



Philadelphia Side Chair

Exercise your carving skills as you tackle one of the greatest American chairs

BY EUGENE LANDON

Built around 1760 in Philadelphia, this chair represents the high point of Colonial Queen Anne chair-making. The piece has a sense of movement throughout its design, from the ball-and-claw feet to the flowing crest rail with its double volutes. The carving is attributed to a master craftsman whose name is a mystery, but who is known as the Garvan Carver because of several pieces attributed to the same craftsman in the Garvan collection at Yale University.

If you've never built a chair or picked up a carving gouge, this is an ambitious place to start, but if you've had some experience in either field, I encourage you to tackle this project. Construction is not as hard as it looks and is broken into three phases: the rear formed by the back legs, the crest rail, and the splat; then the front and side rails; and finally the front legs with their attached knee blocks. So find some good straight-grained mahogany, and let's get to work.

Join the back legs with the keystone; then add the crest rail and the splat

You'll need mahogany that is $3\frac{1}{2}$ in. thick by nearly 7 in. wide by 37 in. long for a pair of back legs. (If you are building two chairs, you can get four legs out of a 12-in.-wide board.) After you have roughed out the legs on the bandsaw, lay out and cut the blind mortises for the back rail and the through-mortises for the side rails. Shape each leg except for the very top where it will transition into the crest rail.

Cut and tenon the back rail, also known as the keystone because of its shape, and dry-fit it to the legs. Adjusting its shoulders will fine-tune the splay of the back legs. With the distance between the back legs established, you can mark and excavate the three mortises on the underside of the crest rail while it is still a blank. Now bandsaw the crest rail and then carve the shell and the connected spirals, or volutes. As with the tops of the legs, leave the transition areas uncarved until the crest rail is glued to the legs.

The next task is to resaw the curved back splat from a thicker piece and scrollsaw the profile on its face. Although by now the splat is relatively thin, there is still a lot of wood to carve away to give it the maximum



CARVING AND FITTING THE BACK SPLAT



Carve the back splat. A variety of gouges are used to carve the volutes while a 1/2-in. bench chisel is used to relieve flat surfaces (above).



Fit the back splat. The tenon at the bottom fits into the shoe (top). The assembly is then inserted into the crest rail and slid between the back legs onto the back rail (above).

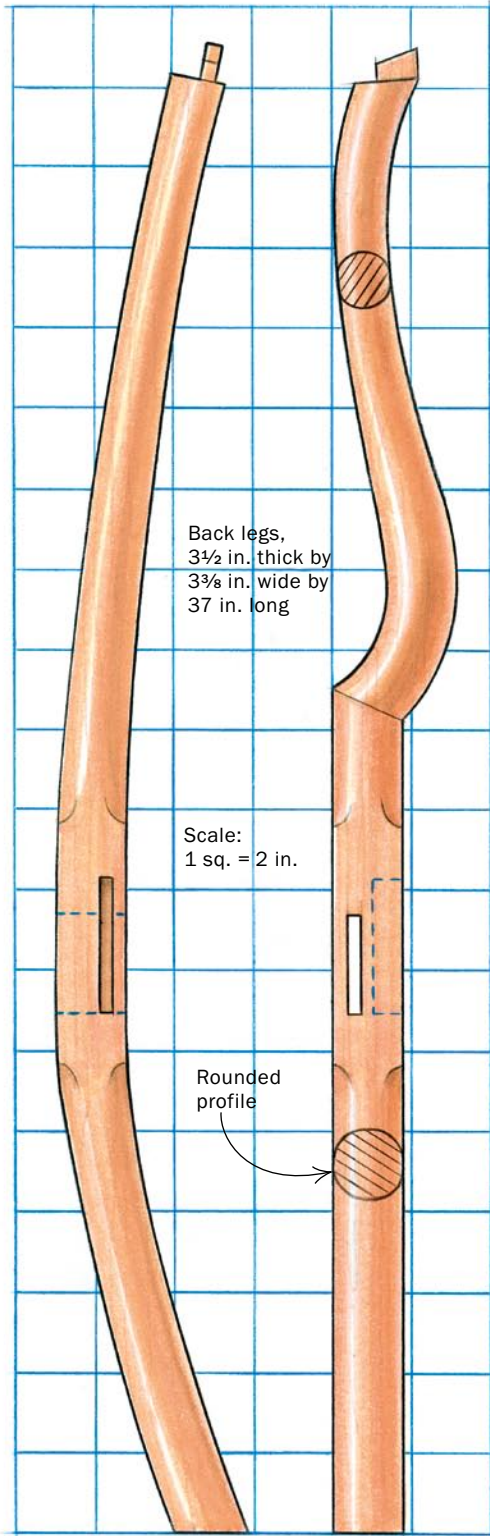


Smooth the transition. Although most of the crest and the back splat is carved before being assembled, the area where the two parts join (above) is carved flush after assembly.

QUEEN ANNE CHAIR PARTS

In all cases, the dimensions refer to the blank from which the piece is sawn. All of the parts except for the rear legs are drawn at 33% of actual size.

Mid-point cross section, 1¼ in. thick plus a ⅜-in. shell, 4⅞ in. wide.



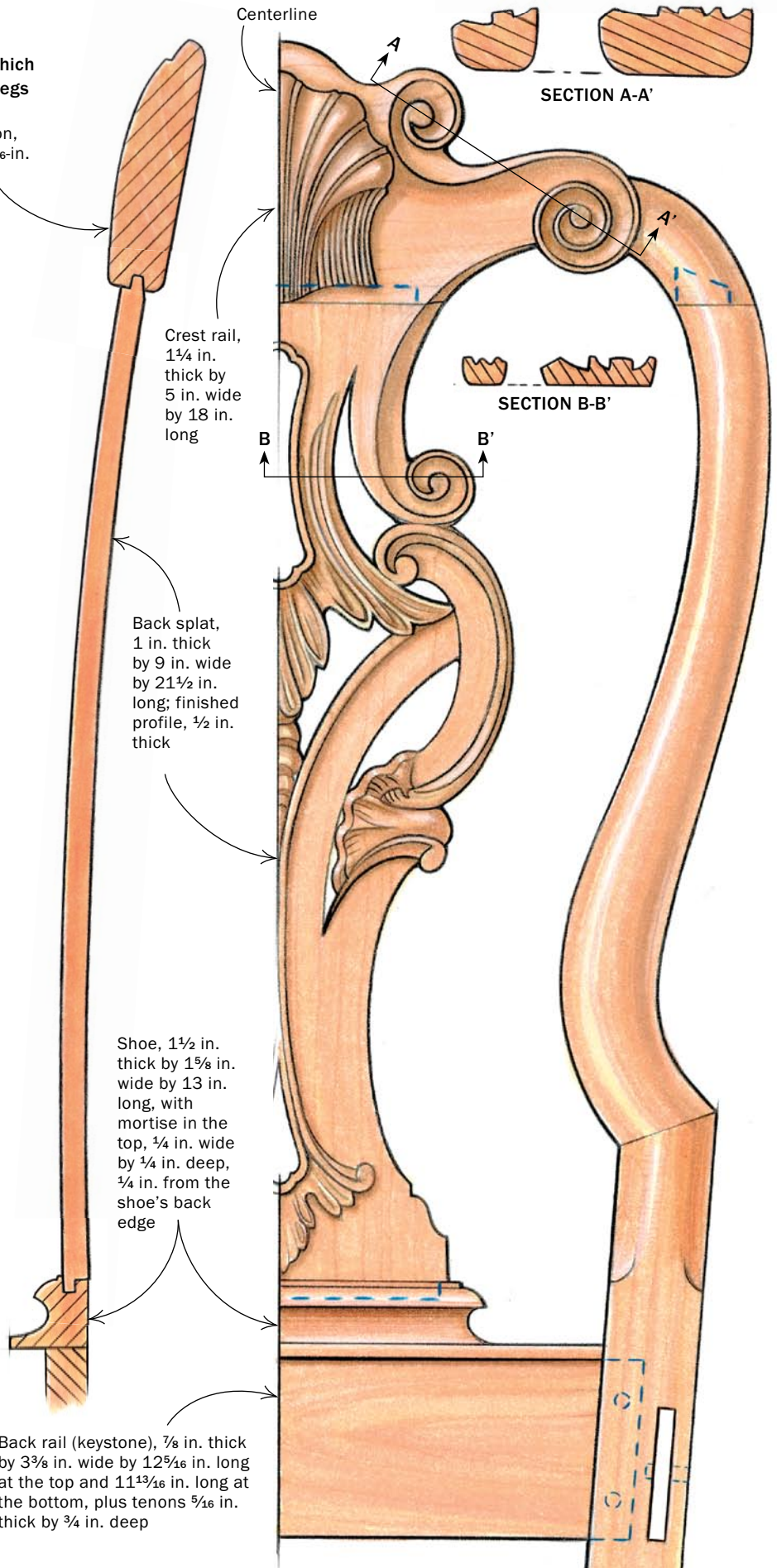
Back legs, 3½ in. thick by 3⅞ in. wide by 37 in. long

Scale: 1 sq. = 2 in.

Rounded profile

SIDE VIEW

FRONT VIEW



Centerline

SECTION A-A'

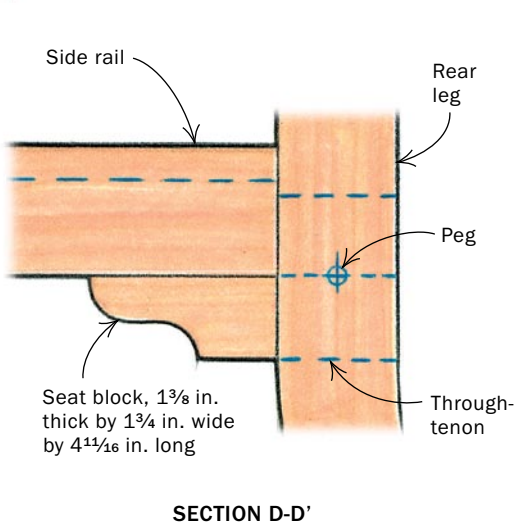
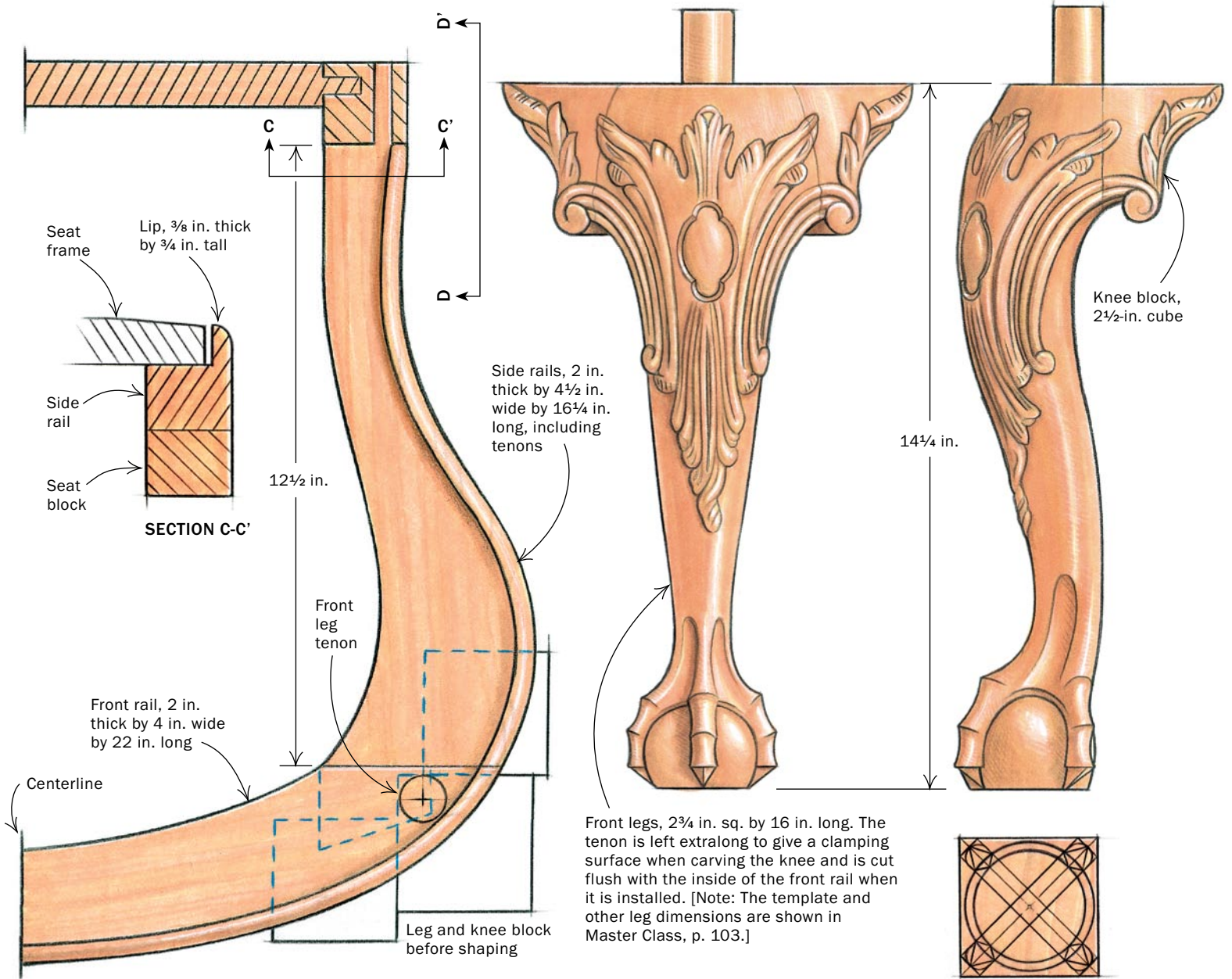
Crest rail, 1¼ in. thick by 5 in. wide by 18 in. long

SECTION B-B'

Back splat, 1 in. thick by 9 in. wide by 21½ in. long; finished profile, ½ in. thick

Shoe, 1½ in. thick by 1⅝ in. wide by 13 in. long, with mortise in the top, ¼ in. wide by ¼ in. deep, ¼ in. from the shoe's back edge

Back rail (keystone), ⅞ in. thick by 3⅞ in. wide by 12⅝ in. long at the top and 11⅜ in. long at the bottom, plus tenons ⅝ in. thick by ¾ in. deep



MARK AND SHAPE THE KNEE



After the bottom of the front leg has been carved and shaped, insert the round tenon into the horseshoe and mark where the leg meets the front rail (left). Bandsaw the knee profile on each front leg and then refine the curve with rasps and files (above).

NOTE: Full-size plans of this chair are available for purchase at www.oldemill.com.



FRONT VIEW



SHELL DETAIL



SIDE VIEW

three-dimensional appearance. The splat has $\frac{1}{4}$ -in.-thick by $\frac{1}{4}$ -in.-deep tenons on the back edge of the top and the front edge of the bottom. The top tenon fits into the crest rail; the other fits into the shoe, a piece of wood attached to the keystone. Neither of the tenons is glued, and the shoe is attached to the keystone with reversible hide glue and a couple of nails. This way, a broken splat can be replaced without damaging the rest of the chair.

I shape the profile along the front of the shoe with molding planes, although you could use different bits in a router table and ease any transitions with carving gouges. Although you could profile the shoulders of the shoe in the same way, a quicker method is to cut off a thin slice from one end of the shoe and use it to transfer the profile to the back of the shoe. Cut this with a scrollsaw to establish the profiled shoulders of the shoe.

With the crest rail glued to the legs, you can fit the splat. Rest the splat in the shoe; slide the shoe into its location on the keystone;

mark and cut the tenon on the top of the splat; and then fit it into place and fair the carvings at the joint.

The front and side rails form the horseshoe

With the back complete, turn to the front. The front and side rails are made from $8\frac{1}{4}$ material with a $\frac{3}{8}$ -in.-wide by $\frac{3}{4}$ -in.-tall lip around the top outside edge to secure the seat. Rather than being applied, the lip is formed by removing the material behind it—forming a rabbet. This traditionally is done with chisels, but you can remove the bulk of the material with a router or a drill press.

As with most chairs, the joint that absorbs most of the stresses connects the side rails and the back legs. Attach a profiled seat block under each side rail to reinforce this critical joint, then cut and fit the tenons on the front and back of the side rails, and mortise the front rail. After the front and side rails are connected, drill a 1-in. hole through each joint to accept the round tenon at



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FRONT LEG

the top of each front leg. When inserted and wedged, the round tenons will lock the three parts of the horseshoe together.

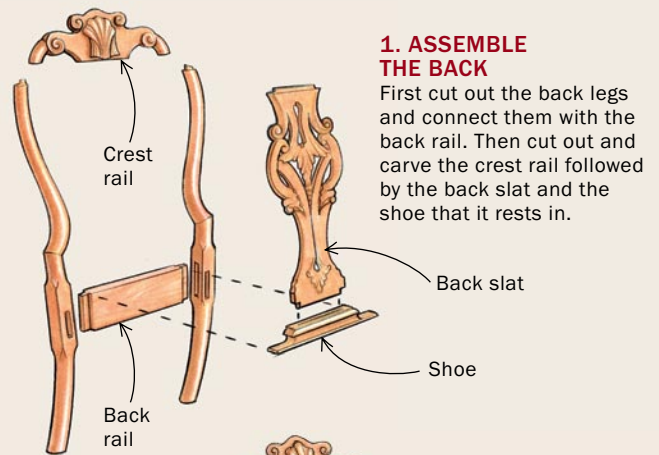
After bandsawing the rough cabriole profile on the front legs, carve the ball-and-claw feet (see Master Class, pp. 102-106). Use a saw and rasp to form the round tenon on the tops of the legs. Insert them in the rails and mark the edge of the front rail on the top of the legs. Bandsaw and then file the knee profile; then attach the knee blocks and cut their profile to match that of the legs. Last, lay out and carve the pattern on the knees.

With the chair assembled and the non-carved areas sanded, follow the steps I described in "A finish that adds 200 years," (*FWW* #168, pp. 121-122). Because of the curved shape of the seat, I recommend having the upholstery done by a professional. Your masterpiece deserves nothing less. □

Eugene Landon is a period furniture maker in Montoursville, Pa.

BUILD THE CHAIR FROM BACK TO FRONT

Parts are fit to the chair as it comes together, rather than measured exactly and precut. Therefore, it is important to build the chair in the correct sequence.

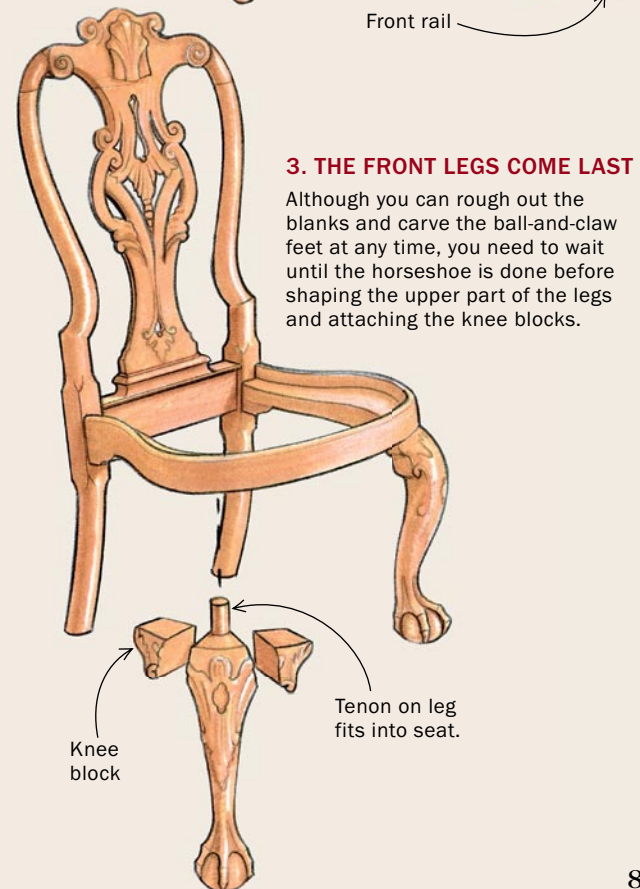
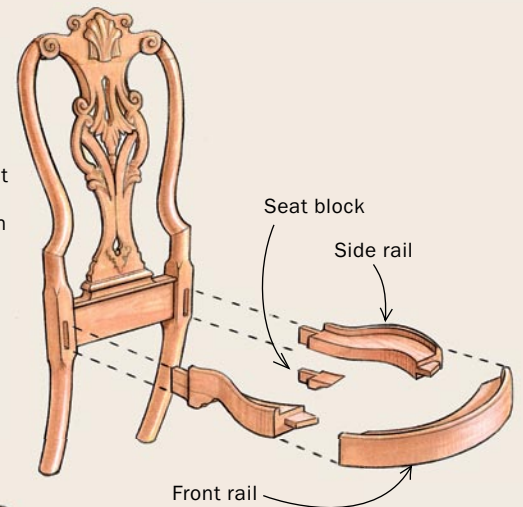


1. ASSEMBLE THE BACK

First cut out the back legs and connect them with the back rail. Then cut out and carve the crest rail followed by the back slat and the shoe that it rests in.

2. CONNECT THE SEAT

The three parts that form the seat of the chair are known as the horseshoe because of their shape. The critical junction with the back legs is reinforced with seat blocks.



3. THE FRONT LEGS COME LAST

Although you can rough out the blanks and carve the ball-and-claw feet at any time, you need to wait until the horseshoe is done before shaping the upper part of the legs and attaching the knee blocks.