



BOARDED LOW BENCH

Chapter 99

Bite off exactly what you can chew.

This low bench is one of the first projects I made as a beginning woodworker. And I've returned to the project many times because this furniture form has a lot of things it can teach you.

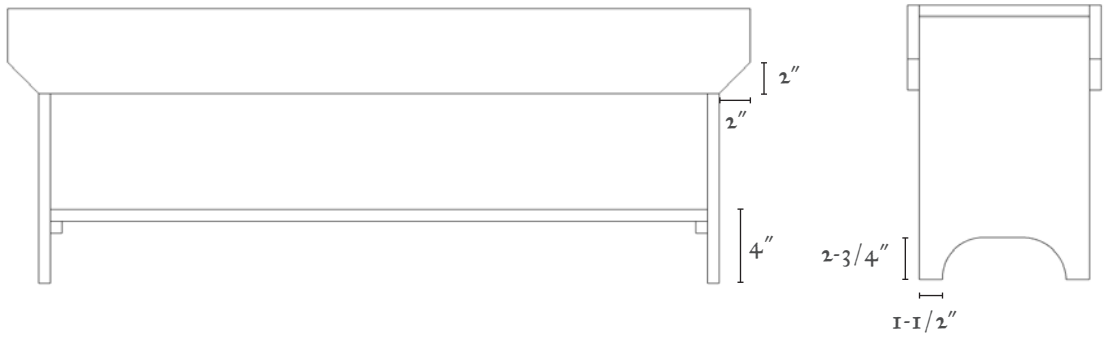
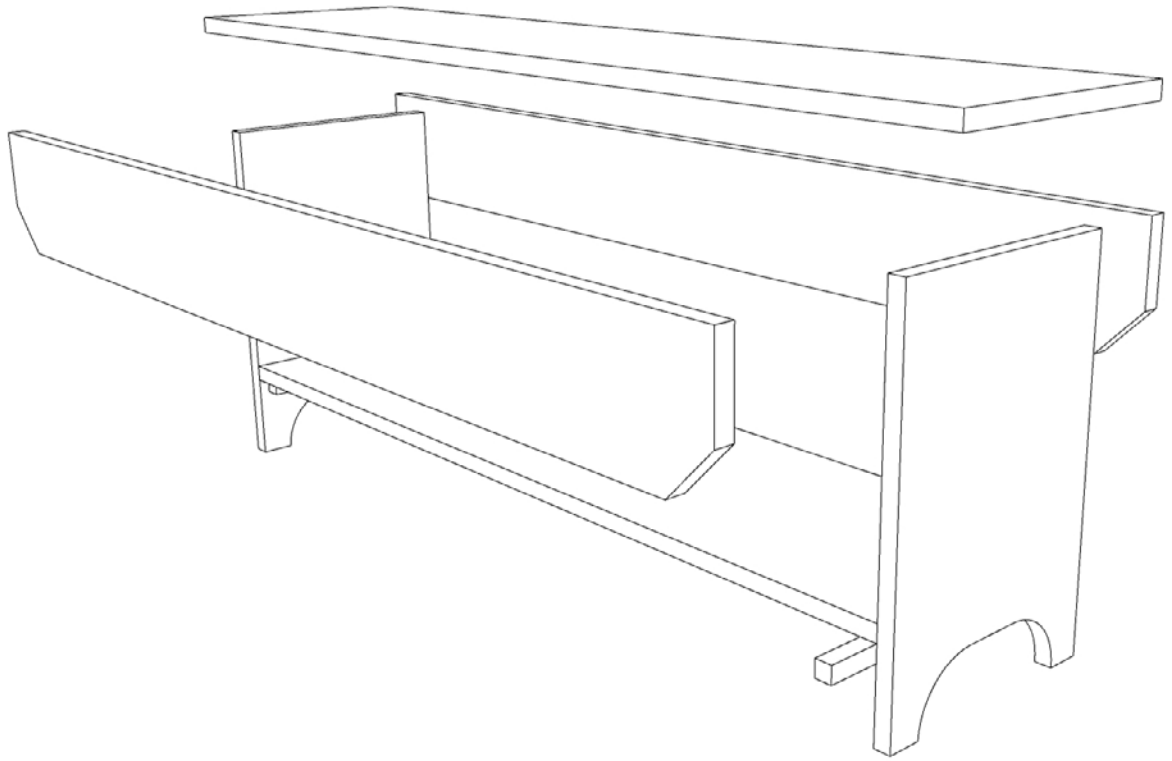
For the dead-nuts beginner, this bench is a way to build a useful project for your home using just a few tools, a few hours of shop time and two 8'-long 1x12s. And if the result is a little crooked or ragged, then it fits in with all the boarded benches you'll see at antique stores.

For the intermediate woodworker, this bench is a chance to focus on processing stock by hand, planing surfaces to perfection and using a shooting board. If you are trying to become proficient with hand tools (especially saws and planes) this project is an ideal exercise. Saw the pieces close and plane them to a perfect fit and finish.

I've also built this bench to achieve other goals. When I was learning to make and fit drawers, I built one of these benches and incorporated a dovetailed drawer. I painted a checkerboard on the seat and stored its checkers in the drawer. (Then I sold it to a customer.)

And when I was warming up to build a Nicholson workbench with angled legs, I built one of these sitting benches with angled legs to wrap my head around some of the complementary angles. (If you squint your

Boarded Low Bench



eyes you'll see how this sitting bench is built similarly to a Nicholson workbench.)

The bench is also an ideal project for learning to use cut nails or blacksmith-made rosehead nails. None of the nails in this bench is located close to the ends of the boards, so you can experiment with different pilot holes without much risk of splitting your work.

But mostly, I just like this bench. I still have the one I built in my first workshop in Lexington, Ky. in 1993 or 1994. Despite my lack of skill at the time, the bench has survived and now sits under a window in our place in Covington, Ky., where our cats use it to hunt squirrels and the neighbors. I've sat on this bench a thousand times as I worked out recipes in my kitchen. And lots of woodworking luminaries have (I think) farted upon it while visiting me.

I hope you'll consider building one because they are loads of fun to make. Here's how I go about it.

Pine is Fine

I've always used white pine 1x12s to make these benches. Full stop. Pine is cheap, easy to work and doesn't move much with changes in humidity. Those qualities make it ideal for this project. If you insist on using a fancier wood, pick one that doesn't move much in service. There is some cross-grain joinery in this project, so wood movement is something to watch out for.

All you need to make this bench are two 8'-long 1x12s. The cutting list and construction drawing show the seat and legs as 11" wide. If your 1x12s are 11-1/4" wide, then go with that. Don't rip off 1/4" of wood on my account.

Saw the seat, aprons and legs to close size – as close as you can get with a handsaw. (Leave the shelf 1" overlong until the rest of the bench is assembled.) Then shoot the parts to finished length. The legs need to be the exact same length. The seat and the aprons should also be bang-on the same length as well (though you can true up small inaccuracies after things are assembled).

I do this with a shooting board. You don't have to own a shooting board, though the appliance makes the task a snap. If you don't have a shooting board, clamp together the boards that need to be the same length (48", for example) and plane the ends simultaneously.



Shoot & confirm. Here I'm shooting the ends of the legs, then checking them against one another. They need to be the same length. What that length is exactly isn't as important as long as it is in the neighborhood of 17".

Saw the Legs & Aprons

Many of these benches feature some sort of cut-out at the bottom of the feet. These cut-outs aren't necessary, but they add a little style to the piece. Pick a curve, an angle or an amoeba if you like. Draw it on the feet. The feet as shown are two 2-3/4"-radius arcs joined by a straight line. But that shape is no better than any other.

Saw out the shape, then clean up your cuts with a rasp and sandpaper.

I also sawed off the corners of the aprons, which is another traditional detail that is not structurally necessary. Mark the 2" x 2" triangle on the bottom corner of each apron. Saw it off and plane off the saw marks.



Better for me. I like to hold a coping saw vertically when making scrolling cuts such as these. My saw cuts end up more square through the thickness of the work.



Clip the corners. This old miter box is handy for angled cuts that have to be repeated several times. These tools are common in the used tool market as they were popular among garage woodworkers and carpenters before the age of electric miter saws.



Get it flat. Here I'm working on the interior surface of a leg panel. It needs to be flat so it meets the shelf without a gap. But it doesn't have to be beautiful because it's not very visible. So a little tear-out or a few plane tracks aren't going to matter.

Cleaning Up

Most of the work in building this bench is done with a plane. The joints between the seat and the aprons need to be tight, strong and exactly 90°. This is all done with handplanes. If you are using pine 1x12s (like me) then you might need to remove some cup and twist from the boards to get the parts to fit together accurately.

This is also an opportunity to work with a pre-industrial mindset. Some surfaces, such as the exterior of the seat and aprons, need to be beautiful but not flat. Other surfaces, such as the interior surfaces of the aprons and seat, need to be flat but not beautiful. Still other surfaces, such as the underside of the shelf, can be almost rough-sawn and still work.

So focus your attention on what needs to be flat and clean.

Dress the edges of the seat to exactly 90°. These need to be straight, 90° to the faces and clean to make a good glue joint. This is a great place to practice with your long planes. Or, if you own a Stanley No. 95



Glue the 'U.' Tight joints between the seat and aprons ensure the bench will look good and last a long time. Clamp the parts together, adjust them as needed to ensure they are flush and clean off the glue. Then wait for an hour before removing the clamps.

edge-trimming plane, you can get the job done without much thought.

After cleaning up the parts, get out the glue. It's time to assemble the seat to its aprons.

The Slow Way

If you are in a hurry, you can glue and nail all these joints together and whip out this bench in an hour or two. I prefer to take a slower approach. I glue the parts together, clamp them until the glue cures, then add the nails. I find this is the better approach when working alone.

If, however, I have an extra set of hands that can hold things in place while I nail them, then I might take this quicker route.

First I glue the seat to the aprons. I prop the parts up on some 2x4s to get them up off the benchtop. Then I apply the glue and clamp things together. With the parts held off the benchtop, I can easily feel if the mating surfaces are flush and make small adjustments. It also makes it



Cheater plane. The No. 95 and its integral fence ensures that the edges will stay square as you fit the legs. It's the ideal plane for the beginner who is still struggling with a jointer plane.



Square all around. Clamp the leg in place and use a mallet to tap it around until it is perfectly 90° to the seat and the aprons.

easier to clean off the glue squeeze-out while it's wet.

After an hour in the clamps, remove them then fit the legs between the aprons. This is done with a handplane (I used a No. 95 plane to keep the edges square). Take a few shavings then test the fit of the leg. The leg should slide in smoothly without bending the aprons out. Take your time here.

Once the legs fit between the aprons, glue them in place. First "size" the end grain of the legs. Sizing is where you apply a thin coat of glue, let it soak in for a minute or two, then apply a fresh coat over that. When used on end grain, this technique increases the strength of a joint that contains a lot of end grain.

After sizing the end grain, apply a bead of glue to the inside of the aprons. Press the legs in place then clamp the aprons to hold them. Use a square to ensure the legs are 90° to the underside of the seat and the interior faces of the aprons. Take your time with this joint and try to get it perfect. It will make fitting the shelf much easier.

Fit the Shelf

If you did your job with the square, then fitting the shelf should be a snap. Begin by screwing the cleats to the inside surfaces of the legs. Use No. 8 x 1-1/4" screws. Drill the clearance holes and countersinks into the cleats for fastening both the shelf and the legs.

After you bore the clearance holes and countersinks, clamp the cleat to the leg. Then drill the pilot holes for the screws and drive the screws.

Now you can fit the shelf. Saw it to close size then shoot it until it slides right in. When it fits, take it out then clean off all the machine marks with a handplane. Don't forget to plane the long edges of the shelf so it is the same width as the legs.

Clamp the shelf to the cleats and drill pilot holes into the shelf. Screw the shelf in place.

At Last, Nailing

Put off nailing up all the joints until the end. Why? The nail heads can interfere with cleaning up the surfaces of the bench. So I plane up the entire bench – true the ends, remove any glue and make sure the seat and aprons are trued up. Then you can drive the nails.

I use 2" (50 mm) Rivierre nails, which have a square and tapered shank like a Roman nail. These work best with a tapered pilot hole, though you can easily get away with a straight hole. The depth of the pilot should be about half the length of the shank (1" or 25 mm). I start with a drill bit that is the same approximate diameter as the tip of the nail. That usually works in soft pine. For this bench I had to jump up a size because the nails were splitting the work a bit.

As always, it's best to experiment with a test joint or two if you are unfamiliar with the nails or the wood species.

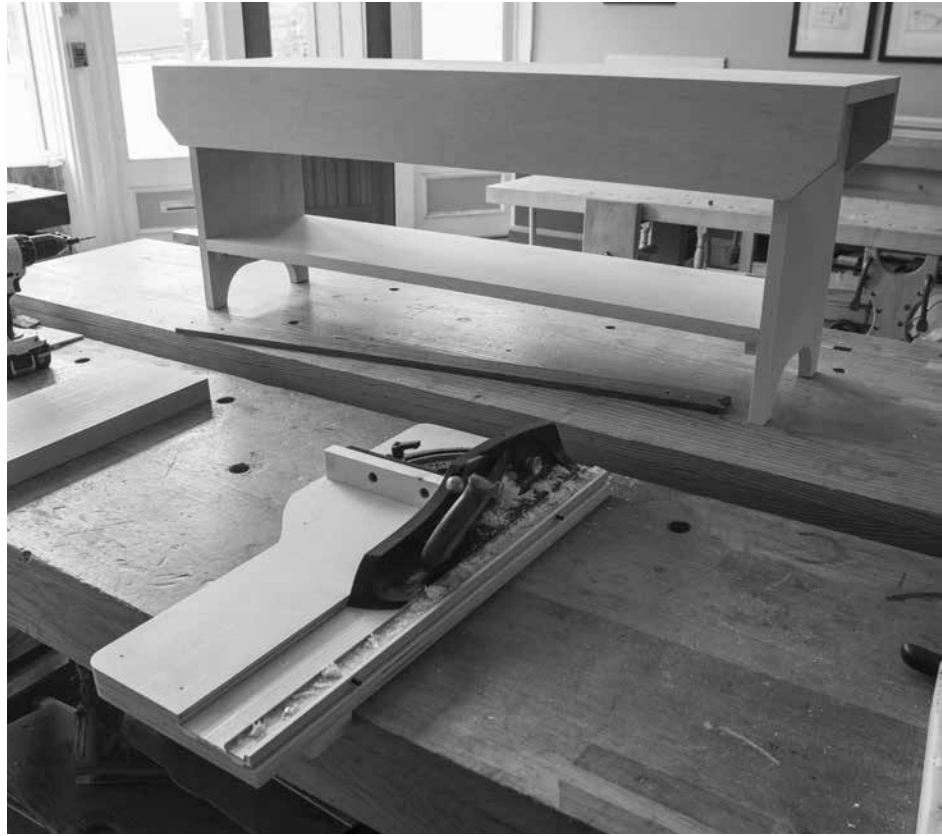
To lay out the spacing of the nails, I use masking tape and mark out my pilot holes on that. Then I can drill my holes and transfer the layout to other places on the bench.

Finishing Details

Break all the edges with fine sandpaper. Then apply a finish. I used a homemade wiping varnish (equal parts boiled linseed oil, mineral spirits and spar varnish). I wipe on thin coats, let them dry then lightly sand them with #600-grit paper. Then repeat until the bench looks nice.



First, secure the cleat. Screw the cleat in place – the clamp helps hold it while you drill the pilot holes.

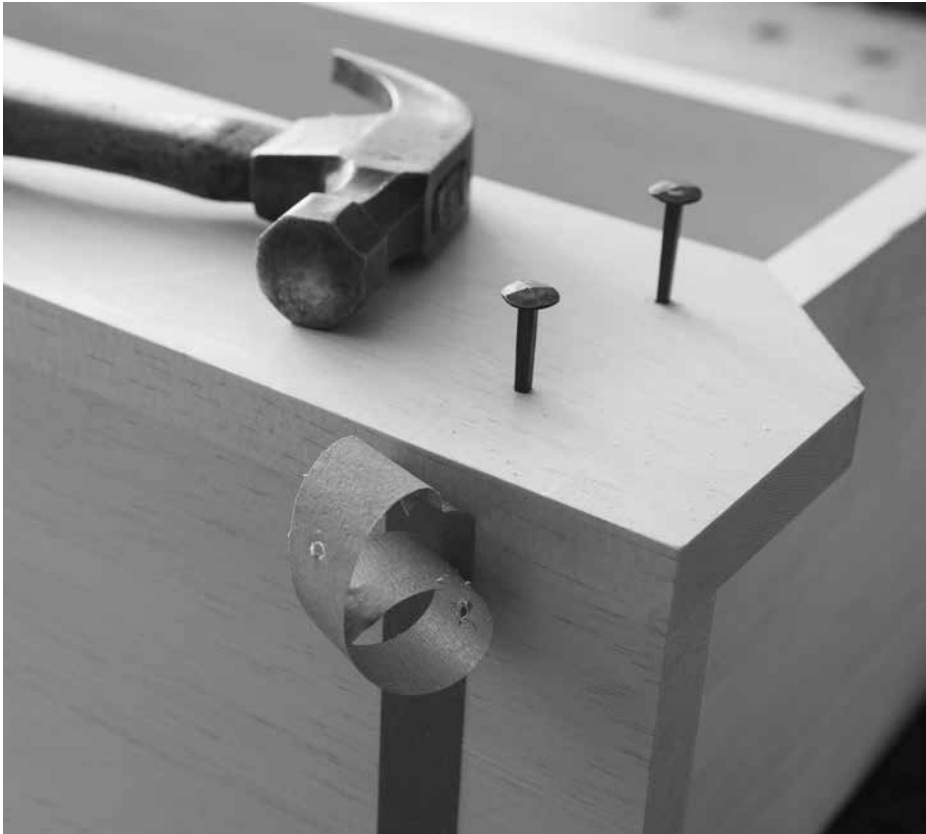


An easy shot. If the legs are square, then shelf should slide right in. If the legs aren't square, you'll have to taper the ends of the shelf to fit the odd-sized hole.

This usually requires three or four coats.

Historically, these benches endured almost every finish imaginable, from wax to polyurethane. Milk paint always looks good on these benches, and I've used it many times to good effect.

No matter what finish you use, don't be disgruntled if it doesn't come out perfect. You'll build another of these low benches soon enough and get a chance to try a different finish.



Driven. Headed nails hold the aprons in place much like a nut and washer hold machine-screw parts in place. So I recommend headed nails (such as roseheads) for a long-term joint.

BOARDED BENCH

NO.	PART	SIZES (INCHES)		
		T	W	L
1	Seat	3/4	11	48
2	Aprons	3/4	5-1/2	48
2	Legs	3/4	11	17
1	Shelf	3/4	11	43-1/2*
2	Cleats	3/4	3/4	10

* Part is oversized for fitting