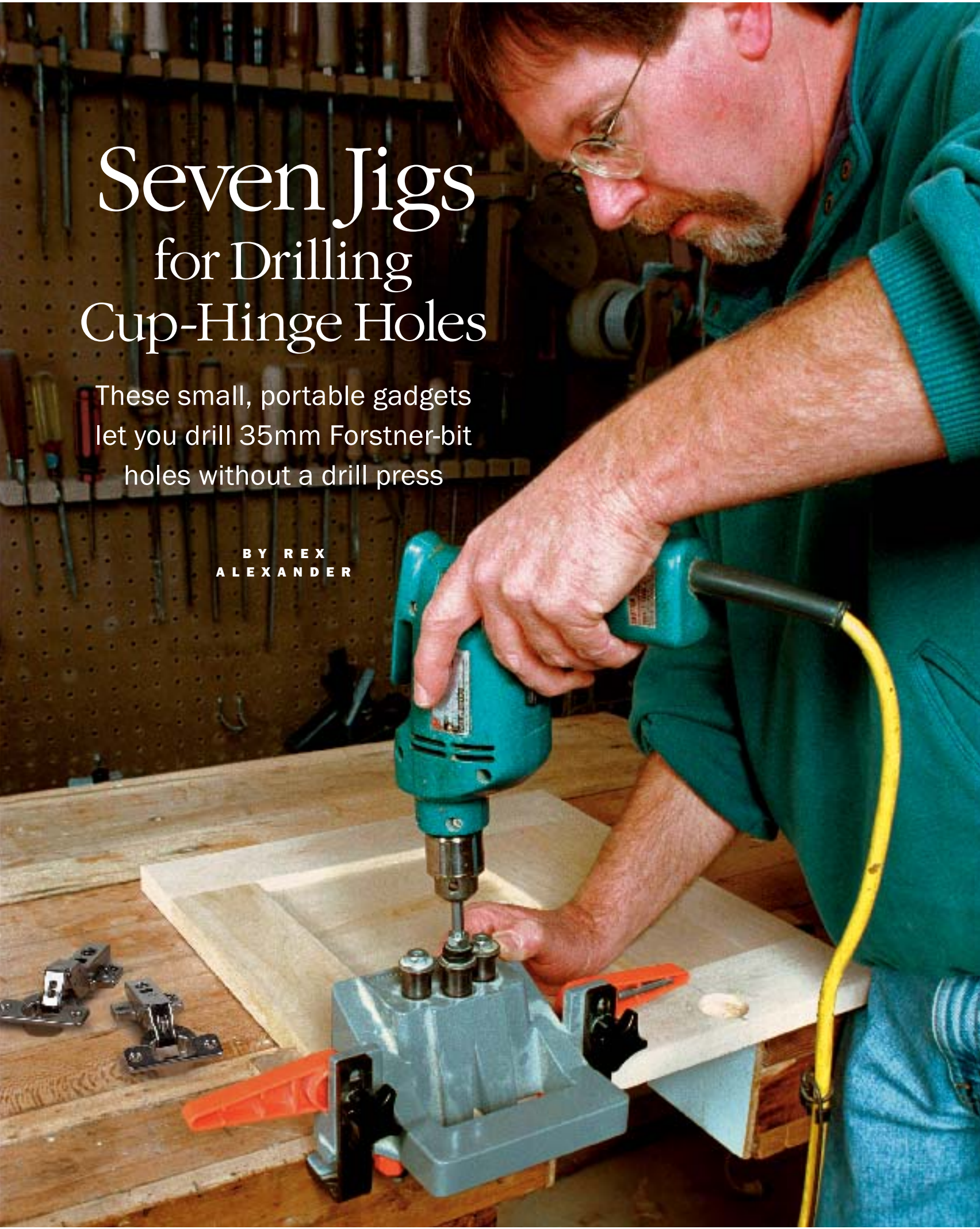


# Seven Jigs for Drilling Cup-Hinge Holes

These small, portable gadgets  
let you drill 35mm Forstner-bit  
holes without a drill press

BY REX  
ALEXANDER





A designated jig just to drill a hole? If you have cup hinges to mount, the answer just might be yes, because to make the hinge both strong and easy to install, the cup is designed to fit snugly into a 35mm hole bored in a cabinet door. A cup hinge installed in a sloppy hole won't enjoy full strength. So you want the hole to be a good one. That's exactly what these jigs promise to help you do.

The jigs come in a variety of designs. Some offer stark simplicity at a low cost. Others are more sophisticated and come with a price that reflects that refinement. But all of these jigs have a couple things in common. They get their power from an electric or cordless drill. And they serve as a surrogate tool for the drill press, supporting the 35mm bit when a drill press can't be used. Without that support, a large bit like this will skitter around the wood.

These jigs are especially handy when you're faced with drilling cup-hinge holes in a door that's large and unwieldy. Just clamp the door to your workbench, then mount the jig and drill.

The jigs are also handy if you're installing cup hinges at a remote site, where there's no access to a drill press.

All of the jigs allow you to adjust the distance from the edge of the door to the edge of the hole—a dimension called the "back-set" or "tab." This dimension provides the necessary clearance for the door to open.

Also, each jig has a mark, usually a notch, that serves as a guide to positioning it on the door. Use a square and a sharp pencil to mark the hinge centerline. Then align the pencil line with the notch on the jig.

Most of the jigs have some sort of clamping system that anchors the jig to the cabinet door as you drill. A couple jigs are handheld. One has to be screwed down.

With a few exceptions, the jigs also provide some sort of means to position and guide a smaller drill bit to bore pilot holes for two mounting screws that secure the cup to the door.

It's easy to see how one of these portable gadgets can have a useful place in a workshop. So when asked by *Fine Woodworking* to give the jigs a workout, I was happy to comply. (An unexpected dividend from drilling countless cup holes during my 27-year career as a cabinetmaker.) □

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## Cup hinges simplify door installations



Cup hinges, also called European-style or concealed hinges, came into prominence in Europe immediately after World War II. These hinges still are the standard in Europe, but despite years of favor there, the hinges didn't attract much attention in the United States until some 15 to 20 years ago. That's when cabinetmaker's here began to recognize that there's a lot to like about them.

For example, the hinges are completely out of sight when the cabinet door is closed (hence the moniker, concealed hinges), and they pack plenty of strength. Plus, they can be installed quickly and al-

low considerable adjustment of the door after it has been installed.

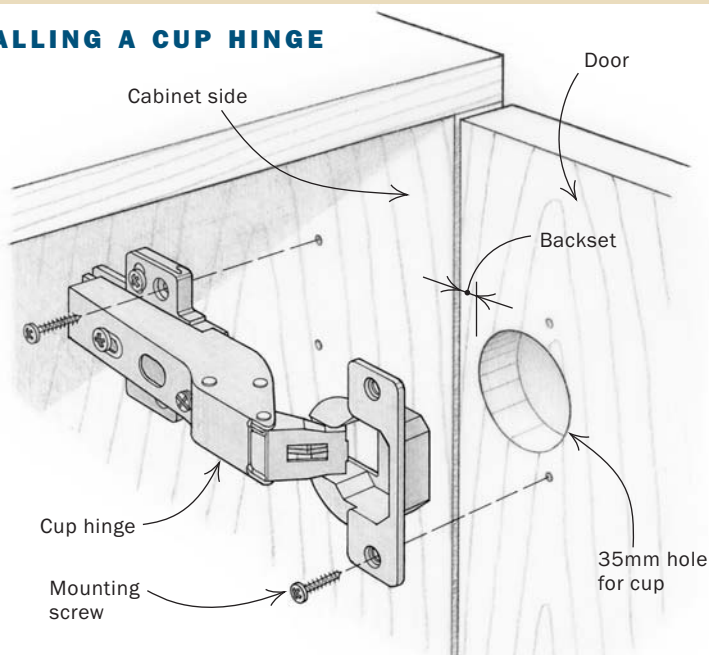
Cup hinges are commonly available as two-piece hinges. The cup and mounting plate are mounted separately. Then, much like you'd secure a seat belt, the cup half of the hinge and the door it's mounted to simply slip into the mounting plate and lock securely in place. The mechanism makes it easy to disengage the two halves of the hinge, so the door can be removed for easy cleaning.

Some cup hinges can be installed entirely without screws: They simply press into place. Others offer various types of quick-mounting attachments.

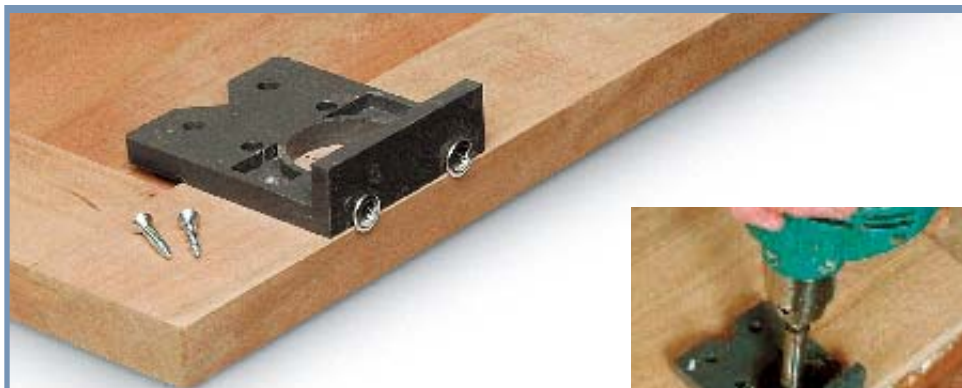
Cup hinges really shine after they've been installed. Because simply by turning a few screws, you can adjust the door in three planes: up or down, side to side and in or out. As a result, you can just about be certain that a door is going to end up fitting perfectly.

You'll find cup hinges at many hardware stores or building supply centers. You can also get them on-line at [www.cabinetparts.com](http://www.cabinetparts.com) or [www.wwhardware.com](http://www.wwhardware.com).

### INSTALLING A CUP HINGE



## EURO EASY DRILL



Among the jigs tested, the Euro Easy Drill is unique in that it must be screwed to the door before drilling can begin. Then, once the cup hole has been started, the jig is removed, and the hole is completed by eyeballing the final depth. Backset adjustment is possible with the Euro Easy Drill, but it requires fiddling with screws and a square to make sure everything lines up.

If you don't have a drill press and have only a few hinges to mount, this jig will do a decent job. But the lack of a mounting clamp and a depth stop slows down everything, so you'll need to bring a good measure of patience to the shop. The Euro Jig is available for \$8.99 from Woodcraft (800-225-1153); a 35mm bit costs \$22.99.



**Start drilling.** The hole in the jig acts as a bushing, keeping the Forstner bit contained and preventing it from skittering around as the cut starts.

## EURO-EZE II



A removable stop block, attached to the underside of the Euro-Eze II, is used to establish any of eight backset options. A Forstner bit is included.

The clamp works okay. And the backset is easy to set up. However, even though I'd given the brass nut on the depth stop a good hand-tightening, the stop slipped about  $\frac{1}{8}$  in. after drilling a few holes in oak. I then discovered the nut could be hand-tightened another quarter turn or so, apparently because the bit heated during the cuts and softened the plastic collet and hub that are part of the stop system. The stop stayed securely in place after that second tightening. A self-centering bit is available as an option. It fits nicely into predrilled holes for the mounting screws.

This jig has a low price and is simple to use. If your budget is limited, and you have only an occasional need to drill holes for cup hinges, the Euro-Eze II is worth considering. But keep an eye on the depth stop.

Woodworker's Supply (800-645-9292) sells the jig (\$29.95) and the optional self-centering pilot-hole bit (\$9.95 for a  $\frac{7}{16}$ -in.-dia. bit; \$29.95 for a 5mm version).



**Drilling the mounting holes.** A self-centering bit is used to drill the pilot holes for the mounting screws. The jig has four pairs of predrilled holes for the bit.

## CONCEALED HINGE JIG-IT



This jig has two main parts: a template (a steel base with a hardwood fence) and a plastic housing that accepts the built-in Forstner bit. The fence maintains an accurate backset. And clamping the jig is quick and easy. The Jig-It doesn't have guide holes for drilling the pilot holes for the mounting screws.

The housing is a nice feature because it helps keep the bit square to the jig as you drill. And because the housing simply lifts off the base after a hole has been bored, the chips don't pack around the bit, a nuisance I ran into with a couple of the other jigs.

The Jig-It sells for \$29.99 (Forstner bit not included) at Rockler (800-279-4441). A 35mm, carbon-steel Forstner bit costs \$15.49; carbide costs \$28.49.



**Keeping square.** The housing helps keep the bit square to the door as the hole is drilled.



## VERITAS HINGE-BORING JIG



**Handheld.** This jig isn't designed to be clamped or secured to the door. Instead, you hold the jig in place with a handle that extends out the front. The author would have preferred a clamp.



**Machine-screw fence.** A pair of knurled, brass machine screws serves as the fence.

The Veritas is a nicely built jig that's designed to be handheld. A pair of brass machine screws serves as an easy-to-adjust fence. The depth stop works well. A long, bent rod that mounts to either side of the jig quickly allows you to set all of the holes the same distance from the door top and bottom. A built-in carbide-tipped Forstner bit comes with the jig.

But the design could use a little tweaking. For instance, when trying to drill a pilot hole for the mounting-plate screws, the drill chuck butted against the jig, preventing me from drilling a hole that was square to the door.

All in all, this is a sturdy jig that looks like it could hold up to drilling lots of holes. The jig felt comfortable in my hand, but it was awkward to hold flat when drilling. My preference would be to clamp it in place. The Veritas Hinge-Boring Jig sells for \$99.75 from Lee Valley Tools (800-871-8158).

## EURO DRILL

Like the Veritas Hinge-Boring Jig, the Euro Drill is handheld. With a pivoting stop on each side, you can quickly position the center of the hinge at the commonly used dimension of 3 $\frac{3}{4}$  in. from either end of the door. The depth stop is easy to use. However, the Euro Drill doesn't offer a way to drill pilot holes for the mounting screws.

The chips have a tendency to pack pretty solidly around the Forstner bit, so plan to clean them out after drilling each hole.

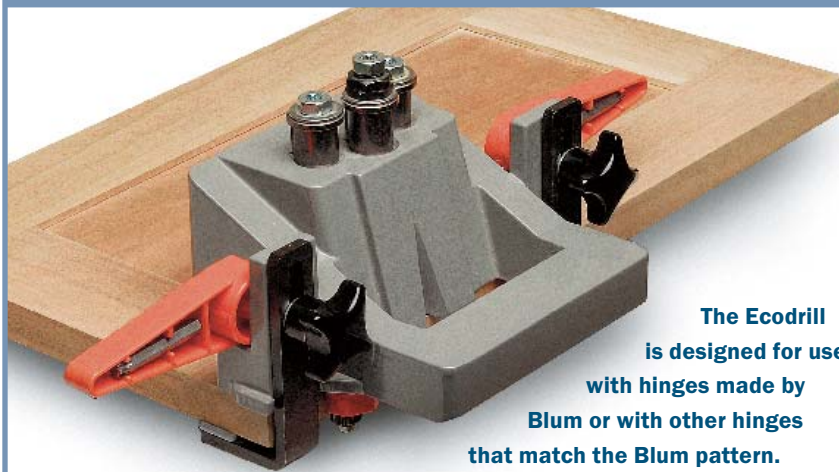
This sturdy jig looks like one a professional might have in his toolbox. I just wish there could be a quick way to clamp the jig rather than hold it in place by hand. As was the case with the Veritas jig, the Euro Drill was awkward to hold flat as I drilled. You can buy the Euro Drill from McFeely's (800-443-7937). The price, not including a Forstner bit, is \$98.95. A 35mm carbide-tipped Forstner bit will cost another \$23.95.



**Packing them in.** With no place to go, the chips quickly pack around the Forstner bit, even after one cut. The author used an air-compressor hose to blow out the chips after boring each hole.



## BLUM ECDRILL



The Ecodrill is designed for use with hinges made by Blum or with other hinges that match the Blum pattern.

Mounting holes are 8mm and accept only Blum's Press-In or Expando dowels or Blum's Enserta hinge.

Chuck a Torx driver bit (supplied) into your drill. Slip the bit into a mating nut on the end of the Forstner bit and start drilling. Then do the same for the two pilot holes. You'll need to clean out the chips after drilling the holes.

This jig has adjustable backset stops, which may be set to seven different positions. It's also easy to use the clamp. Pivot down the handles, and the jig clamps to the door.

This professional-quality jig is a pleasure to use. It sets up quickly and then drills the cup hole and two mounting holes to the correct depths in seconds with little effort. I'd use it even if I had a drill press. You can order the Ecodrill from the Superior Distributing Co. (800-622-4462). The \$169 price includes the Forstner bit and two 8mm bits.

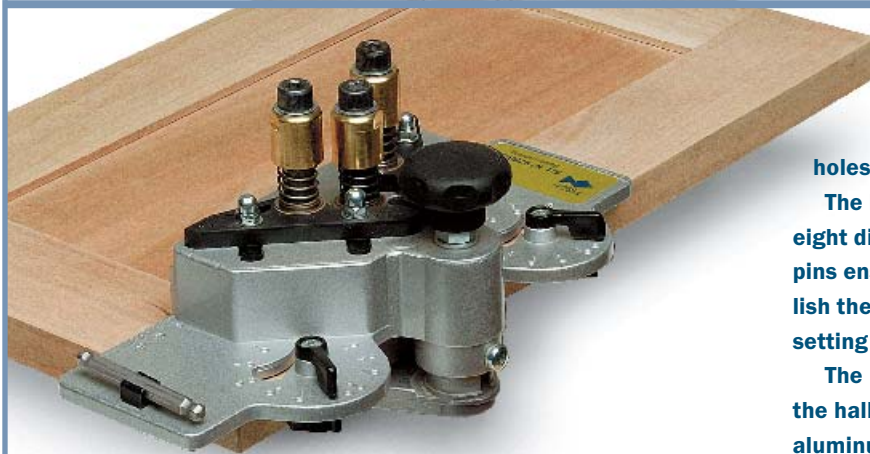


**Dial in the backset.** Setting the backset is just a matter of turning a pair of multisided blocks.



**Drilling the cup hole and two pilot holes is as easy as one, two, three.** One, insert the driver bit in the cap screw on the end of the 35mm Forstner bit and drill the hole; two, move the driver bit to a pilot-hole bit and drill; and three, repeat for the final pilot hole.

## FISCH MULTI-PATTERN EURO JIG



This top-of-the line jig drills all of the common hinge patterns. In addition to the 35mm Forstner bit, it comes with a 7/16-in.-dia. bit for the mounting holes; 5mm and 8mm bits are sold separately.

The bits for the mounting holes can be adjusted to any of eight different positions. And once adjusted, a pair of metal pins ensures that the bits won't shift out of position. To establish the backset, just turn two short, plastic levers to the exact setting you want.

The Fisch jig is the most expensive of the bunch, but it has the hallmarks of a well-built tool, starting with a beefy cast-aluminum housing that serves as the foundation for all the remaining parts. The Forstner bit cuts cleanly and quickly. Like Blum's Ecodrill, I'd use this one even if I had a drill press. The jig is available for \$219.99 from Fisch Precision Tools (724-663-9072).

**Movable mounting-hole bits.** The jig offers eight different positions for the mounting holes. And once the bits are positioned, a pair of steel pins keeps the bits locked in place.



**Select a backset.** Just turn a couple of levers to set the backset to any of eight options.