CHIPPENDALE-STYLE SIDE CHAIRS – PART 4

DENNIS ZONGKER CONTINUES WORK ON HIS BESPOKE CHAIRS BY MAKING THE CABRIOLE LEGS AND CARVING THE DECORATIONS

In my previous article (see *F&C* 317) I explained how to hand-carve the back splat, crest rail and rear legs of these chairs, altogether with scrolls and a centre shell. In this article I will explain how to make the Chippendale-style cabriole legs and how to hand-carve the grapes, leaves and scrolls into the legs.

In order to create an authentic cabriole leg in the Chippendale style, there are several key characteristics that should be incorporated into your design. First and foremost, it is important to note that each leg should be crafted from a single piece of wood extending from the bottom foot to the top of the leg. The upper section of the leg should extend flush to the top edge of the rails allowing for the rails tenon to fit into the mortise of the upper section. This gives the Chippendale look and also adds to the stability and strength of the legs.

Another important aspect to consider is the attachment of the two knee returns. These returns should be carefully glued onto the opposing sides of the leg after the cabriole shape has been cut out on the bandsaw. This step also adds a visual design to the leg but also reinforces its structure.

The shape of the cabriole legs is characterised by two distinctive curves. The upper is convex, creating an outward bow, while the lower curve is concave, resulting in an inward bow. It is crucial to maintain the alignment of these two curves along the same plane, as it contributes to the overall elegant shape of the leg. By following the design principles, you can ensure the creation of a true cabriole leg in the Chippendale style that represents the grace and craftsmanship of the furniture style.


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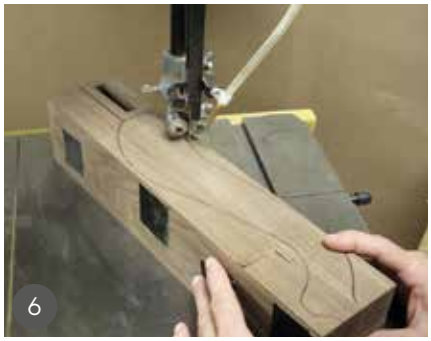
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PHOTOGRAPHS BY DENNIS ZONGKER

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GLUING UP THE CABRIOLE LEGS

1 With a larger board of ¾in-thick [CHECK] solid American black walnut, I was able to cut two rips out on the tablesaw at 3½in wide x 84in long. Then on a thickness planner I planed the two pieces to 1¾in thick. The size of the block of walnut being glued together was 3½in thick x 3½in wide x 84in long, which was enough for all four of the cabriole legs. Before I glued the two pieces together, I cut two extra clamping cauls, one for each face. This will prevent any clamp marks when clamping the two pieces of walnut together when using several large bar clamps. After the glue dried, I scraped off the excess dry glue then squared up the large block of walnut on a jointer. Then with a mitre saw I cut the four legs to length at 17in long.

BANDSAWING THE CABRIOLE LEGS

2 From my AutoCAD drawing I printed out a full-scale drawing of the side view of the cabriole leg. Then I used contact adhesive to glue the paper template to a piece of ¼in MDF plywood to cut out on the bandsaw. Using the ¼in-thick template makes it more accurate and faster to trace the lines onto the walnut leg.

3 I flipped the template over to draw the trace lines onto the opposing side. This gave a mirror image at the inside corner of each leg. Then I measured the location of the two mortises on each leg and drew in the exact mortise location.

4 I used a ¾in mortise drill bit and a chisel mortise machine to cut in both opposing mortises for each inside corner of the cabriole legs.

5 Next, I set up my bandsaw with a ¼in-wide 6-TPI positive claw bandsaw blade. Then I started feeding the legs into the blade and following the outside edge of the pencil line.

6 Once I was done cutting the inside and outside lines of one face, I taped the cut-off wood back onto the leg. This provided a solid block with the opposing pencil lines back to follow. Then I cut out the opposing side of the cabriole leg.

7 Here you can see the freshly cut cabriole leg.

RASPING AND SHAPING THE LEGS

8 After clamping a leg to my workbench upside own, I used a variety of different rasps varying in size, shape and coarse to fine teeth depending on how much wood needed to be removed. Starting at the bottom back edge of the foot and using a round coarse rasp, I started shaping and rounding over all the sharp edges. The very bottom of the foot has a full 1in diameter circle. To help guide me and to keep a similar circle on all four legs, I used a compass to draw the circle into the bottom of the foot.

9 To rasp the front edge and foot I used a carving vice to hold the leg nice and snug, and with a large coarse rasp I rounded the front of the leg to create a smooth round arch. The lower foot was rasped until the foot was almost round and then the arches were blended together.

CARVING THE GRAPE DESIGN

10 I began by drawing all the lines onto the walnut using a paper drawing template. I used a scalpel to cut out the detail lines to be able to trace the lines onto the cabriole legs.

11 Here you can see the completed rasped leg with the grape design drawn on the corner of the leg, clamped tightly in the carving vice ready to start carving.

12 I used several different sizes of carving gouges that matched up to the shapes and radiuses. Then with the gouge at a straight 90° angle to the carving I used my mallet to tap the gouge three times to equal about ⅛in deep cuts. This is called a stab cut. I repeated this step all around the vines, leaves and grapes. Be consistent with the same amount of pressure applied when tapping the gouges.

13 To remove the waste wood, I made relief cuts up to the stab cut at the outside edge of the entire grape design. I used my mallet to tap the gouge handle: this way I could control the amount of pressure applied to the gouges when removing the wood to the outside edge of the grapes and leaves. I repeated the stab cut and relief cut until I reached approximately 5⁄16in in depth around the entire design.

14 At the top of the leg where the arch and rails will be jointed to each other, it is important that the carving depth was equal to the bottom of the rails. I used a flat chisel to carve down to the top arch of the cabriole leg.

15 The vines were shaped using a No. 2/5 carving gouge upside down rounding the edges by shaving off small amounts at a time. I made them look natural by just having high and low sections that blend together. I then undercut where two vines meet together having the smaller one undercut to the bigger vine.


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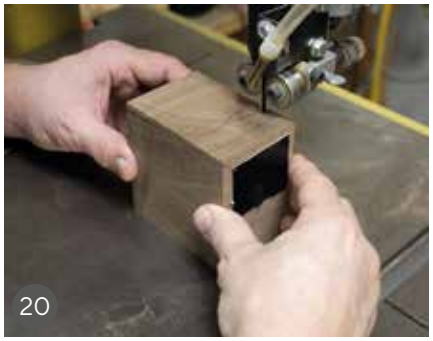
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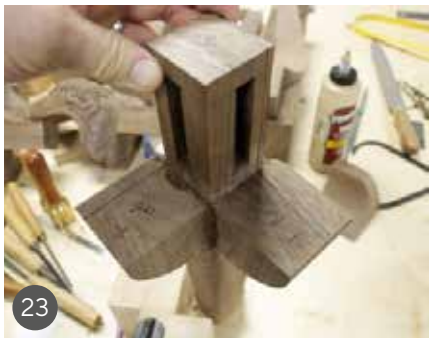
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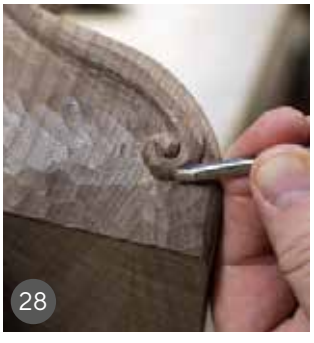
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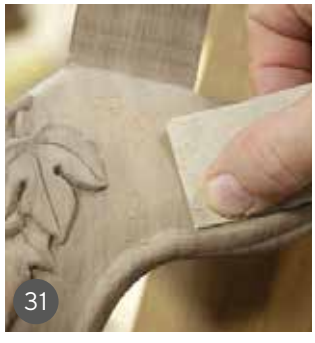
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16 Next, I started carving the leaves by cutting a concave centre cut approximately ¼in deep with a No. 9/5 carving gouge. To give the leaves a realistic appearance I carved a gradual slope from the outside edges to the centre of the leaves. I used a few flatter gouges to shave off small amounts at a time until I achieved a smooth, natural flow on each grape leaf.

17 To carve the grapes, I made stab cuts around the circle of each grape, then I relief cut with a No. 3/5 carving gouge upside down and pushed into the stab cuts. I repeated the stab cut and relief cuts three times to get each grape to be as round as possible.

18 The last carving step was to use a pencil to draw the veins of the leaves to make them look natural. Then with a No. 16/3 V-tool carving gouge I freehand pushed into the wood following the pencil lines to carve in the veins.

MAKING THE KNEE PATTERN

19 For the knee returns, there will be two for each leg: a left and a right. I used the same walnut stock that I cut the legs out of in order to match up the colour and woodgrain. With my paper template I traced the front and side profiles onto the block of walnut. Then on a mitre saw I cut the height of the knee returns at 2½in.

20 Next, with a bandsaw I cut out both the front and side profiles. I used the same method as for cutting out the cabriole legs by cutting one face then taping the waste wood back onto the block in order to cut out the side profile

GLUING THE KNEE RETURNS TO THE LEGS

21 To glue the knee returns onto the legs I made a block that supports the leg upside down. Then I used the cut off waste walnut as clamping cauls.

22 Here you can see the process of gluing on the opposing knee return.

LAYOUT OF THE 7° ANGLE

23 The front of the chair seat is 20½in wide while the back of the chair is at 17in wide. This means that the outside face of each cabriole leg both left and right will have a 7° angle that needs to match up to the side rails. This picture shows the top of the cabriole leg. One side of the knee return will need to be shaped at a 7° angle and the front of the legs is at a straight 90° angle. Each leg needs to match up in pairs for both chairs. I drew in the straight and angled lines onto the top of the knee returns also at the upper section of the leg.

RASPING THE UPPER LEG 7° ANGLE

24 To shape in the 7° angle I first cut a board on the tablesaw at the 7° angle at the thickness needed to match up to the leg tenon. Making the board longer so that I could clamp it down to my workbench by clamping the leg to the block of wood, I used a Japanese saw rasp to rasp the upper leg tenon flat and even matching up to the 7° angle.

25 For the knee return I used the same Japanese saw rasp to remove the waste wood up to 7° angle line drawn in at the top.

26 I used the knee return paper template to draw in the scrolls flowing down the edge of the legs.

CARVING THE SCROLLS

27 Starting at the top of the scroll I stab cut with my carving gouges at a 90° angle working my way around the scroll and using a variety of different gouges that matched up to the radiuses. I tapped the mallet very lightly only cutting about 1/16in deep to prevent chips or cracks. I continued this stab cutting along the entire length of the scrolls. Next, I relief cut up to the stab cuts around the entire scroll, then repeat the stab and relief cut until I get approximately 3/16in deep.

28 To carve the inner circle of the scroll I lightly stab and relief cut by following my pencil lines, leaving the centre of the scroll at its highest point. I then carved deeper as I moved down the scroll.

29 A No. 2/5 carving gouge upside down was used to carve on the outside edges of the scroll from the top to the very bottom. I radiused the back edge of the legs with the same gouge.

30 With a fine tooth rasp I smoothed out the carving gouge marks.

31 The last step was to sand with small pieces of 150-grit sandpaper until smooth.

NEXT ISSUE

In my next article, I will make the back and side rails using compound tenons that go through the back legs, and also fit and glue the chairs together. Then I will show how to make the solid walnut seat. That will conclude this series on making the bespoke Chippendale-style hallway table and two side chairs. You can also follow my work on Instagram: **@denniszongker**