Build a Sturdy Shop Table

A gridded top makes clamping easy and keeps sawdust out of your way

BY PETER POLCYN

As a full-time cabinet and furniture maker, I work with a lot of plywood. I typically break the sheets down using a track saw, and finding the right surface to do this work has been a challenge. Over the years I tried everything from sawhorses to traditional workbenches, but nothing worked exactly like I wanted. I need a flat, stable, well-supported surface that won't collect sawdust and allows me to clamp boards and plywood anywhere. And it can't be too precious to cut into with a track saw.

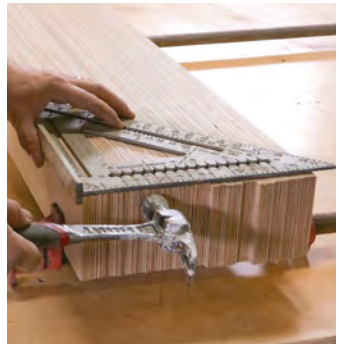
A homemade grid-top shop table, which I call a "cut table," is my answer. I built my first about a year and a half ago. Because it was made primarily for track-saw use, the design included spots for the saw and tracks. The table worked well, but there were aspects I wanted to improve. This article follows the second iteration of my cut table, which addresses the limitations of the first version.

The biggest problem was that the table sagged a little in the 8-ft. direction, likely because it was only 4 in. thick. The new version has a 12-in.-wide apron to better resist sagging. In the first version, sawdust fell right on the floor. The new version has a sloping bottom that directs sawdust to collection bins on both ends to keep my work area tidy. Finally, I added enough on-board power to use several corded power tools at once. I'm really happy with the new table and it has greatly improved my shop and my workflow. If you do casework, I strongly recommend this as an option. □

Peter Polcyn is owner of Rail and Stile Custom Woodworks in Seguin,Texas. Photos by Colin Russell.

PREP THE PARTS

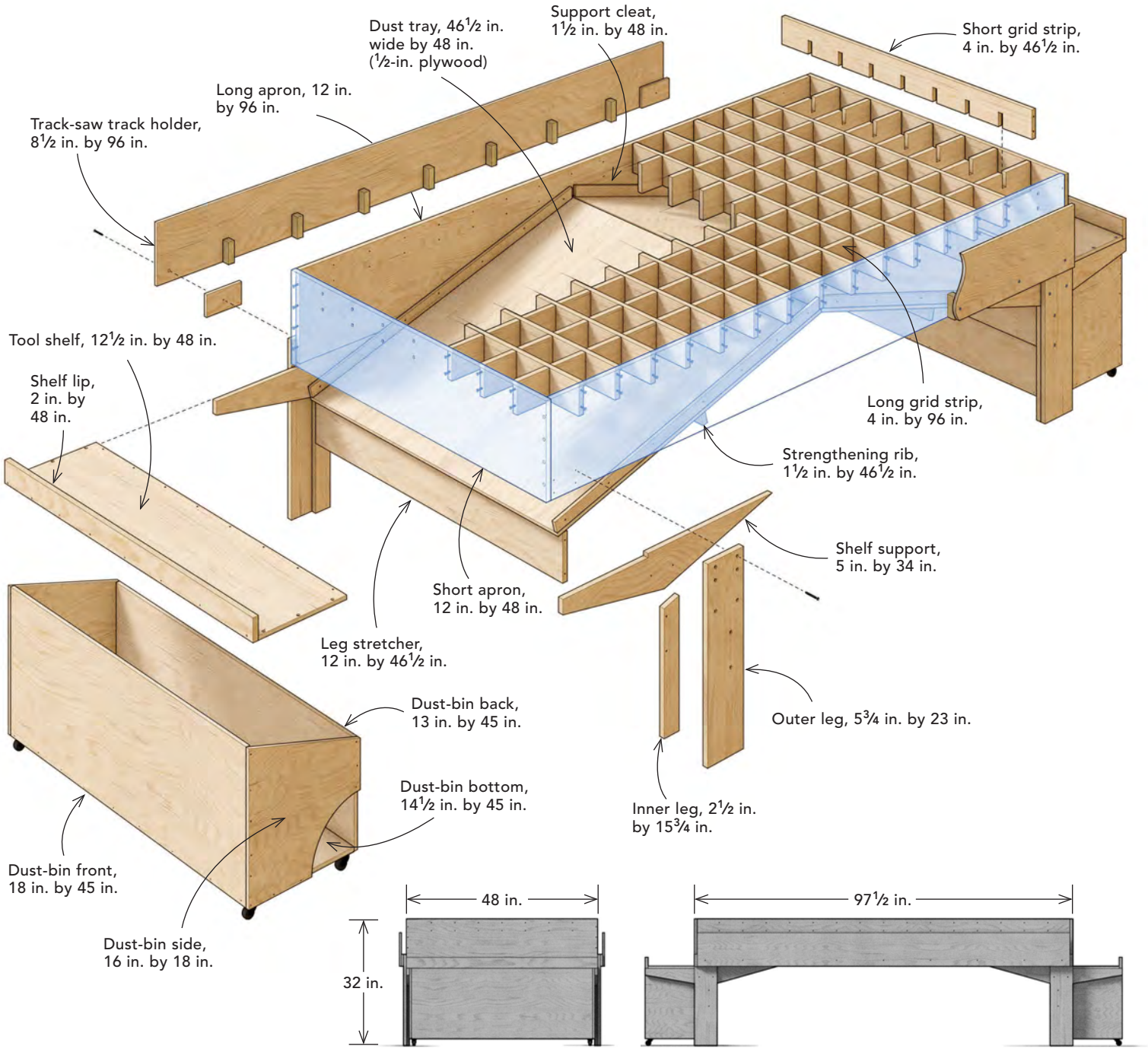
This shop cut table is made from three sheets of ¾-in. 4x8 Baltic-birch plywood and one sheet of ½-in. 4x8 Baltic-birch plywood for the dust trays. Cutting the parts is the most labor-intensive part of the process—the rest is just screwing the pieces together. Start by stacking the ¾-in. plywood flush, and trim one 8-ft. edge straight. Then separate the sheets and cut 15 4-in. strips with a track saw or tablesaw—these strips make up the top.



Align the strips. *Use a square to line up the plywood strips. Snugged pipe clamps hold the strips in position, but allow them to be moved into alignment with hammer taps. Once the ends are flushed up, use clamps with full-width cauls to align the tops of the strips, tighten the pipe clamps fully, then remove the clamped cauls.*

Notches come next. *Lay out the half-lap notches for the grid's intersecting pieces 6 in. o.c., starting at the middle and working toward the ends. I use spacing blocks and a knife rather than attempting a precise layout with a tape measure and pencil.*

Drawings: John Hartman



Slice and dice. *Set the track saw's depth just shy of the full 2-in. depth of the notches, then cut both sides of each notch, make three or more additional cuts in between, and remove the waste with a chisel.*

Flatten and split. *Use a router and jig to level the bottoms of the notches. Then cut eight of the pieces in half—do this by cutting both sides of the center notch. You will end up with 16 pieces (one will be extra), each 47⅝ in. long.*

ASSEMBLE THE TOP

The first step in the assembly process is gluing the notched plywood strips into an intersecting grid. Once the intersecting pieces are fully assembled, the apron and legs can be attached to the top with screws.

Glue the grid. *Dry-fit the parts to check the alignment, then glue them using a squirt of wood glue at each intersection.*

Tap it in. *Thump the overlapping pieces into place with a rubber mallet. Make sure the pieces are fully seated or the finished top will be uneven.*

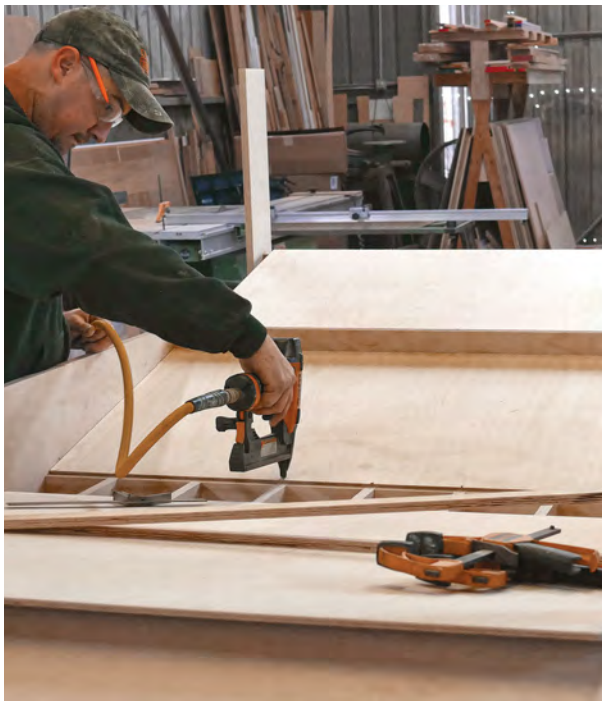
Clamp the intersections. *Each joint should be clamped for about 30 minutes. It's unlikely you'll have enough clamps, so move them to subsequent joints after the glue has sufficiently set up.*

Trim to width. *The apron ends are made from 4-ft. pieces of plywood, so the assembly must be trimmed to that dimension. This can be done before glue-up, but trimming after assembly offers one last chance to ensure the sides are perfectly straight. It takes two passes to get through the 4-in. strips.*

Add the apron. *Tack the pieces of 12-in.-tall apron in place first, then fasten them with two countersunk 2-in. wood screws into the ends of each grid strip and four into each corner, keeping the screws at least 1 in. down from the top to protect sawblades when the table is in use.*

Shelf it. *Tack and then screw a 12-in.-deep by 4-ft.-wide storage shelf onto the bottom of the apron on each end. Support brackets are added later to prevent sag.*

Cleats for dust trays. *Plywood trays under the grid slope toward each end to funnel sawdust into collection bins. Dry-fit the trays on blocking first and trace along the bottom edge. Then attach cleats for the dust trays along these lines with narrow-crown staples and glue.*



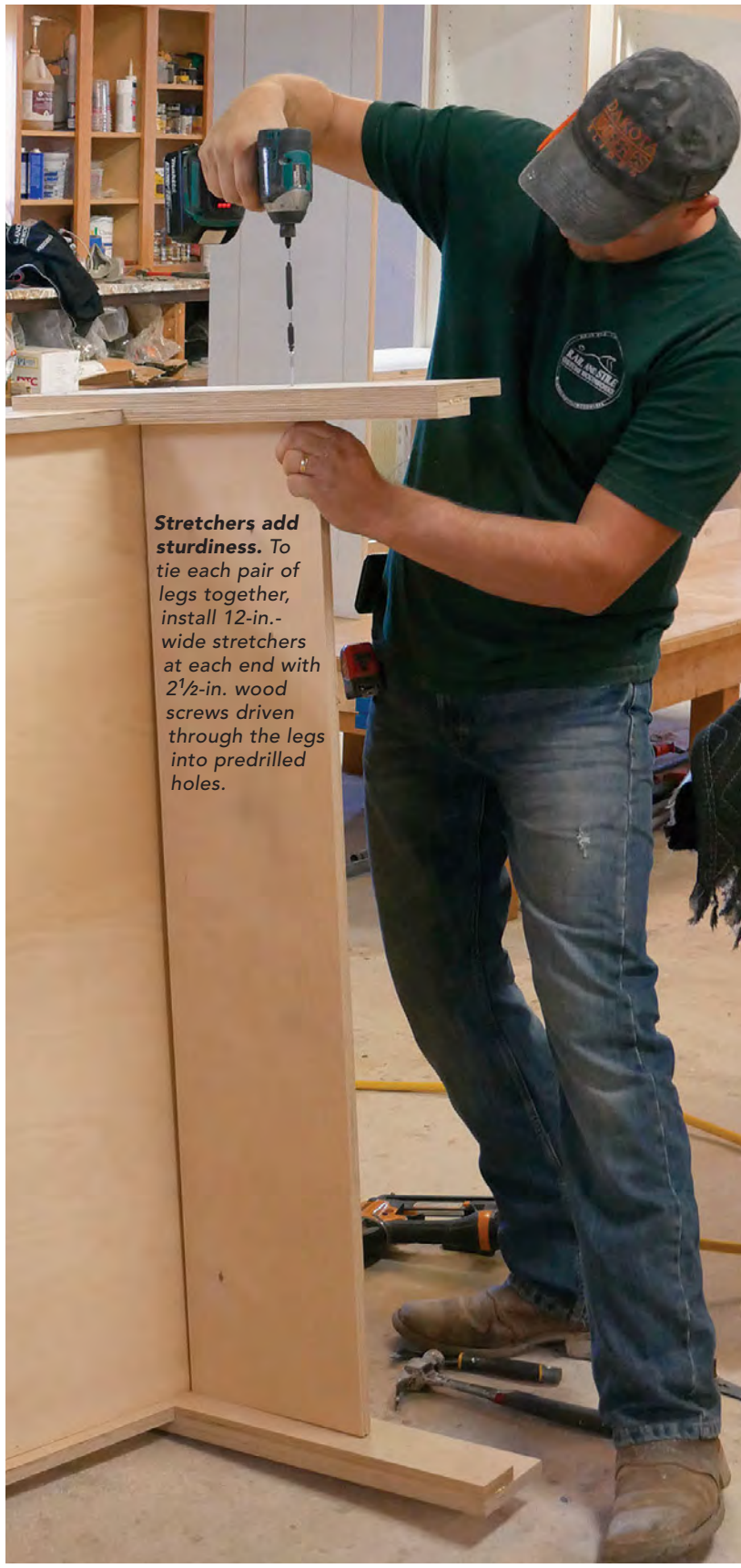
Install the legs and dust trays. *Screw the legs to the apron and then attach the dust trays, made of ½-in. plywood, to the cleats. Finally, add ½-in.-tall strengthening ribs, made of ¾-in. plywood, centered on the length of each tray and fastened with narrow-crown staples.*

STRENGTHEN THE LEGS

A cut table is only as good as it's base, which must be sturdy and resist racking in both directions to keep fasteners from loosening over time. I reinforce the legs with another layer of plywood and stretchers, and then use the nearly completed table to help build the dust bins.

Bolster and close. *I attach ¾-in. plywood brackets at the top of each table leg to serve multiple purposes. In addition to providing racking resistance, they also close the sides of the undertable dust trays and reinforce the tool shelves on either end.*

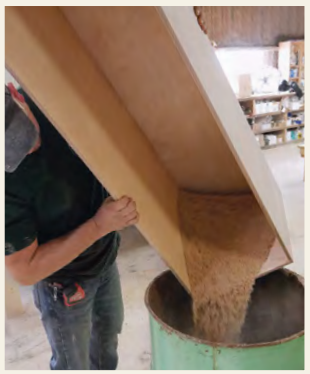
Beef up the legs. *Glue and staple strips of plywood to the inside of the legs to add strength and transfer weight directly from the table to the floor.*



Stretchers add sturdiness. *To tie each pair of legs together, install 12-in.-wide stretchers at each end with 2½-in. wood screws driven through the legs into predrilled holes.*

THE RIGHT TRACK

A holder for my 118-in. track-saw guiderail is mounted on the side of the table, where the track is kept protected and within reach. The holder also acts as a support when I'm planing, sanding, and edge-profiling boards (photo left).



LESS MESS

The table's sloping bottom and the dust bins on both ends are game changers when it comes to keeping a neat workspace. In my opinion, effective dust management is the table's best feature.

OUTFIT WITH ACCESSORIES

How you outfit the table depends on personal preference. Here's a look at how I customized my version.

POWER UP

A 4-ft.-long heavy-duty power strip with 12 outlets allows me to use a project's worth of corded tools without swapping cords, and means I rarely need an extension cord.

ONLINE EXTRAS

Go to FineHomebuilding.com/magazine to see a cut table assembly video and download a 3D SketchUp model.