and finish

Once everything is shaped but not completely faired from part to part you can glue it all up and insert the screws in the front leg. Plug the two holes on the front of the chair with tapered plugs. I use a tapered tenon maker by Veritas for my plugs. The dados on the back can be filled with blocks of wood and shaped. They look better if there is some contrast like face grain to end grain.

Shape it all using your sense of artistry!

Sand all the way through the sanding schedule. If you are using walnut, sand to 400 before burnishing with Scotchbrite Pads to 1000 (red, gray, white).

Finish with an oil and wax finish, preferably Masterpiece Oil and Wax.

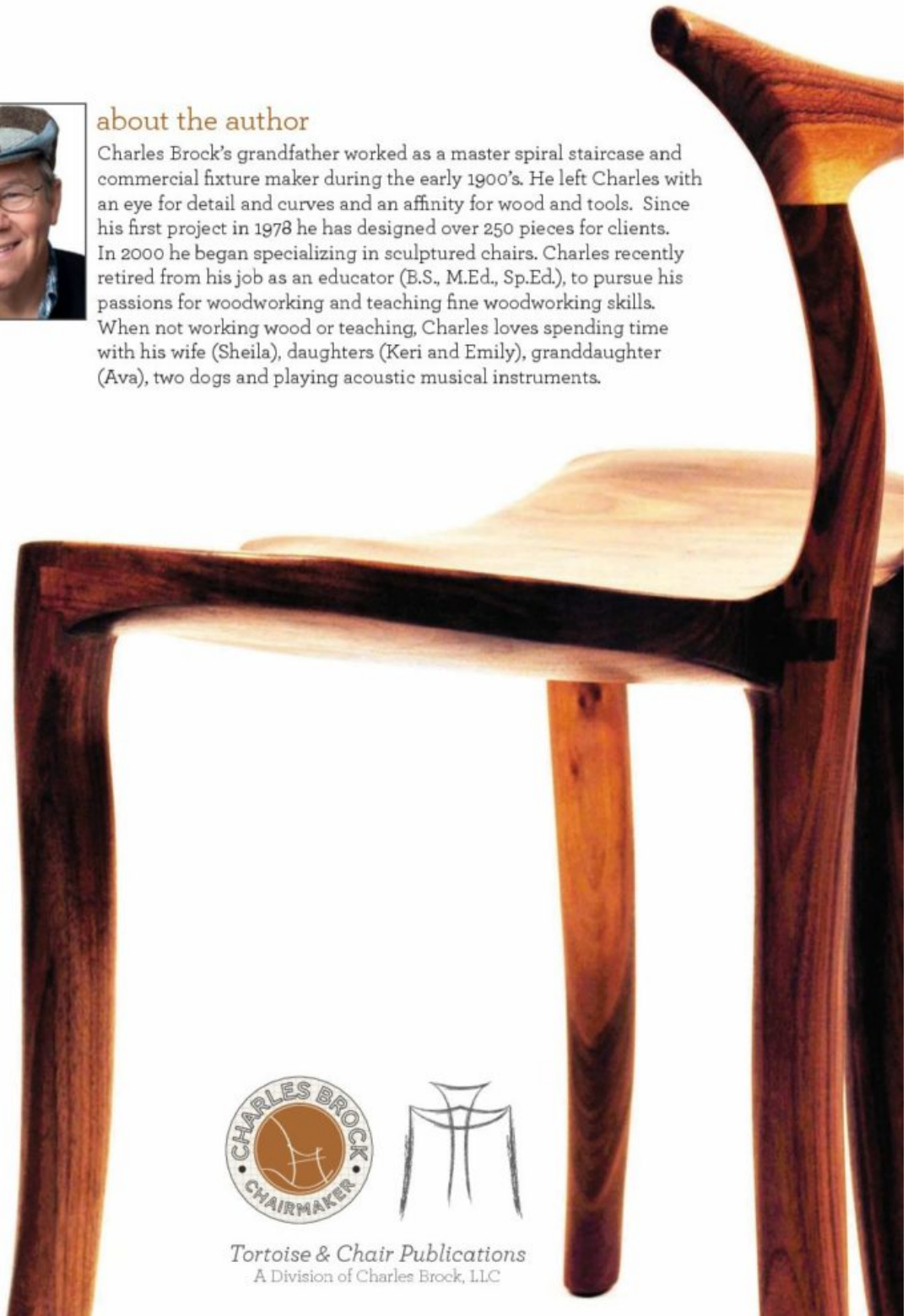
Make several and give them to your friends!

Thanks so much.
Chuck



about the author

Charles Brock's grandfather worked as a master spiral staircase and commercial fixture maker during the early 1900's. He left Charles with an eye for detail and curves and an affinity for wood and tools. Since his first project in 1978 he has designed over 250 pieces for clients. In 2000 he began specializing in sculptured chairs. Charles recently retired from his job as an educator (B.S., M.Ed., Sp.Ed.), to pursue his passions for woodworking and teaching fine woodworking skills. When not working wood or teaching, Charles loves spending time with his wife (Sheila), daughters (Keri and Emily), granddaughter (Ava), two dogs and playing acoustic musical instruments.



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