



Extra Help for Holding Work

**Holdfasts and
hand screws
make your bench
more versatile**

BY CHRIS GOCHNOUR

Every piece of furniture I make begins at my workbench and ends there, too. It's where I lay out, cut, and fit joinery, plane surfaces, and glue it all together. At the end of the project, it's where I do things like break edges and look for small defects in the surface. Because the bench is such an important tool, it's critical that it be set up for effective and efficient work. This means it must be able to hold work reliably and securely, while still being flexible enough to get a handle on any part you throw its way.

A bench's ability to hold work securely begins with its vises, but it shouldn't be limited by them. When my front and tail vises are unable to get an adequate grip on a workpiece, I turn to other strategies. Most of them involve a holdfast or two. Holdfasts are quick to use, apply plenty of clamping pressure, and can be located just about anywhere on a bench where you can drill a hole. I'll show you how I use them to supplement my vises, as well as a few other techniques that expand my bench's workholding abilities.

FRONT VISE

TRADITIONAL DESIGN NEEDS SOME HELP

A single-screw vise can rack when you hold a part on one side of the jaw. It also has trouble holding wide or long stock. The solutions are simple.

WEDGE ELIMINATES RACKING

To prevent racking when clamping a workpiece on one side of the jaw, use an L-shaped wedge. Slide it in from the opposite side so that both sides are clamping something of the same thickness. The vise holds the part securely, and you can work more accurately.



HOLDFAST EXTENDS THE GRIP

Dog holes drilled along the front apron make the front vise more versatile, letting you use it in conjunction with a holdfast to clamp a wide panel for dovetailing. Without the holdfast, the board would chatter so much that sawing would be nearly impossible. A holdfast can also be used to secure the far end of a long board for edge-planing, another task that's far more difficult without the holdfast.



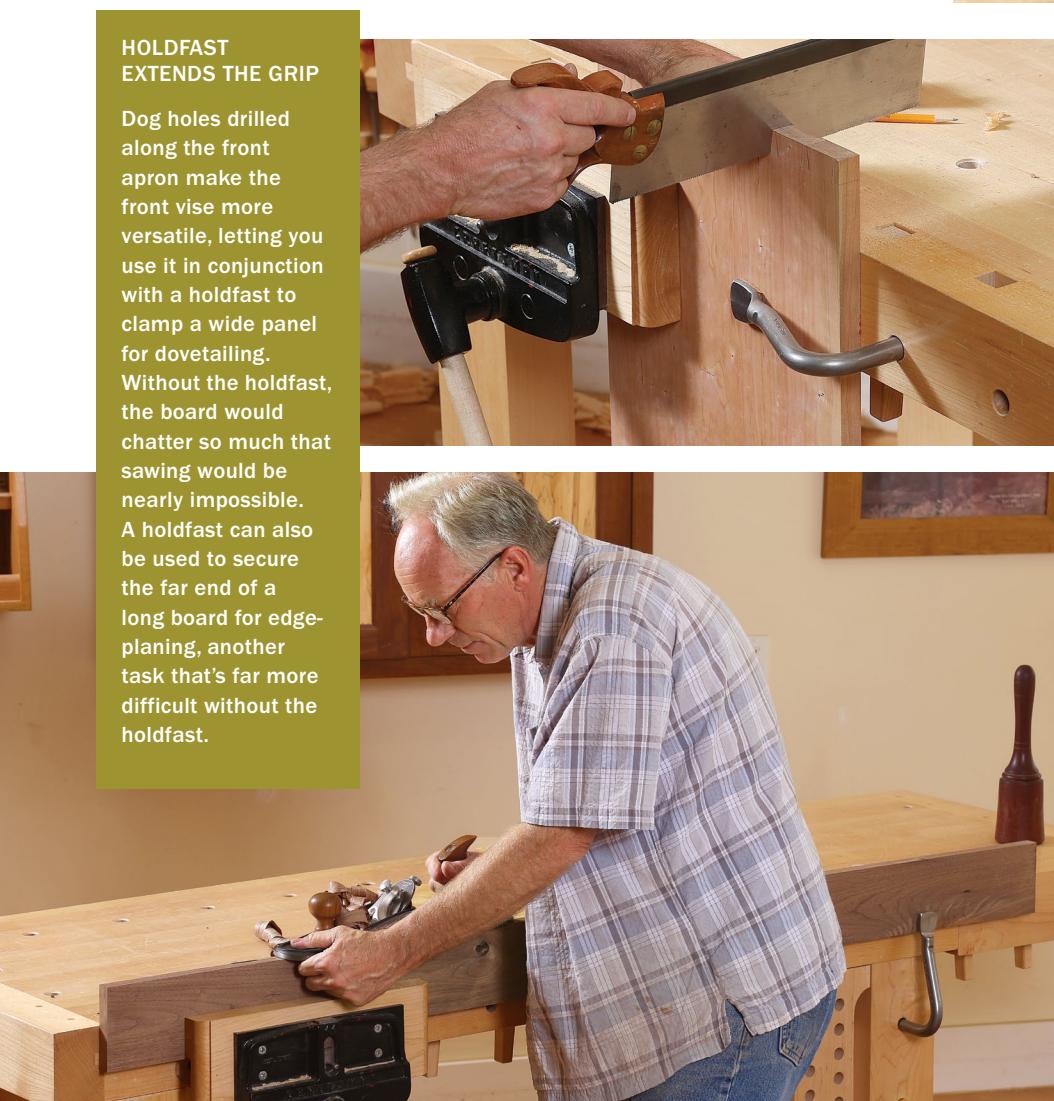
Make your vises work better

My bench has a front vise with a wooden jaw, and a traditional tail vise. Both are great, but they have limitations. Luckily, there are simple ways to improve their versatility and effectiveness.

The front vise has a single screw in the center. Almost any time a workpiece is held vertically it is placed to one side of the screw, which causes the jaw to rack and weakens the vise's grip. To prevent racking, make a wedge that slides into the other side of the vise. Once the wedge's thickness matches the workpiece's thickness, you can tighten the vise without racking.

Another problem with a single-screw vise is presented by wide boards and panels. A board more than a few inches wider than the side of the jaw can be loose enough that it chatters when you saw dovetails or plane end grain. A holdfast stops the chatter. Knocked into a hole in the front apron, the holdfast locks down the side of the workpiece that's not in the vise. This works great for long boards that need edge-planing, too. Rest the board against the bench's front edge and lock the pad down on the board's face. Now you can plane without the board wobbling.

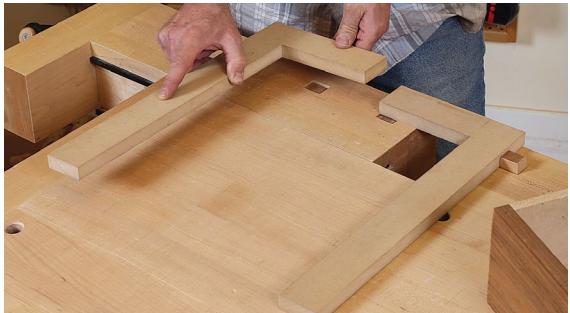
A tail vise works in tandem with bench-dogs for planing parts. But drawers are tough to hold with dogs. I've come up with two solutions. When I need to plane the



TAIL VISE

TWO UPGRADES ADD VERSATILITY

A bit of workholding ingenuity allows you to use your tail vise for more than just face planing.



L-BRACKETS SPREAD THE PRESSURE

Benchdogs have trouble clamping wide parts like drawers. Gochnour expands their reach with L-shaped MDF cauls, which stabilize drawers better than straight cauls would. Tighten the drawer between the two cauls and you can plane the drawer's edge without it skittering across the bench or chattering beneath the blade.

top or bottom edges of a drawer, I use two simple, L-shaped cauls made from MDF. Used with the tail vise and benchdogs, they spread the clamping pressure over the entire width of the drawer, stabilizing it.

The other solution gets called into action when I need to plane the outside faces of the drawer sides. I made a holding jig with two supports that stretch out in front of the bench and are clamped to the bench-top using holdfasts (see photos, p. 61). A crossbar links the two supports and prevents them from racking. The distance between the supports is adjustable, so the jig can be used for just about any drawer.

Let the holdfast take center stage

When you need to clamp something beyond the reach of your vises, the best



PLANE THIN STOCK WITHOUT A STOP

Planing a thin board against a stop is tricky, because it can bow up under the plane. Gochnour secures the board at the back instead. He clamps a hand screw in the tail vise, then clamps the board in the hand screw. Finally, he planes away from the vise and hand screw.

Online Extra

To watch a demonstration of Gochnour's method for planing thin boards, go to FineWoodworking.com/266.

How to grip when bench vises fall short

HOLDFASTS LOCK PARTS DOWN FLAT

A holdfast excels at securing a part where a vise simply can't reach. Whack it on top to lock it down, but on the side to release.

A third hand for dovetails. When chopping the waste from dovetails, the workpiece must be flat on the benchtop. A holdfast works faster than a bar clamp and can put pressure right where you need it.



HAND SCREW ADDS STABILITY

For best support, chopping a mortise should take place on the benchtop, not in a vise. A hand screw and holdfasts keep the stile vertical.



Help with molding an edge. The jaw of a front vise is often in the way of the fence on a combination or molding plane. Clear planing is possible if you pinch the workpiece between dogs and use battens secured by holdfasts to counteract the sideways pressure applied when you plane.



Power-tool assist. Gochnour often uses holdfasts to secure a straightedge when routing dadoes. The holdfasts also lock the workpiece to the bench, making the routing operation more stable. And the holdfasts go on and off quickly.

Clamp the clamp. After clamping the stile on edge in the hand screw, secure the hand screw to the benchtop with a holdfast (top). A holdfast at the stile's other end stabilizes it all the more. This way, the stile won't deflect or fall over under the force of heavy mallet blows.

LOCK DRAWER SIDES FOR PLANING

Holding big boxes is a challenge for any vise. Gochnour's clever jig, with its parallel supports, lets him plane any size drawer.



How it works.
Locate the first support so there's just enough room between it and the jaw of the front vise for the drawer front or back to slide in. Add the crossbar and tighten the wedge on the first support. Fit the drawer over the supports, snug up the second support, and tighten the second wedge. The crossbar keeps the supports parallel and prevents them from moving under pressure of planing.



Lock down the second support.
You should be able to barely slide the drawer onto the supports. Gochnour uses a Veritas Fast-Action Hold-down to lock the drawer to the support, which prevents the back end from lifting up as you complete a pass with the plane.

solution is again the traditional holdfast. For example, the best way to chop out the waste between dovetails is with the work-piece flat on the benchtop. A vise can't help, but a holdfast will.

When a holdfast or two doesn't suffice, turn to a hand screw. You can use one to stabilize a stile on edge to chop mortises on top of the bench. You can also use one with a tail vise to plane thin boards. Clamp the hand screw in the vise, then clamp the board in the hand screw. Plane away from the hand screw and the board won't flex. It's a great fix for an irritating problem. □

See contributing editor Chris Gochnour at Fine Woodworking Live 2018 (finewoodworkinglive.com).



Better than a vise. After the fixture is set up, you can quickly move between sides of the drawer box, and from one drawer to another as long as they are the same size.