Minibench Works Wonders

Benchtop model has all the features of a full-size bench

BY STEVE LATTA

Get closer to the action

The minibench puts your work at a comfortable height for detail work. It's perfect for inlay, for trimming furniture parts, and for intricate carving.

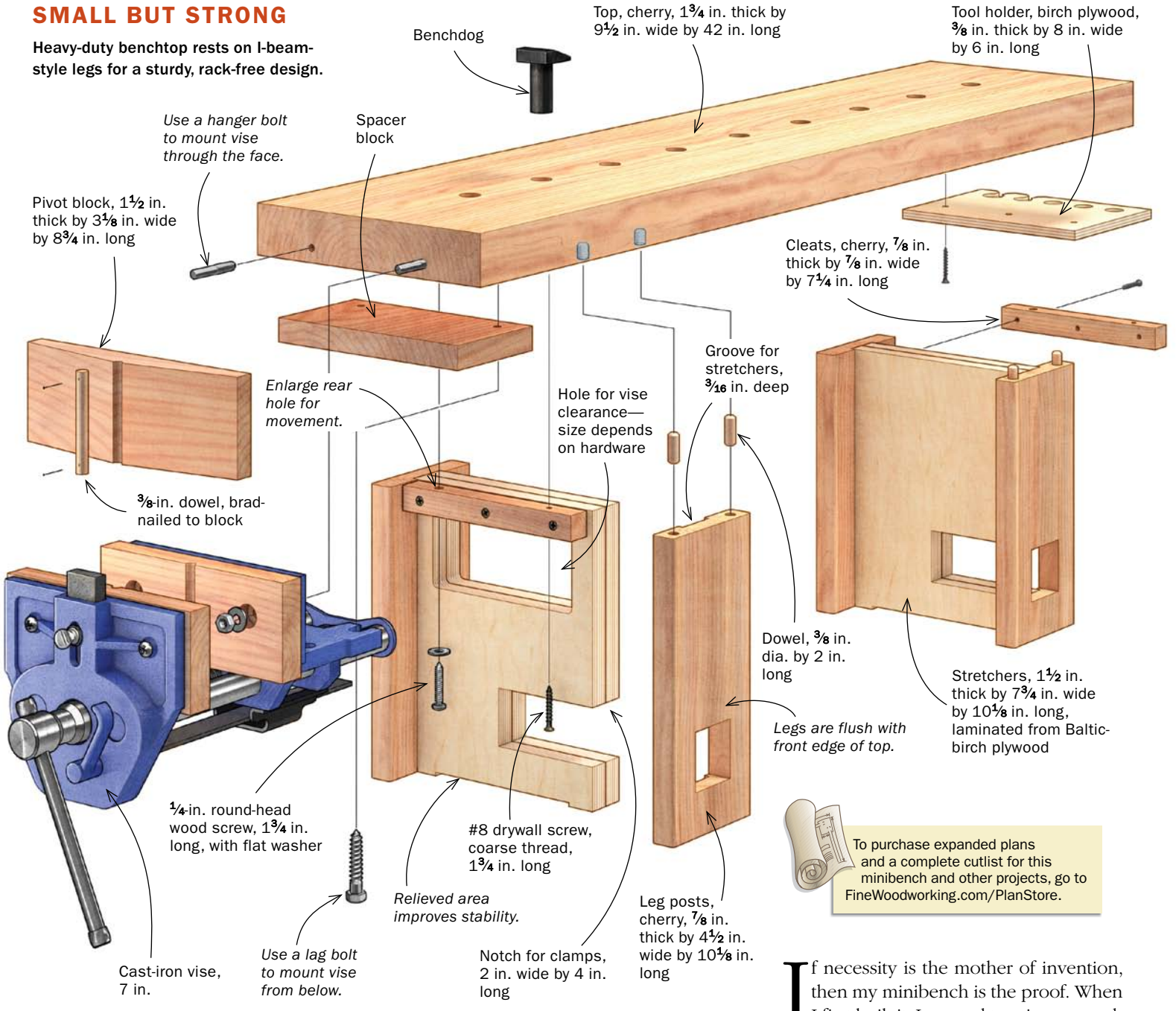
CLAMP PARTS ON TOP

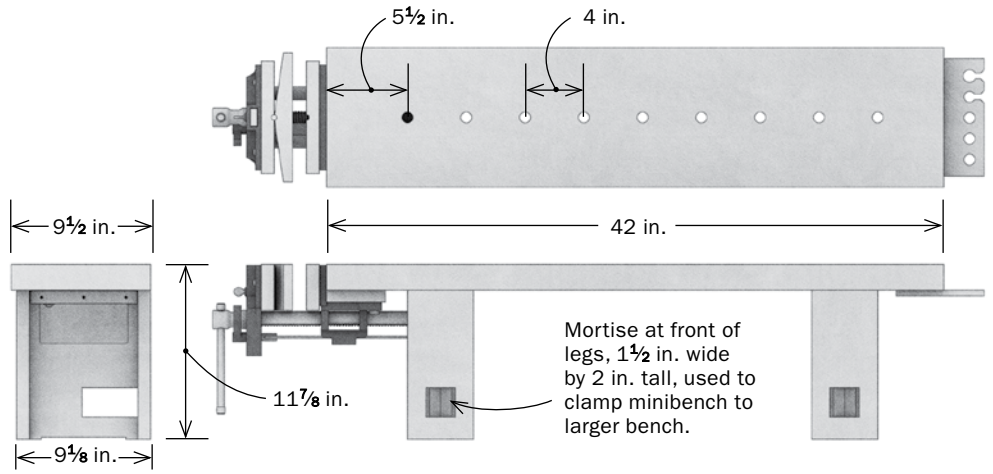
IN THE VISE

OR ON THE FRONT

SMALL BUT STRONG

Heavy-duty benchtop rests on I-beam-style legs for a sturdy, rack-free design.





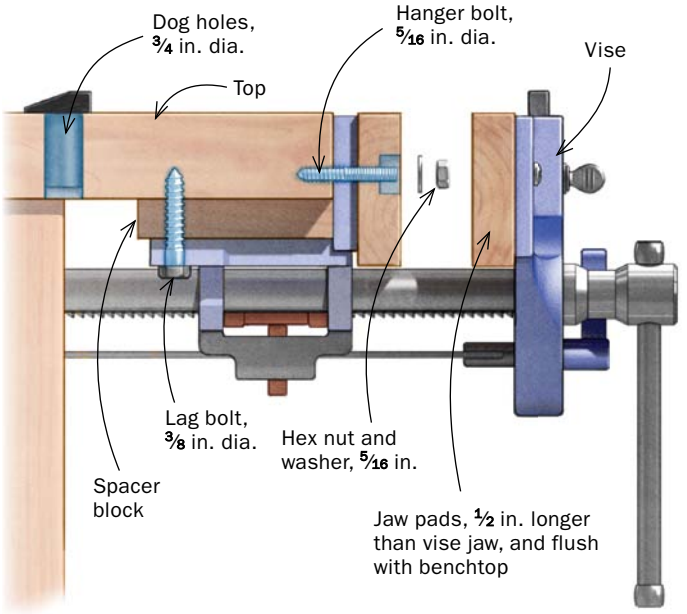
To purchase expanded plans and a complete cutlist for this minibench and other projects, go to FineWoodworking.com/PlanStore.

If necessity is the mother of invention, then my minibench is the proof. When I first built it, I wanted to raise my work to a more comfortable height, and to hold legs and other furniture parts for joinery cuts and detail work. Clamped on top of my regular bench, the minibench gets the work closer to my eyes without bending over. The 42-in.-long top is perfect for most furniture parts. It has a vise on one end, and the dog holes make it easy to hold parts. Plus there's plenty of clearance to use most types of clamps, making it easier to handplane and carve more accurately.

I can clamp a workpiece to the front of the base when working on the edge of a piece, like hogging out the waste between dovetail pins or mortising the hinges on a

Photos: Ben Blackmar; drawings: John Hartman

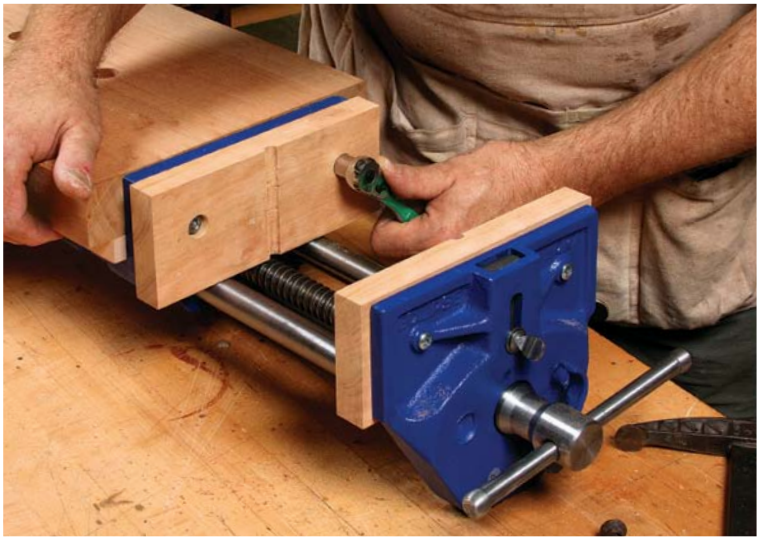
Make the top



Drill the dog holes. *To avoid blowout, Latta uses a spade bit in the drill press. He sets the depth stop for just after the point comes through, then flips the benchtop and finishes from the other side.*

Get the vise at the right height. *Glue on a spacer block to locate the top of the vise 1/16 in. below the benchtop.*

Bolt on the vise. *Two hefty lag bolts and two hanger bolts help keep this vise right where it needs to be. With the benchtop upside down, set the vise in place and sink the lag bolts.*



Take the bite out of the jaws. *Bolt on hardwood pads to create a non-marring surface inside the vise jaws.*

door. And a tool holder on one end helps me keep track of wayward tools. The small benchtop consolidates my work area, helping me stay focused on my task. Because the work area is limited, tools seem to get put back more often too, letting me work more efficiently. For all these reasons, this minibench has become my primary bench.

Pick a tough wood for the top

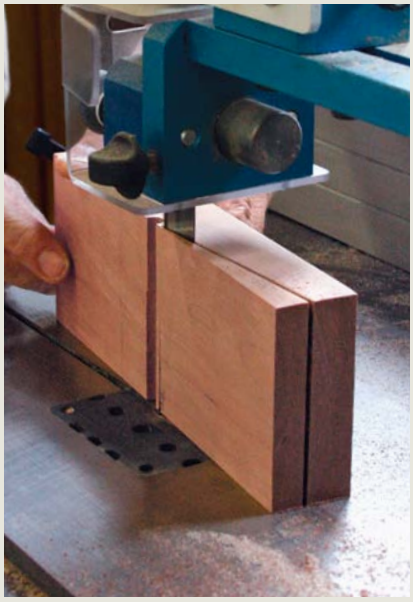
The benchtop is cherry, but most hardwoods will do. Ultimately, you need a wood

Not square? No problem. *The pivoting block helps the vise conform to an out-of-square workpiece, putting pressure where needed, to hold a tapered leg, for instance.*

Add a pivoting jaw for tapered work

A pivoting-jaw insert holds shaped furniture parts such as tapered legs in the vise. It's pretty simple to make. The pivoting block has a dowel attached to the back that rides in a matching half-round in the jaw pad, letting it swivel freely from side to side. The jaw is held in place by the vise's clamping pressure, so it's easy to remove.

Drill for the dowel. *Clamp a backer block to the pivot block and drill a ⅜-in. hole on the seam to create a half-round channel for the dowel. Then drill the wooden jaw pads the same way.*



Angle the back. *Latta relieves the back on each side of the channel, so that the block can pivot freely in both directions.*

Attach the dowel. *Fasten the ⅜-in. dowel to the block with glue and a few small brads.*

that's wear-resistant and tough enough for benchdogs and hold-downs. Mill the top to final dimensions, then drill the ¾-in.-dia. holes for the benchdogs at the drill press. They should be centered on the top and spaced about 4 in. apart down the length.

I wanted this compact bench to have a vise, so I chose an Eclipse 7-in. quick-release vise with a built-in benchdog—a must for holding long furniture parts like legs and rails. The quick-release makes for fast, easy adjustments. Mount the vise so that the jaws are 1/16 in. below the top of the bench, to protect you from dulling your sharp tools on the metal jaws. Set the height of the vise by using a spacer block mounted under the benchtop. The thickness of the block will depend on the vise you use. After gluing on the spacer block, you can install the vise.

I-beam legs are light and sturdy

The top rests on two strong I-beam legs, consisting of two hardwood posts and a stretcher made from a double thickness of ¾-in. Baltic-birch plywood. Both legs are mounted flush with the front edge of the top so that work can be clamped there. Each leg is mortised on the front to make it easy to clamp to your regular workbench. The leg closest to the vise needs a clearance hole for the vise hardware.

Glue up the stretchers for the legs and cut them to size. Relieve the bottom edge of the stretchers at the tablesaw using a dado blade and a miter gauge with a tall

Make the legs

The legs are shaped like an I-beam, with two hardwood posts connected by a thick plywood stretcher. A mortise in the front of each leg makes clamping to the benchtop quick and easy.

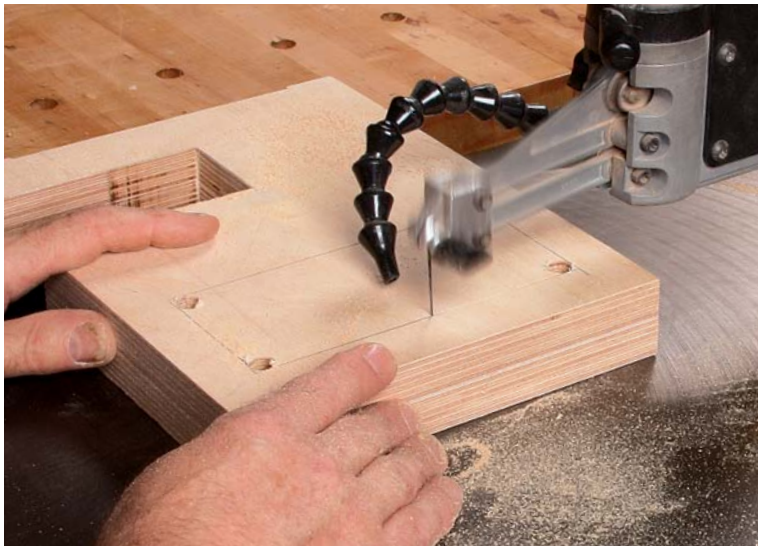
Relieve the bottom of the stretcher. *Latta uses a dado blade. He attaches a tall fence between two miter gauges and clamps on blocks to stop the cut 1 in. from each side.*

fence. This relieved area creates two small feet and helps keep the legs from rocking on any irregularities. Next, mark the front of the stretchers for the clamp notches. Make the two long cuts on the bandsaw using a fence and a piece of ¼-in. plywood underneath to prevent blowout, and finish the cut using a scrollsaw. Next, mark and cut out the mortise for the vise in one stretcher.

The leg posts are cut from one board. Mill it to thickness and width, then plow the groove for the stretchers. Use a stretcher to check the fit as you go. Now you can cut the posts to length.

Because sharp wood corners can break and chip easily during the normal wear and tear of woodworking, ease the long edges of the posts with a ¼-in. roundover bit on the router table. Then use the stretchers to transfer the marks for the clamp mortises to the posts. Cut them out, drilling the corners on the drill press and cutting the sides with a scrollsaw. Glue and clamp the posts to the stretchers, making sure the top and bottom edges are flush.

The top is attached to the legs with dowels and screws. The screws go through a cleat attached to each leg stretcher. The dowels are located in the front post to keep the top flush with the legs. To accommodate wood movement and direct it toward the back of the bench, I enlarged the clearance holes for the rear screws that go through the cleat and into the top. To



Cut out the mortises and notches. *Drill the four corners of the mortise for the vise hardware and cut the sides on the scrollsaw. Make the long cuts for the notches on the bandsaw, then connect the ends on the scrollsaw.*

Groove the leg post for the stretcher. *Latta cuts the groove a little at a time, testing the fit with a stretcher as he goes.*

Mark the leg post for the mortise. *Use the stretcher to transfer the location of the clamp mortises onto the posts. Cut the mortises using a scrollsaw.*

ATTACH THE LEGS TO THE BENCHTOP

Pop in a pair of dowel centers. *Latta uses dowels to register the front of the benchtop flush with the legs. To locate the dowel holes in the top, he uses dowel centers.*

install the dowels, drill two holes in the top of each front leg post using a ⅜-in.-dia. brad-point bit. Then use dowel centers to transfer the location of these holes to the top. Put the centers in the holes, and with the top upside down, position the legs correctly and press down. Use the dimples made by the centers to drill the holes in the underside of the top. Insert the dowels into the holes without glue. Now screw the cleats to the legs, then screw the legs to the top.

The last step is to make the tool holder from a piece of ½-in. plywood and drill a few holes in it for chisels and screwdrivers. Notch a couple of holes to the edge—that will allow it to hold wide chisels—then screw it on and drop in your favorite tools. Now you have a serious work station, and it's time to get to work. □

Contributing editor Steve Latta teaches woodworking at Thaddeus Stevens College of Technology in Lancaster, Pa.

Online Extra

To watch a short video of this minibench in action, go to **FineWoodworking.com/extras.**

Put some pressure on these points. *A flat scrap of wood helps get the legs flush with the front of the benchtop. Then just add pressure. The pointed dowel centers will create a perfect set of dimples that mark where to drill.*

Cleats keep it all together. *Mount the cleats 1/32 in. shy of the top (left), to ensure the legs are pulled tightly against the top. Put the legs in place, and screw them down. Sink the screws that connect each cleat to the top (below).*