

Simple Workbenches

These site-built benches are easy to make and simplify many jobs

by Tom Law

Thumb through carpentry textbooks from the turn of the century, and you'll find pictures of carpenters wearing coveralls to protect their white shirts and neckties from sawdust. Some carpenters even wore felt hats with feathers tucked festively into the hatbands. You won't find many neckties on construction sites today—or many felt hats. But in other ways, things haven't changed much since those more genteel days.

Back then it was customary to build sawhorses, workbenches and stepladders as soon as the framing lumber arrived. It's still a good idea to

fabricate a workbench or two. Even though houses are fashioned with different techniques and tools now, these benches are useful when you need more than a sawhorse. They can be made from the same materials that go into a house—a length of 2x12 or ½-in. plywood, 2x4s and some 1x material. They are not as heavy or elaborate as the benches used by cabinetmakers, and they aren't difficult or time-consuming to put together.

There are two benches I especially like. One of them is a carpenter's bench (top photo, this page) with a 6-ft. long top made from a 2x12 and

an adjustable ledge that holds up a door while you work on it. The second (bottom photo, this page) is a door bench that is light yet strong enough to support a door while you plane it to size. What makes this one unique is an opening in the top where you can stand as you walk the bench from room to room. Both benches can be assembled with glue and drywall screws.

Tom Law is a consulting editor for Fine Homebuilding who lives in Westminster, Md. Photos by Kevin Ireton except where noted.



Carpenter's bench. This bench is made from materials commonly available on a job site. The pair of 2x4 legs in the back are slightly splayed to increase stability. An adjustable support on the front will hold a door.

Door bench. This slightly different design also has adjustable cleats to hold a door, but it includes two tool shelves and an open space in the middle of the top where you can stand and walk the bench from room to room.



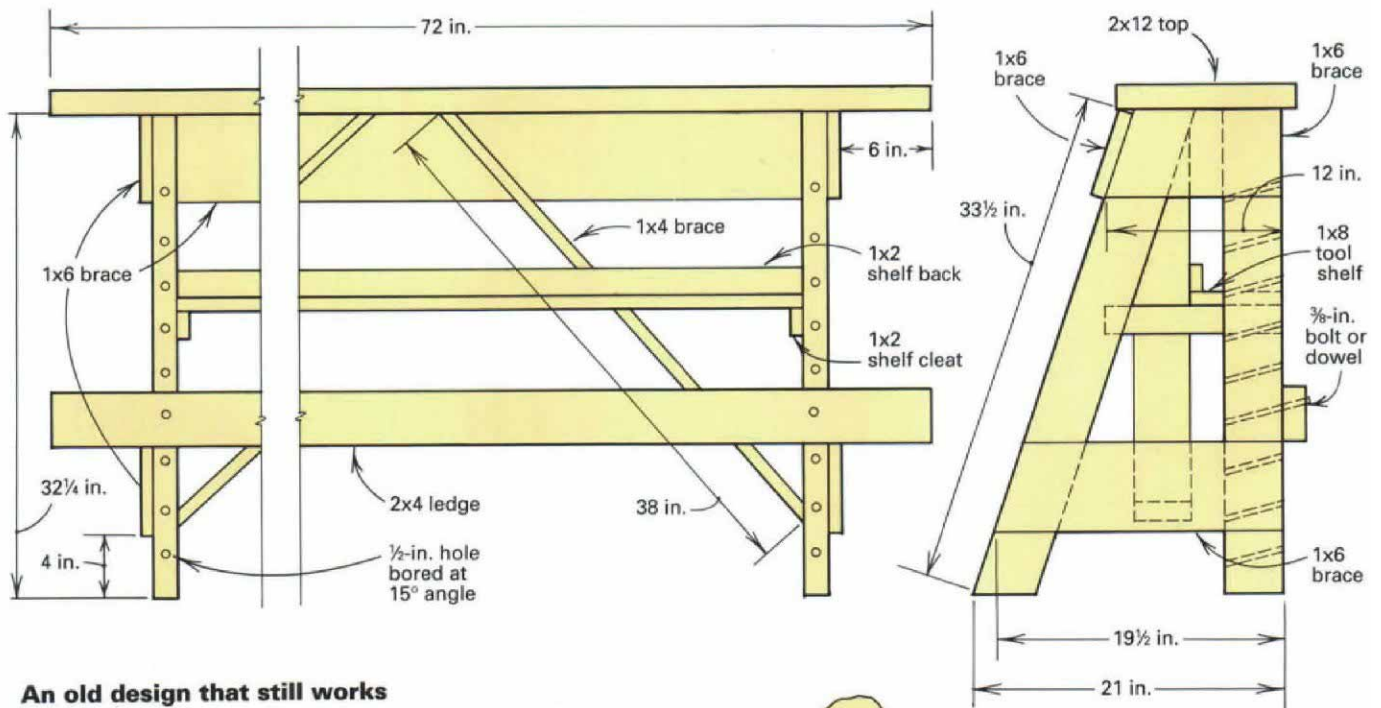
The carpenter's bench

The American Technical Society began publishing craft books in 1910, and the illustration for this bench was still included in its 1960 edition of *Fundamentals of Carpentry*. That's where I first saw it. The bench top is only about 1 ft. wide, but it still holds a number of tools, and there is a shelf in the base for any tool overflow.

The 2x12 top overhangs the base by 6 in. on each end (drawing below). The top is flush with both the frame and the legs on the side you face as you work, and it overhangs the back of the bench slightly. The legs are made from 2x4s. The legs in front are at right angles to the top, and the back legs are slightly splayed to stabilize the bench. Tied together with 1x braces and stiffened by a shelf cleat, the bench is strong and rigid.

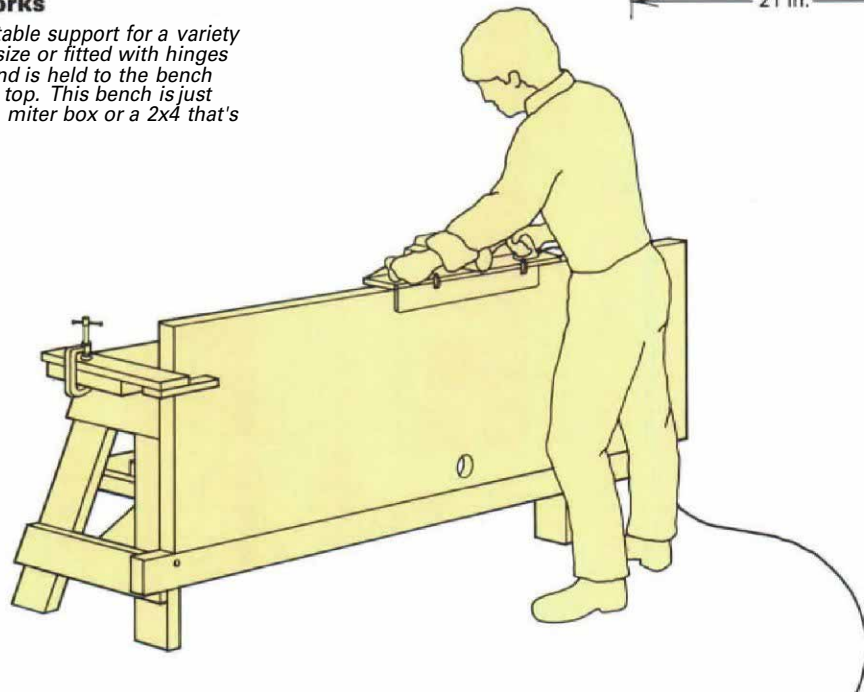
A series of holes in the front legs allows a 2x4 ledge to be adjusted to different heights. When you want to plane a door to fit an opening, just rest one edge on the ledge and clamp the top of the door to the bench. The door will stay put while you work on it. (For more on job-site clamps, see *FHB* #74, pp. 70-73).

The bench I use is made from some clear fir that I salvaged on a remodeling job. I used 2-in. thick rough-sawn lumber for the framing. I ran the lumber through a thickness planer for a clean surface and assembled the bench with glue and drywall screws. To avoid splinters I rounded each corner and edge with a router. The bench should be about 3 ft. high, but adjust the height so that it's comfortable for you.



An old design that still works

This bench provides sturdy, adjustable support for a variety of jobs. A door being trimmed to size or fitted with hinges rests on an adjustable 2x4 ledge and is held to the bench with a block clamped to the bench top. This bench is just as useful for holding a chopsaw, a miter box or a 2x4 that's being cut to length.



The door bench

The other bench pattern I like is the door bench. It's made a little differently but has the same advantages as the carpenter's bench. The door bench uses pieces of $\frac{1}{2}$ -in. plywood instead of a 2x12 for a work surface, but it also uses 2x4s for legs and 1x4s for braces. It is lighter than the carpenter's bench because benches these days don't need to be as heavy as they were when hand tools were the norm. The electric tools we use today just don't exert as much pressure on a workbench.

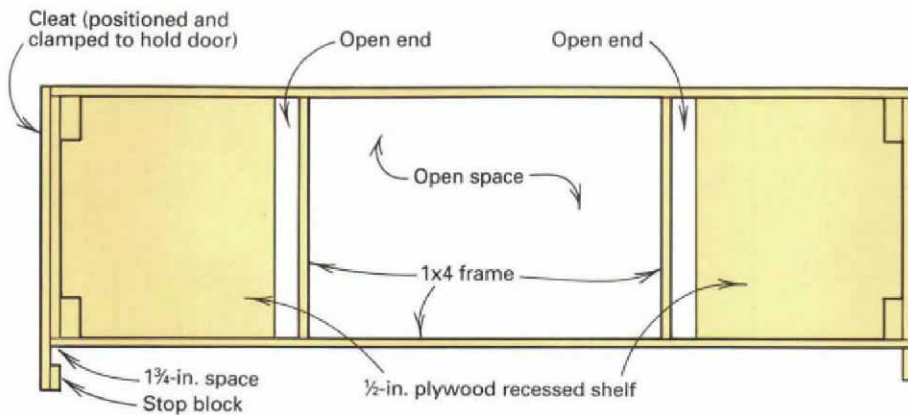
The bench is 6 ft. long, 34 in. high and 22 in. wide (drawing below). It is narrow enough to pass through a 2-ft. door opening. The top is divided into three compartments. The two on the ends are made by recessing plywood into a 1x4 frame. The lip that results keeps your tools from rolling off the work surface and keeps tools out of the way when you lay a door on top of the bench to cut it to size. I leave a small space between the ends of the two plywood pieces and the 1x4 frame so that sawdust and other debris can be swept out of the compartments easily.

The middle compartment is left open. The space gives you a place to stand when you want to move the bench around the house. Just step in-

to the opening, lift the bench and move it to the next room where you'll be working. Because the bench is narrow, it fits through doorways without damaging trim. And because it's light, one person can carry the bench with ease.

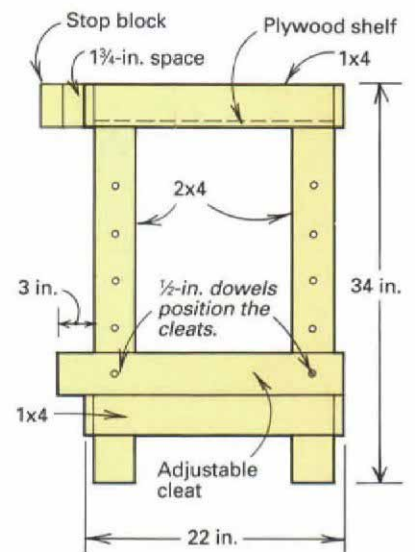
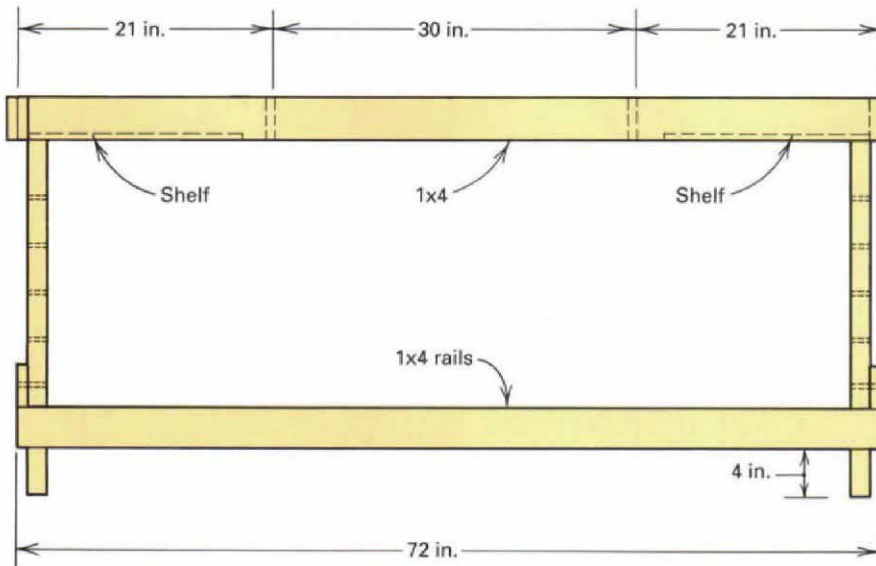
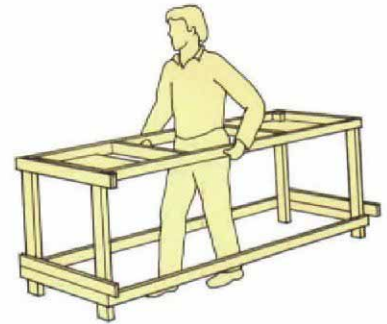
A door is laid flat across the top when it's being cut to length and held on the side of the bench for edge planing and hinge fitting. A series of holes is bored in each bench leg to make the adjustable cleats. The cleats, located on the two short sides of the bench, extend about 3 in. beyond the front legs, giving doors a place to rest. The cleats are held in place by $\frac{1}{2}$ -in. dowels. There is a third cleat with a stop block attached to it that holds the doorsnug to the bench. Just position the cleat so that the door is held snugly, then clamp the cleat to the 1x4 frame with a C-clamp.

This kind of bench also makes a good all-purpose table. Just use a damaged door or a piece of plywood for a top. With a supplementary top, the bench is a good place to spread out blueprints or locate your chopsaw. And if you build it to the right height, the bench can also serve as an outfeed table for your table saw. □



A bench that's easy to move

This bench can be walked from room to room. It also holds a door on an adjustable 2x4 ledge. When installing hinges and locksets on a number of doors, one trick to make the job go faster is to mark locations for hinges and hardware right on the 1x4 face piece of the bench. The marks can be transferred directly to each door without remeasuring.



Panel-cutting table

by Ric Puls

One of the most sought-after tools on our job sites is something we affectionately call the grid. It is nothing more than a simple panel-cutting table that rests on two sawhorses. The grid is lightweight and versatile, and it's especially useful when cutting full sheets of plywood.

Instead of trying to balance an awkward piece of plywood on a pair of sawhorses, or working at ground level, we clamp a panel to the grid and use a saw guide for straight, trouble-free cuts. The grid fully supports a panel so that we can concentrate on the cut, not the cutoff that might bind the saw. And we don't worry about damaging our sawblades because the grid is constructed without metal fasteners. We like these rigs so much that we usually have two or three of them wherever we work (photos right).

We make our grids from three 2x4s and slats of 1x4 pine. We size them so that they are 92 in. by 44 in.; that's 4 in. less in each dimension than a standard 4x8 sheet of plywood, which makes it easy to clamp a saw guide to the work. The 1x4 pine crosspieces are let into the tops of the 2x4 stringers and attached with wooden dowels and glue.

To cut the notches for the 1x4s easily, screw together all three 2x4 stringers and use a radial-arm saw to plow out the troughs all at once (be careful to put the screws only where you know cuts will not be made). Just set the depth of cut to the exact thickness of the 1x4 slats. Because there are no metal fasteners in the grid, and no diagonal braces, it is essential that all the joints be tight. So it's a good idea to rip your slats to a uniform width before making the notches. These rigs take a real pounding on the job, and they won't last if the joints are sloppy.

Lay out the stringers so that all three of them will be supported by the tops of your sawhorses. After you have determined the spacing, attach the slats. They are held in each notch by a pair of 1/2-in. dowels. Bore each set of holes at opposing angles, and glue the slats and dowels in place. Once the glue has dried, you can trim the dowels with a saw so that the work surface is flat. The absence of nails or screws means you can make cuts anywhere on the surface without worrying about nicking your sawblade.

Even with the grids, we don't freehand long cuts. Instead, we use site-built saw guides (top photo). These are straightedges with glued-on fences that are clamped to the workpiece. They are easy to make and reduce tearout. They also guarantee straight edges (for more on how to make saw guides, see *FHB* #76, pp. 63-65). Used together, a grid and a saw guide take the hassle out of cutting a stack of panels accurately. And if someone inadvertently cuts a grid in two (it does happen), it's not difficult to make a replacement.

—Ric Puls is a builder and woodworker in Elkhart Lake, Wis.



Trouble-free cuts. The grid, supported on a pair of sawhorses and teamed up with a saw guide, helps guarantee accurate cuts on sheets of plywood. Offcuts won't bind the sawblade, and the lack of metal fasteners means you won't damage your blade when making a cut.

No metal fasteners

The 1x4 slats are held to the 2x4 stringers by pairs of 1/2-in. dowels and glue. Bore the holes for each pair at opposing angles to make the joint strong, and make sure the slats fit snugly into the notches.

