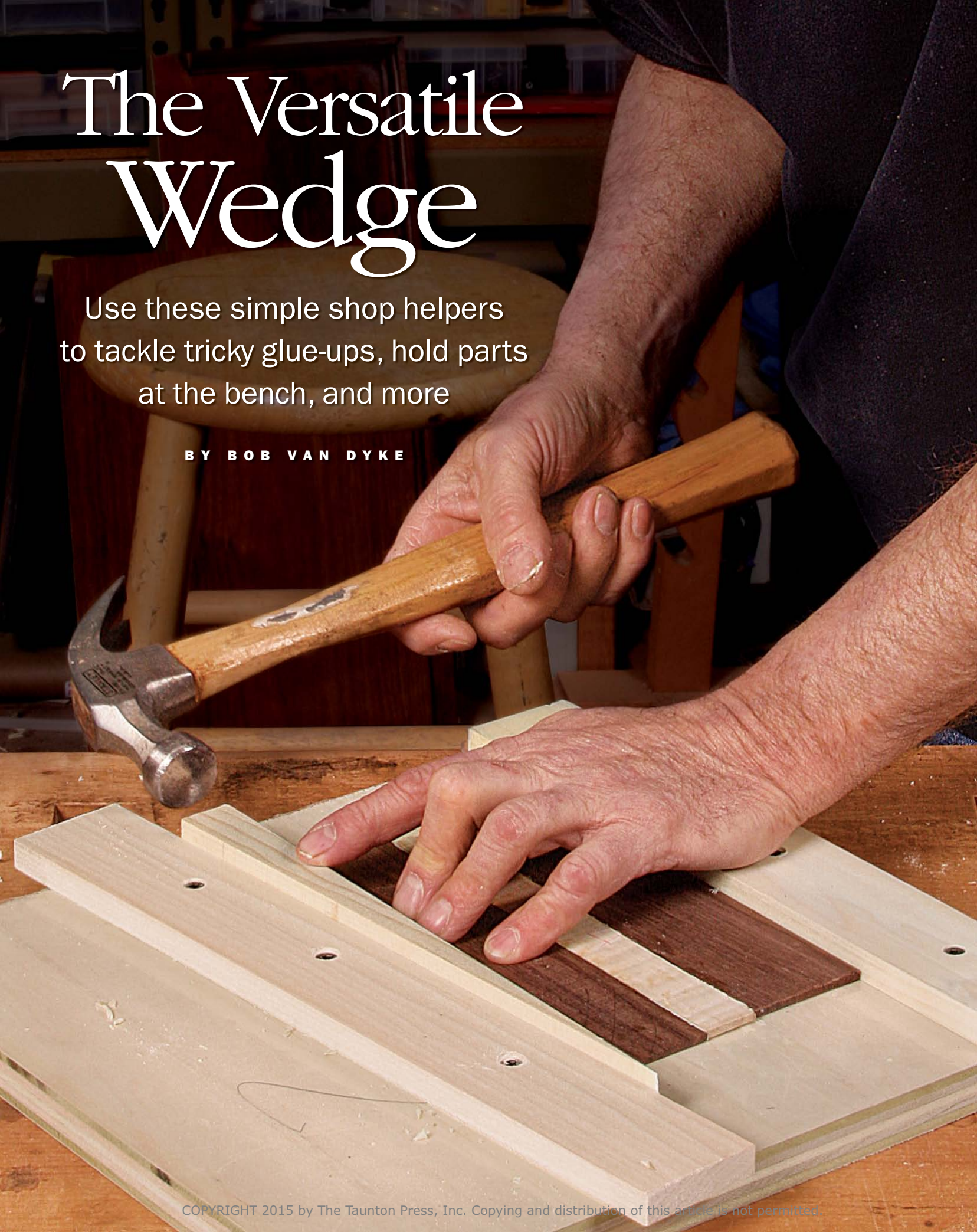
The Versatile Wedge

Use these simple shop helpers to tackle tricky glue-ups, hold parts at the bench, and more

BY BOB VAN DYKE



The wedge: I'm continually amazed at how something so simple can be so incredibly useful. It's common to see wedges used in joinery, and they are the traditional way that a cutter is held in a hand tool like a handplane or cutting gauge. But I also find them really handy in certain clamping situations where traditional clamps are cumbersome or completely ineffective.

Not only is the force created by wedging action great when used to hold parts together, but that same force can also be used to safely separate parts with no damage.

I constantly find new purposes for wedges in the shop, even though they've been around as long as recorded history. Here I'll show a few ways to clamp with wedges, a few ways to take things apart, and a few ways to hold work at the bench. Once you've explored all the ways wedges can help you in the shop, you may think twice about buying another expensive specialty clamp.

They are easy to make

If you save offcuts from angled furniture parts like tapered legs, you might already have ready-made wedges stashed around your shop. When I do need a wedge that's a certain size or with a specific slope, it's easy to cut one or two wedges from the edge of a board on the bandsaw.

When I need multiple wedges of the same size and shape, I cut them on the bandsaw with a simple jig (see photos, below). Plane the stock to thickness and cut it to length, then place it in the jig's notch and push it through the blade. Flip the stock end over end to cut the next wedge. For most clamping applications these bandsawn wedges will be ready to use right off the saw. But if the bandsaw leaves too rough a surface, clamp the wedges together in a vise and smooth them with a handplane.

To make wedges on a tablesaw, use a taper jig. Select a wide rectangular workpiece and set the fence to produce a tapered offcut just the size you want for your

How to make them

NEED JUST A COUPLE? GO FREEHAND

Lay out the wedges on a board and bandsaw to your pencil lines. These freehand wedges typically need smoothing with a handplane. Clamping them together in the vise for planing keeps the angles identical.

NEED A BUNCH? MAKE A JIG

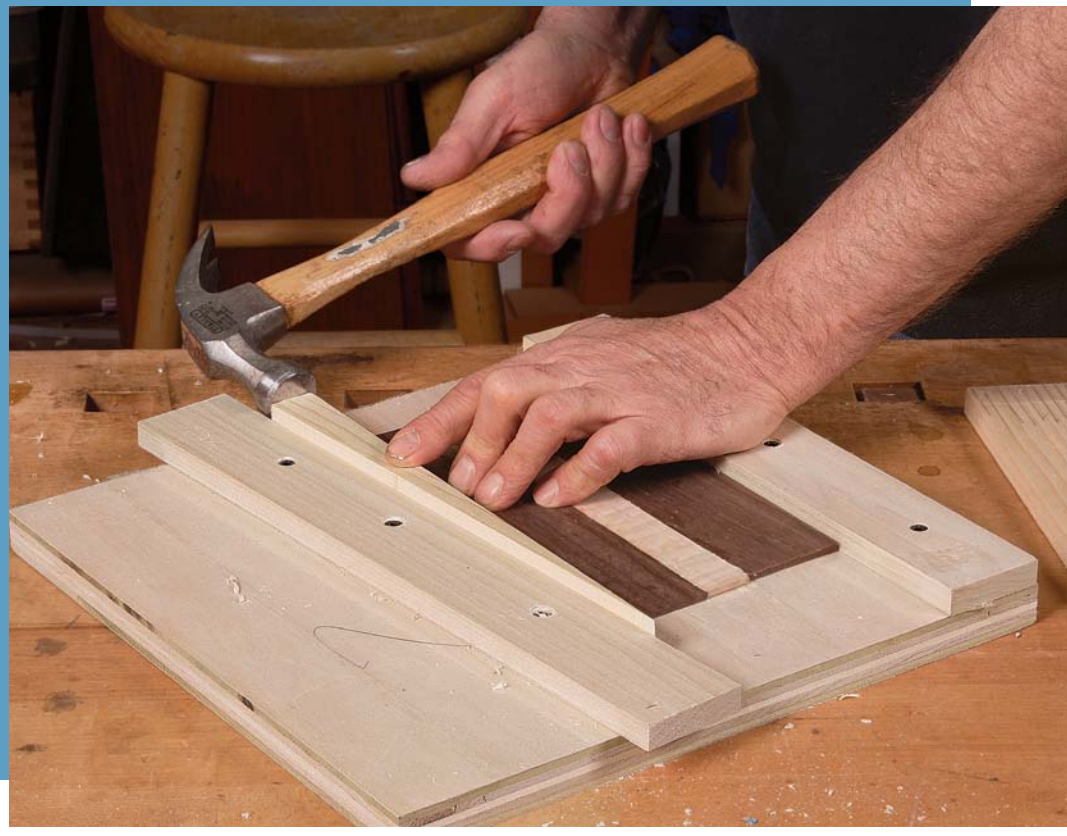
Cut a notch the size and shape of the wedge you need in a piece of ¾-in.-thick MDF or plywood. Place the wedge stock in the notch and run the jig along the bandsaw's fence. Flip the workpiece end over end after each cut.

How to clamp with wedges

THIN PANELS

This jig clamps thin stock together by squeezing it between two fences with a wedge. It can be scaled up or down to match the size of any project.

Build the jig. *Screw one fence to a piece of ¾-in.-thick plywood (above). To keep from gluing your workpieces to the jig, add packing tape to the top of the base. Then set the workpiece and wedge in place, and screw on the other fence (right).*



Ready to work. *With the two fences in place, glue the edges of the workpieces and get them into position (above). A few light taps on the end of the wedge clamps this panel together (right). You can keep the pieces from springing up under the pressure by resting something heavy on top, like a handplane.*

Photos: Ben Blackmar

EDGING

With some help from a clamp across the end, you can use long, thin wedges to clamp edging onto the end of a countertop that's too long for your clamps to span.

Even pressure on edging. *A pine caul on each side helps line up the trim flush with the edges (above). Add a clamp across the end of the counter (right), spacing the bar about ¼ in. from the wood edging. Tap in wedges (below right) to apply pressure evenly along the glue joint.*

wedge. The type of wood used does not usually matter, but if there is a chance that the wedge could damage my work, I make it from a softwood like pine. Wedges are usually cut with the grain running down the length—wedges cut across the grain are likely to break when driven in.

Handle unique glue-ups

Wedges are perfect for joining small pieces and for other glue-ups that can be frustrating with conventional clamps. For instance, when edge-gluing wood to make thin door panels and small box tops, the pieces are difficult to keep flat in bar clamps, and sometimes the clamps just won't stay on.

To get around the problem, I use wedges and a simple fixture that's quick to make from scraps, screws, and packing tape. Cut two fences at least as thick and a little longer than the pieces to be glued, and wide enough that they won't flex under pressure—2 in. wide usually works. Make the base from a scrap of ¾-in.-thick plywood wide enough to hold the two fences, a wedge, and the parts to be glued. To keep glue from sticking to the base, I put packing tape on the top surface of the plywood.

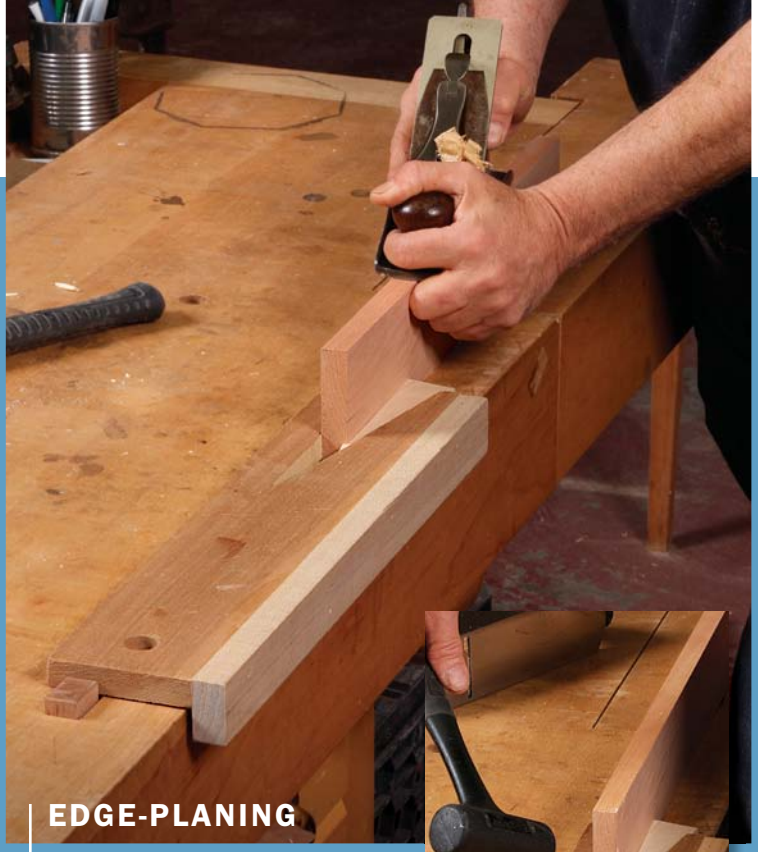
Screw one of the fences to the base and place the panels to be glued up side by side against it. Place a wedge longer than the workpiece next to it. Slide the opposing fence against the wedge and screw it

Hold work...

Wedges are great at helping secure stock at the bench. Save offcuts to use as benchtop shims and build a simple jig to make edge-planing and routing easy.

CUPPED PANELS

Wedges for wobbly wood. *Use wedges to stabilize a cupped board or an oddly shaped workpiece on the workbench.*



EDGE-PLANING

Wedged bird's mouth holds tight. *Slide the workpiece into the bird's mouth along with the hooked wedge. The force of planing will tighten the wedge's grip. Release the board by tapping on its end (right).*

in place. Remove the workpieces, glue the edges, put them back between the fences, and then tap in the wedge. The wedge will lock them in place and apply even pressure across the entire joint. To keep the pieces of the panel from springing up under pressure, stack a caul and a heavy object like a handplane on top.

Gluing edging to the end of a long countertop is another task made simple by wedges. I don't often have clamps long enough to reach the length of a countertop, so I place a bar clamp across the end and leave a small gap between the bar and the workpiece. Then I insert wedges between the clamp and the edging. Put glue on the edging and slip it in place, then add the clamp and tap in enough wedges from top and bottom to exert even pressure.

Hold work at the bench

I use an assortment of wedges at my bench to support or hold furniture parts. The wedges work great and don't get in the way like a clamp might. One way I use them is to stabilize parts that aren't flat, like a cupped board. I also place a wedge under a shaped part, like a tapered leg, so it won't rock as I plane it. For routing, I use a simple jig, clamping the work with opposing wedges.

ROUTING

Wedges won't get in the way. *Opposing wedges can clamp work for routing. Van Dyke uses a U-shaped jig to hold the workpiece for mortising and to support the router. A pair of wedges anchors the work solidly in the jig.*

...or take it apart

How many times have you been frustrated when trying to get templates off workpieces or disassembling a dry-fitted drawer? Wedges are the solution. They even help take apart furniture without damage.

TEMPLATES

Take off a stuck-on template. *A router template attached with double-sided tape isn't always easy to get apart. Drive in wedges to separate the pieces.*

DRAWERS

Safely separate stubborn dovetails. *Two large opposing wedges force the sides apart while keeping them parallel, so there's no chance of cracking a pin.*

Clamping stock in a bench vise for edge-planing is another task that can be awkward, especially with long boards in situations where the ends are unsupported. A bird's-mouth jig with a wedge makes this job easy because the entire length of the board is supported on the benchtop. To use it just push the end of the board into the bird's mouth with the hooked wedge, and the piece will be held tight. To release it, just give it a tap on the end.

Disassemble without damaging

Long, low-angle wedges are perfect for separating parts that have been temporarily joined with double-sided tape, like a flush-cutting router template. To separate tight dovetails in a dry-assembled box while keeping the two sides parallel, you can drive wide opposing wedges between the two sides. You can use thin, low-angle wedges to disassemble furniture for repairs, too. Carefully drive them in to separate stubborn old glued-up parts for repair without further damaging the piece.

Try a few of these techniques, and it might just spark your imagination to come up with other ways to put wedges to work. □

Bob Van Dyke is the founder and director of the Connecticut Valley School of Woodworking.

FURNITURE REPAIR

Put down the pry bar. *When the glue in those tired old furniture joints gives out, wedges do a great job getting them apart for repair without marring the wood.*