Craftsman Rocker

Classic style meets comfort in this sturdy oak rocking chair

BY MICHAEL PEKOVICH

Photo, this page: Michael Pekovich

Designing a chair can be a tough thing to get right, especially a rocking chair. So I used an old Stickley-style flea-market find that's been parked in front of my woodstove for a number of years as a starting point. Its wide, low stance and deep cushion make it the most comfortable rocker I've sat in. My goal was to clean up some of the lines and proportions of the original, but make sure to keep all of its comfort intact.

The construction of the chair is straightforward, but there are curves and angled joinery that add a little challenge. Fortunately I found a way to simplify both tasks.

Start with the legs

The front legs are straight, but the rear legs take a bit of a turn. It's important to get their shape right for the rest of the project to go easily. Start by making templates for the legs. I used ¼-in. MDF. Draw the joinery on the templates to allow them to also serve as story sticks.

Trace out the rear leg profile on the stock and rough-saw the shape on the bandsaw. To clean up the lower front face of the legs at the exact angle, I made a jig for the tablesaw. The back faces are not as critical, so I just cut close to the line on the bandsaw and cleaned up with a block plane, scraping the inside corner where the block plane couldn't reach. With the legs shaped, cut the mortises. If you use a hollow-chisel mortiser, place a wedge under the rear leg to keep the front face horizontal when cutting the side rail mortises. For the mortises on the inside face, be sure to register the front of the leg against the fence.

In addition to mortises for the seat rails, the front legs get a tenon at the top for the armrest. The outside faces are grooved for the corbels that support the armrests.

Wedge simplifies angled tenons

Angled joinery can be a headache, but if you make a wedge equal to the angle of the side rails, you can use it to cut all of the angled tenons without tilting a blade or

SHAPE THE REAR LEGS

Templates guide the way. *Pekovich begins by making templates of the front and rear legs including the joinery locations. To trace out the rear leg profile, he registers the top front of the leg against the jointed edge of the blank, and bandsaws out the rear shape.*

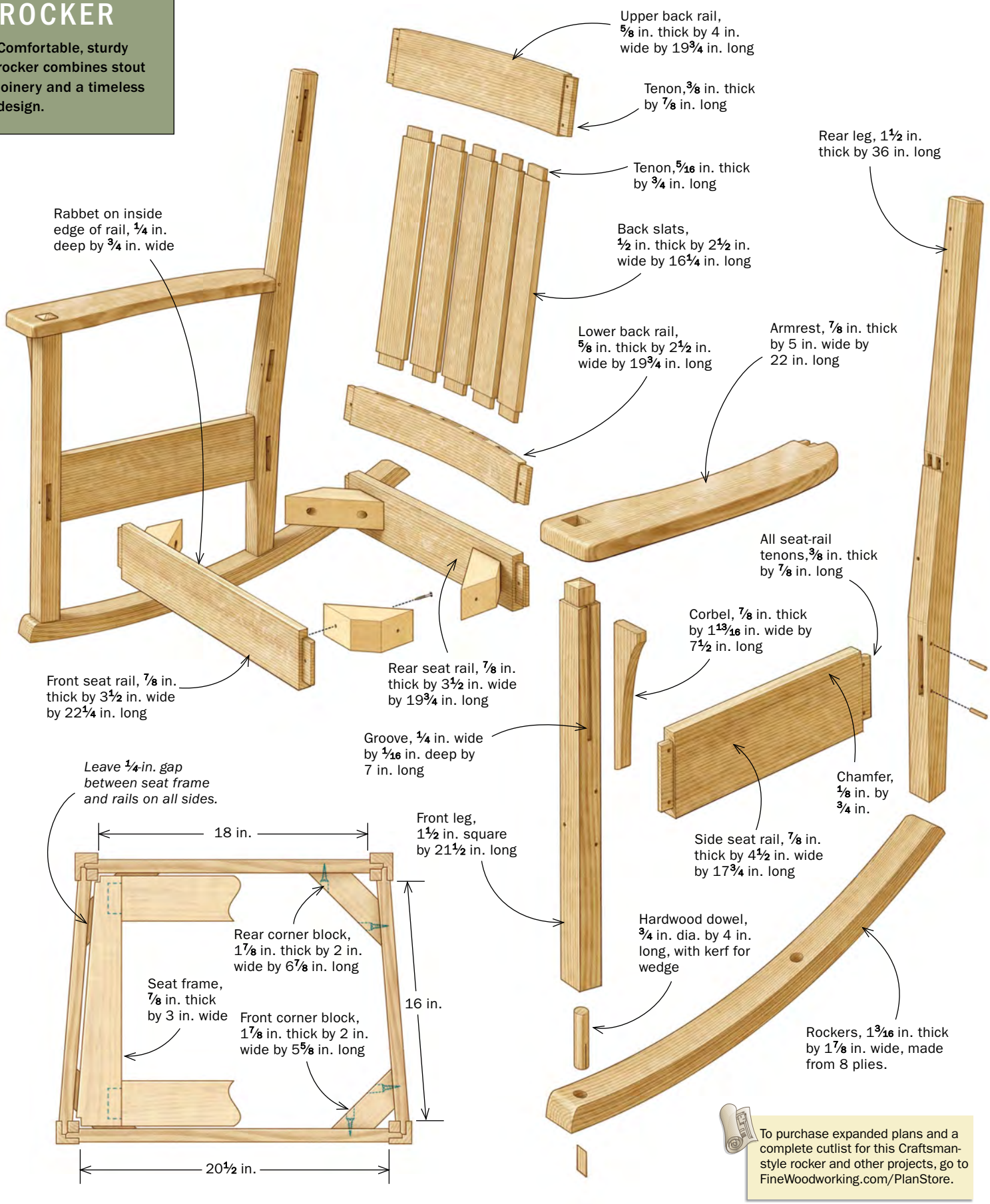
Finish the front profile. *To clean up the lower front face of the leg, Pekovich uses a tablesaw jig. The jointed upper front face of the leg rides against the jig's angled fence. The back of the leg is cleaned up with a block plane and scraper.*

Register off the front face when mortising. *This will ensure that the chair comes together square. A wedge cut to match the taper of the leg helps to clamp the leg in place.*

Photos, except where noted: Rachel Barclay

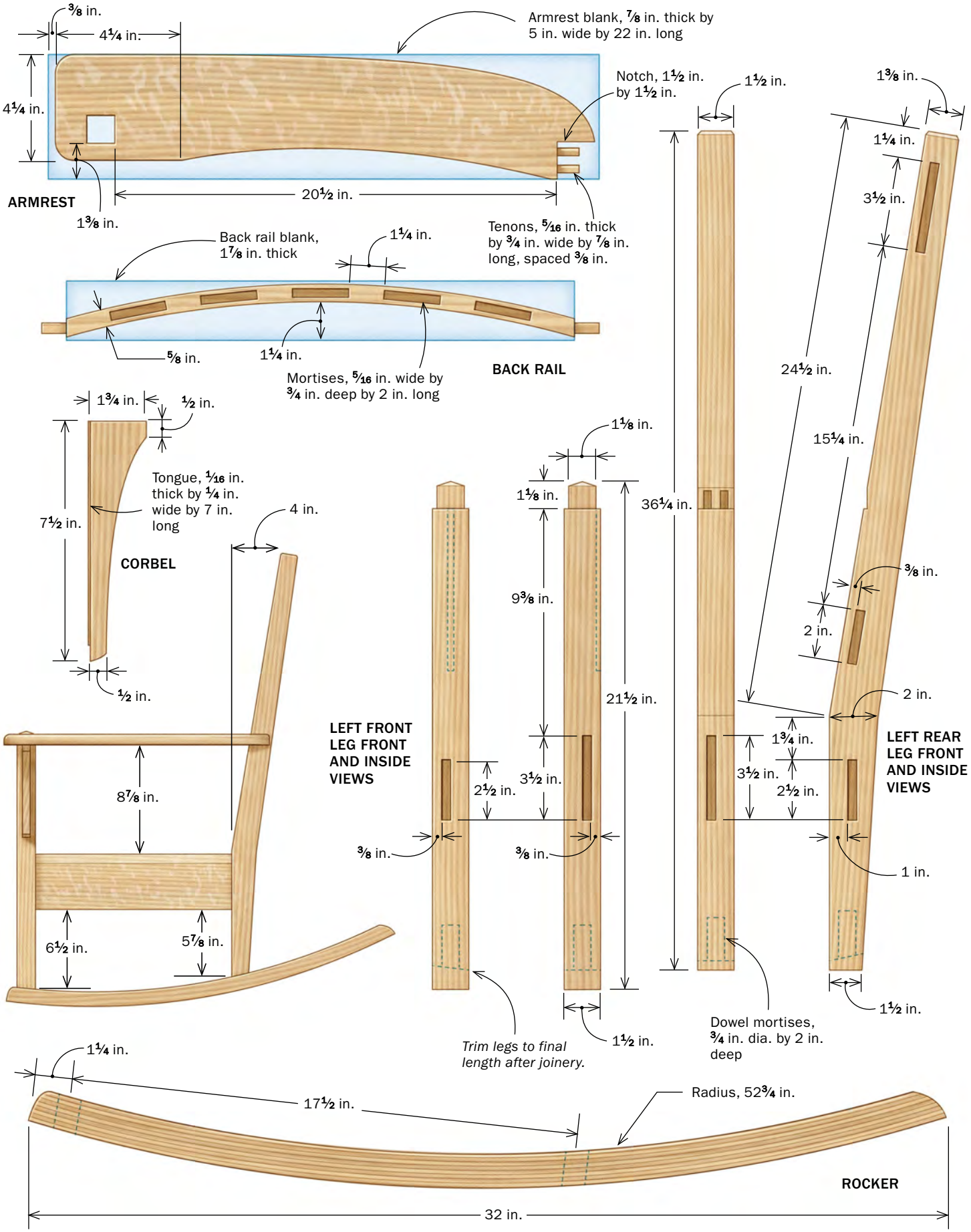
A CLASSIC ROCKER

Comfortable, sturdy rocker combines stout joinery and a timeless design.



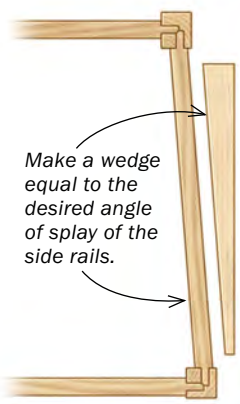
To purchase expanded plans and a complete cutlist for this Craftsman-style rocker and other projects, go to FineWoodworking.com/PlanStore.

Drawings: John Hartman



A WEDGE FOR ANGLED TENONS

A wedge that equals the splay angle of the side rails helps cut the side seat rails to length and cut the angled tenons on the ends.



Cut the side rails to length. *Screw the wedge to the crosscut sled (above) to trim the side rails to length at the proper angle. Cut one end, then add a hook stop to cut the rail to final length (right).*

Combine the wedge with a spacer to cut the angled tenons. *To cut the first cheek, clamp the rail against the wedge in a tenoning jig. Pekovich uses a ¼-in.-wide box-joint blade set to cut the cheek and shoulder in one pass (left). Then he adds a spacer next to the wedge to cut the second cheek (above). The spacer should be the thickness of the desired tenon plus the kerf of the blade.*

angling a miter gauge. Start by cutting the side rails to length with the wedge screwed to the crosscut sled so that the rail ends are angled to match the splay angle. Then combine the wedge with a tenoning jig to cut the tenon cheeks. Add a spacer block to cut the second cheek. The width of the spacer should equal the width of the mortise plus the sawblade kerf. Finish up by cutting the tenon to width with a handsaw and chiseling the end shoulders.

Back rails start as thick blocks

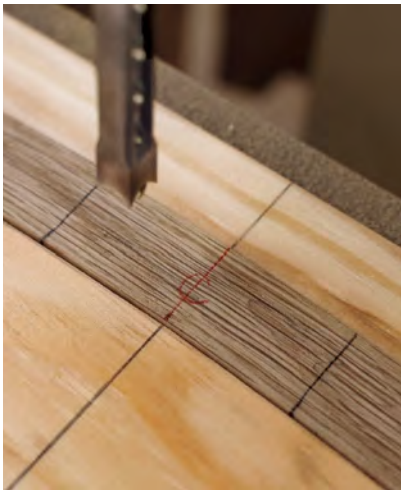
Before moving on to the rest of the joinery, you'll need to make the back rails and the rear seat rail. All three parts are the same length, as are the tenons. This ensures that the back assembly comes together square without gaps at any joint. The only difference is that the upper and lower back rails, because they'll be cut to a curve, start out as thicker blocks. Cut the tenons in all of the parts before sawing the back rails to their curved profile.

If you're careful at the bandsaw, the curves should clean up easily with a spokeshave and scraper. Complete the back rails by mortising them for the back slats. I screwed a set of curved jaws to my mortiser fence to make the job easier. Dry-fit the back rails to the legs to determine the slat length and tenon the slats to fit.

The last task is to cut the front seat rail to length and tenon

Cut the tenons before the curves. *The same blade and spacer used for the seat rail tenons are used for the back rails as well.*

Saw and smooth the curves. *A steady hand and sharp blade at the bandsaw should leave just a little waste to clean up. Pekovich uses a spokeshave followed by a card scraper to quickly smooth away the bandsaw marks.*



Mortise the back rails for the slats. *If you have a mortiser with a sliding table, a pair of curved clamping cauls makes the job easier. Draw a centerline at each mortise location on the back rail and align it to a centerline on the cauls. Then shift the table left and right.*

Dry-fit and measure for the front rail. *It's common for the angle of the side rail tenons to differ slightly from the plan. If that happens, it will throw off the length of the front rail. To account for any variation, wait until the rest of the chair parts are cut and dry-assembled before measuring and cutting the front rail to length.*

ADD THE ARMRESTS

With double tenons at the back and a through-mortise and tenon at the front, the armrests add extra insurance against racking.

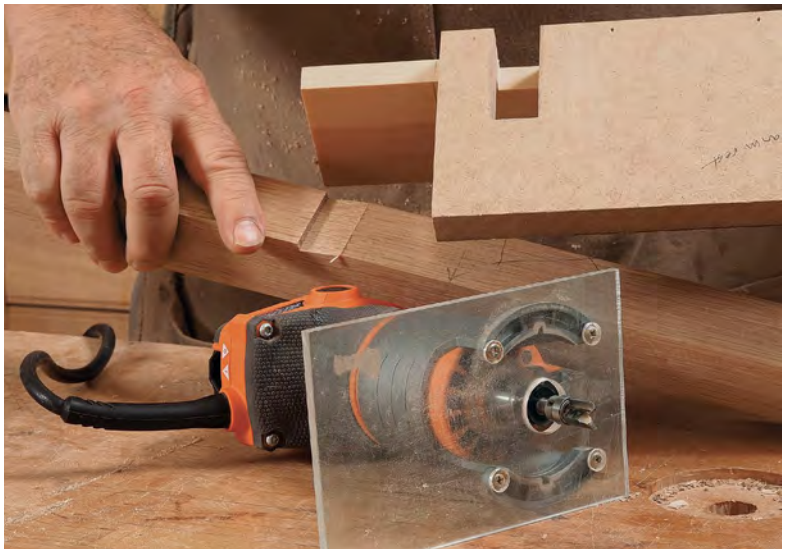
Dry-fit to locate the notch in the rear leg. *To simplify the double-tenon joinery at the back of the armrest, Pekovich first cuts a notch in the leg that's perpendicular to the armrest. Rest a straightedge on the shoulder of the tenon on the front leg and mark the bottom of the notch on the rear leg.*

the ends. It's best to save this for last so that you can dry-fit the back assembly, side rails, and front legs to measure for the front rail length. If there was any error in your wedge angle, you can adjust the length of the front rail so that all the joints come together without gaps at the shoulders.

Add the armrests

The armrests attach to the rear legs with a double tenon. The leg is angled where they meet, so the first step is to rout a notch in the leg perpendicular to the armrest. This lets you cut the tenons with square shoulders. To locate the notch, dry-fit the chair and rest a straightedge on the tenon shoulder, then mark where it intersects the rear leg. I used a simple routing jig and pattern bit to cut the notch. The key is to add a wedge to the bottom of the jig to rout the notch at the correct angle. Next, cut the mortises at the notch location and cut the double tenons using a crosscut sled at the tablesaw. The tenons are shouldered on the top edges only. Clamp a piece of MDF along the baseline and use a bearing-guided straight bit to rout the shoulders.

The next task is to locate the mortise on the armrest for the front leg tenon. Clamp a straightedge to the inside face of the rear leg and measure the distance between the straightedge and the inside cheek of the tenon. Then measure between the notch



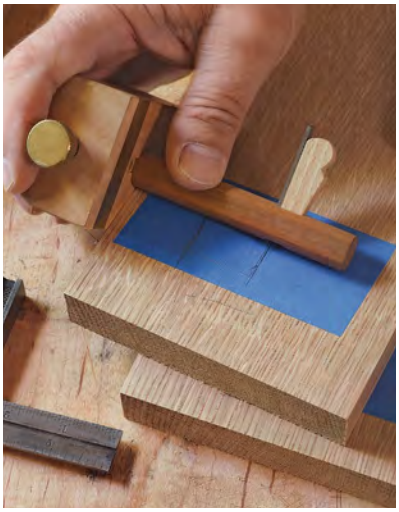
Notch the rear legs. *The routing jig has a cutout equal to the thickness of the armrest. A wedge attached to the bottom creates a flat that is parallel to the front leg. The jig is clamped to the leg and a bearing-guided straight bit is used to rout the notch.*

Mortise the rear legs for the armrests. *Place a wedge under the rear leg so that the flat of the notch is perpendicular to the bit. Cut the bottom end of the mortises flush with the bottom of the notch. The top ends are inset from the top of the flat to allow for a shoulder.*

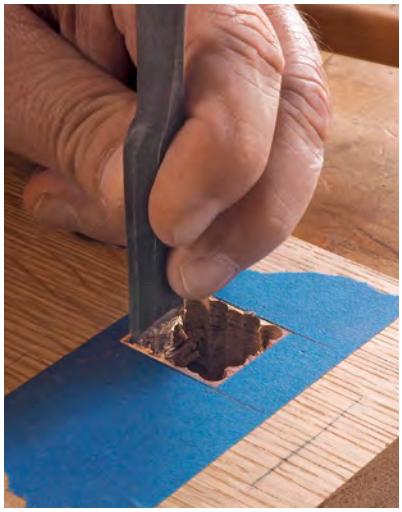
Tenon the armrests. *After laying out the tenon spacing on the armrests, cut them at the tablesaw using a crosscut sled. Define the tenon walls first, then slide the armrest over to remove the waste.*

Shoulder the tops of the tenons. *Use a bearing-guided straight bit to cut the shoulders. To guide the cut, notch the corner of a piece of MDF and clamp it along the baseline of the tenons. The side of the notch prevents you from inadvertently routing into the armrest.*

Measure off of the rear leg to locate the armrest mortise.



Pinpoint the mortise for the front leg tenon. *To locate the mortise side to side, clamp a straightedge to the inside face of the rear leg and measure between it and the inside cheek of the tenon. Then measure between the notch in the rear leg and the rear cheek of the tenon to locate the mortise front to back.*



Drill and chop the mortise. *At the drill press, remove most of the waste. Then chop to the scribe lines working halfway through from each face.*

in the leg and the rear cheek of the tenon. This will give you the location of those two mortise walls on the armrest. Use a marking gauge to lay out the mortise on both faces of the armrests. After drilling and chopping the mortises, cut the armrests to their final profile.

Get rocking

The last task is to outfit the chair with the rockers. Rather than sawing them from solid stock like the back rails, I created the curves with a bent-lamination technique. Start with thick stock a few inches over length and rip it into strips roughly 3⁄16 in. thick, jointing the face between cuts. Make a triangle on the stock before you start; this

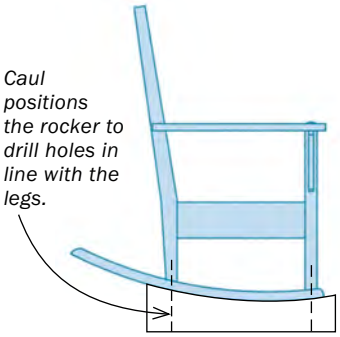
Shape the armrests. *Cut out the profile at the bandsaw, then shape the edges with a block plane and files. The front of the armrest can be rounded slightly for comfort. Grip it and let your hand tell you how you need to shape it.*

ROCKERS

Using bent laminations creates a stronger rocker than cutting it from solid stock.

Saw the plies. *Joint the face of the blank between each cut. Remove the sawmarks from the second face at the planer or with a handplane.*

A bending form creates the curves. *Pekovich layered MDF to create a clamping form and drilled holes for clamps. To keep the plies aligned, he wraps the bundle with stretch wrap after gluing and then wraps each end of the bundle to the form. Begin clamping from the center and use a flexible caul to distribute the clamping pressure.*

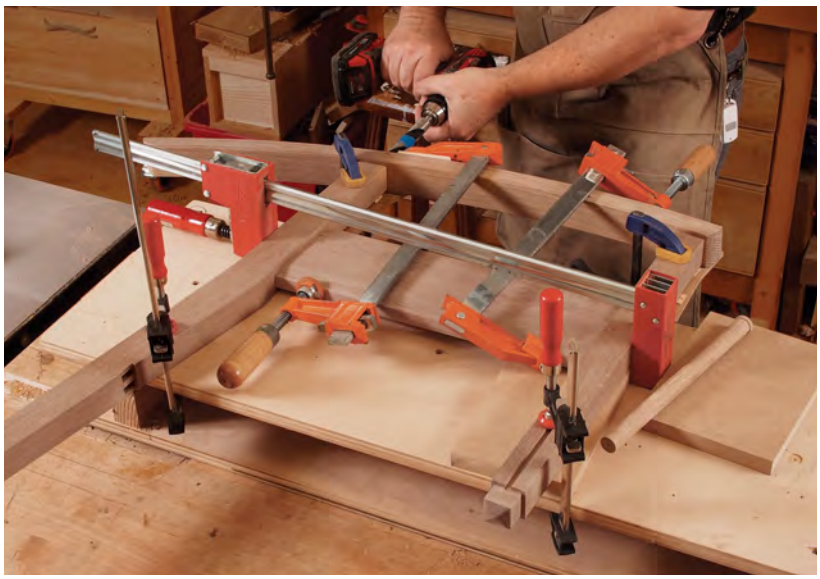


Pre-drill the rockers. *After cleaning up the rockers, trim them to length and drill through-holes for the dowels. Make a curved caul to support the rocker and use a Forstner bit to drill holes at the leg locations.*

will help you keep track of the order of the strips for a more seamless glue-up later.

Make a bending form from layers of MDF with holes drilled at clamp locations and the ends notched for clamping as well. Finally, screw cleats to the bottom of the form to raise it off the benchtop for easier clamping and cover it with packing tape. I used Unibond 800 glue for the lamination because it has a rigid glueline and won't creep over time. When the glue is dry, run one edge of the lamination over the jointer and then head to the planer to clean up the opposite edge.

There are a few options for attaching rockers, but I went with dowels, which are



Trim the legs and drill for dowels. *Set the rocker in place and scribe the curve onto the legs. After trimming them, use a block plane or file to fine-tune the fit. Then clamp the rocker in place as a drilling guide and use a brad-point bit to drill the legs.*

ASSEMBLE THE CHAIR SIDES FIRST

VIDEO WORKSHOP
Upholsterer Michael Mascelli shows how to make a cushion for this rocker in a members-only video at FineWoodworking.com/267.

Glue the side assemblies. *Kerf one end of the dowels for a wedge and epoxy them into the legs. Fit the armrest onto the front leg tenon, then bring the side assembly together. Finally glue on the rocker, driving a wedge into the kerf to lock it securely. Trim the dowel flush once the glue is dry.*

essentially slip tenons. Dry-fit the legs to the side rails and hold the rocker in place to mark the curve on the leg bottoms. Bandsaw the shape and then fair each curve to match the rocker using a block plane or file. Drill the rockers for the dowels using a concave caul at the drill press. Then use the rocker as a drilling template for the legs. I turned oak dowels, but you can buy hardwood dowel stock if you wish. Slot the upper portion for wedging later and glue them into the legs with epoxy.

Finish before assembly

This is the perfect project for pre-finishing because nothing needs to be flushed after glue-up. I fumed the white oak rocker overnight using janitorial-strength ammonia, and followed up with a wiping varnish and brown wax. (For more on fuming, see Finish Line: "Fumed finish: authentic Arts and Crafts," *FWW* #186, p. 116.)

Start by gluing the slats to the back rails; then glue up the side assemblies. Add the rockers, gluing and wedging them in place. Finally, bring the entire assembly together. Screw corner blocks inside the seat rails to add strength and give the cushion a place to rest. I chose to let an upholsterer handle the cushion, but I provided a seat frame with ¼-in. clearance around each edge and a notch at each leg post. □

Michael Pekovich is a furniture maker, instructor, and FWW's creative director.

Bring it all together. *Start by gluing the back slats to the back rails, then glue up the side assemblies. Once those dry, glue everything together. When the final glue-up has cured, add screw blocks inside the seat rails at each corner to strengthen the joints and provide a platform for the cushion.*