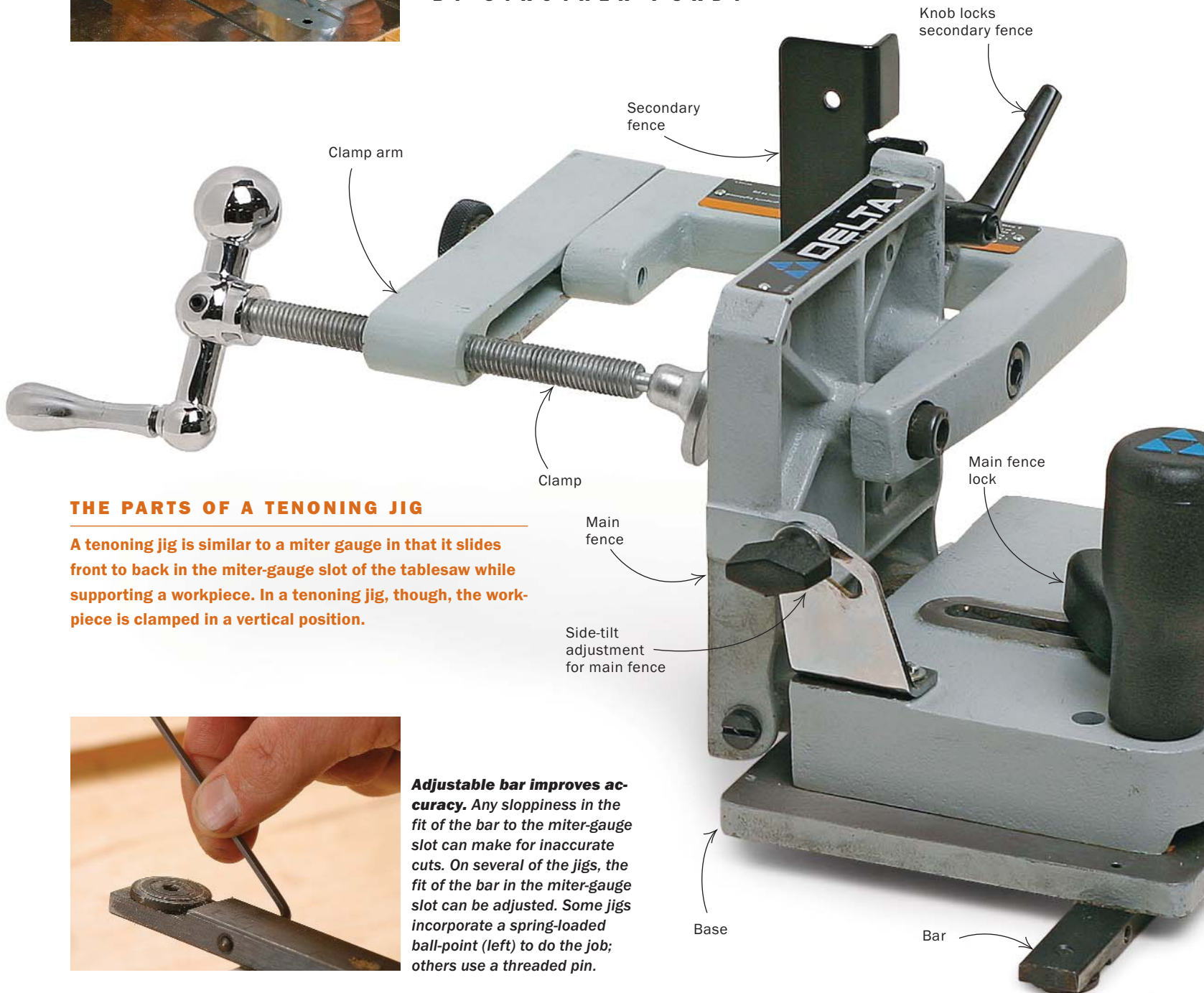


Tenoning Jigs

Tablesaw jigs ensure accurate and repeatable joinery

BY STROTHER PURDY



THE PARTS OF A TENONING JIG

A tenoning jig is similar to a miter gauge in that it slides front to back in the miter-gauge slot of the tablesaw while supporting a workpiece. In a tenoning jig, though, the workpiece is clamped in a vertical position.



Adjustable bar improves accuracy. Any sloppiness in the fit of the bar to the miter-gauge slot can make for inaccurate cuts. On several of the jigs, the fit of the bar in the miter-gauge slot can be adjusted. Some jigs incorporate a spring-loaded ball-point (left) to do the job; others use a threaded pin.

Examine any well-cut tenon, and you'll find cheeks that are flat, smooth, and parallel—three characteristics that help produce a strong mortise-and-tenon joint. And while tenons can be cut in an assortment of different ways, many woodworkers find they produce well-cut tenons most consistently with the use of a jig.

When cutting a typical tenon, the jig holds the workpiece square to the table in two directions—side to side and front to back. However, the jig may be adjusted for angled work.

You can cut the cheeks of a tenon in just two passes over the blade. Then, the tenoning jig is set aside and the miter gauge is used to cut the shoulders. The process is easy, fast, and accurate.

Currently, there are a number of tenoning jigs on the market, and I gave 10 of them an up-close look in my shop. The list includes the Delta 34-183 and 34-184, Garrett Wade 18P04.06, General 50-050, Jet/Powermatic 708295, Rockler 29840, Shop Fox H5782,

Woodcraft 144755, Woodtek 116-738, and Yorkcraft

7868. (Because both Jet and Powermatic are owned by the WMH Tool Co., their jigs are identical right down to the paint color and the model number, which is why I grouped them together for this review.)

The main fence of the jig adjusts side to side to set the width of the tenon. The fence also has a side-tilt ad-

justment. A secondary fence offers front-to-back tilt adjustment that's also helpful when making certain cuts.

Achieving the right tenon thickness required a bit of fiddling with most of these jigs. First, loosen a large and then a small locking handle to move the main fence to approximately the right distance from the blade. Then engage a micro-adjustment dial to fine-tune the tenon thickness. Finally, after locking the fence in place by tightening both the small and large locking mechanisms, you're ready to make a cut.

On the Delta 34-184, however, the process was simpler. First, loosen just one locking knob. Then push a lock button that allows you to slide the main fence into its approximate position. Then fine-tune the position and tighten the locking knob.

All of the jigs feature a scale to provide some guidance when measuring the distance from the blade to the jig. But I found all of the scales to be somewhat crudely made, offering little practical value.

The jigs have more similarities than differences

With a quick glance at these jigs, you might assume they're all identical. But a closer look reveals some subtle differences.

In the course of the review, I used each jig to cut several 2-in.-wide by 1½-in.-long tenons. Then I measured the thickness of the tenons at several points. In each case, the thickness of any given tenon varied by no more than 0.002 in., a number that's more than acceptable.

By the way, to ensure accurate cuts when using any of these tenoning jigs, the miter-gauge slots must be parallel with the sawblade and the blade must be square to the tabletop. So before making test cuts with the jigs, I made sure my saw was properly adjusted.

Delta 34-183, Shop Fox, and Woodcraft—A pair of

vertical handles distinguishes these three jigs from the others in this review. When an angled cut is called for, each of these

jigs has a main fence that can tilt the workpiece to the left up to about 18°. Also, using the secondary fence, the workpiece can be tilted forward up to 45°, and an adjustable stop makes it easy to return automatically to the 90° position.

You need an Allen wrench to adjust the

KEY FEATURES



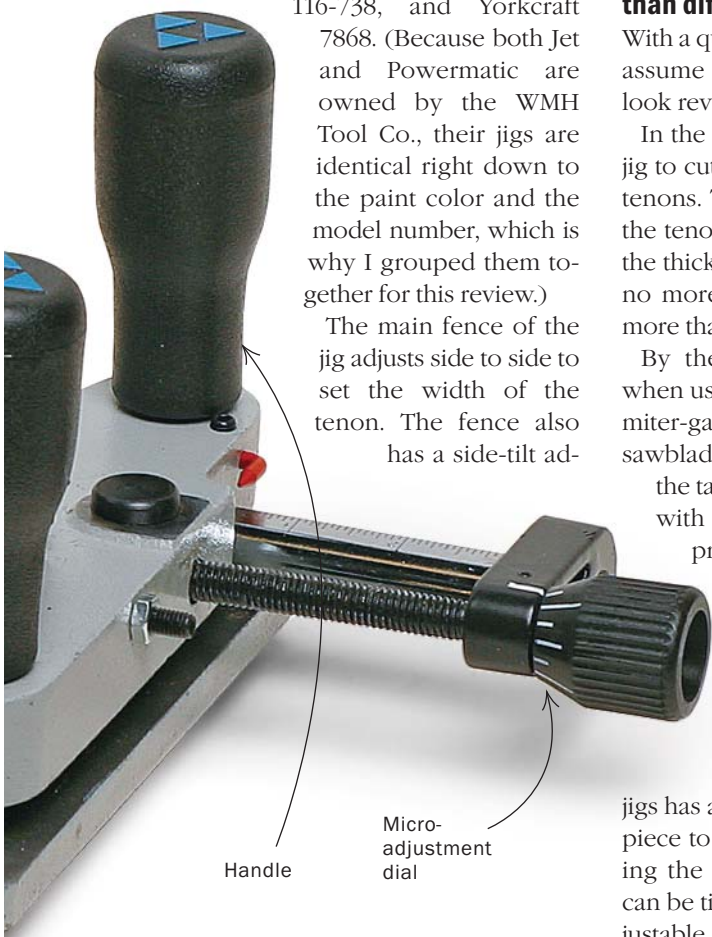
Side-tilt adjustment. The jigs have a main fence that can be tilted left up to 18°, 24°, or 45°, depending on the manufacturer.

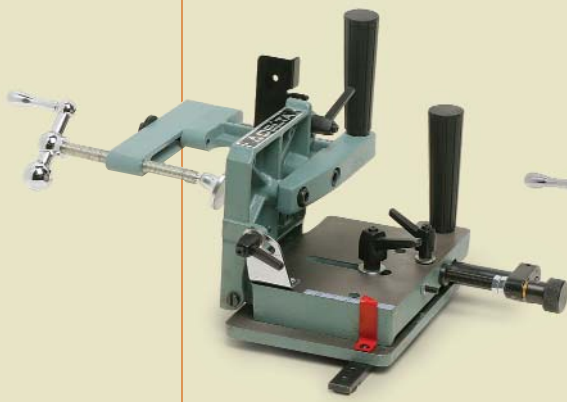


Front-to-back tilt adjustment. Using the secondary fence, each jig allows the workpiece to tilt backward up to 45°.

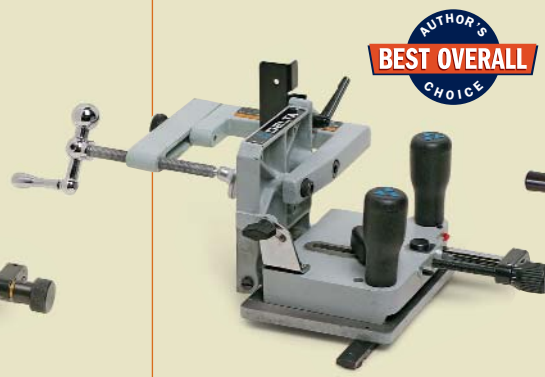


Side-to-side adjustment. When it came to establishing the tenon width, the Delta proved easiest to use—just push a release button, slide the main fence sideways, and then fine-tune the location with the micro-adjustment dial.





DELTA 34-183



DELTA 34-184



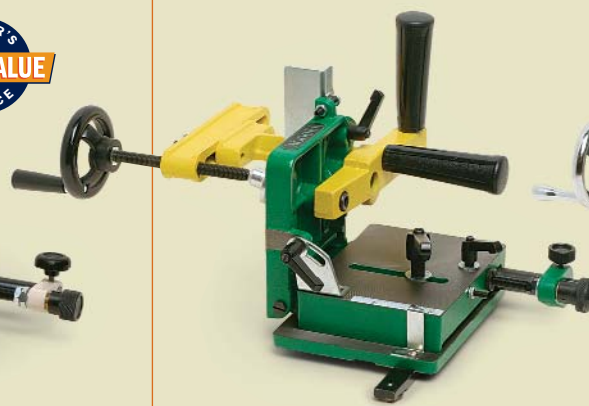
GARRETT WADE 18P04.06

Model	Contact	Price	Maximum workpiece thickness	Side tilt	Back tilt	Guide-bar adjustment
DELTA 34-183	800-438-2486	\$85	3 $\frac{3}{8}$ in.	18°	45°	Pin
AUTHOR'S BEST OVERALL CHOICE DELTA 34-184	800-438-2486	\$100	3 $\frac{3}{8}$ in.	18°	45°	Pin
GARRETT WADE 18P04.06	800-221-2942	\$100	3 $\frac{3}{8}$ in.	24°	45°	None
GENERAL 50-050	514-326-1161	\$100	2 $\frac{5}{8}$ in.	45°	45° (front and back)	Ball-point
JET/POWERMATIC 708295	800-274-6848	\$100	3 $\frac{1}{8}$ in.	24°	45°	None
ROCKLER 29840	800-279-4441	\$106	3 $\frac{3}{8}$ in.	24°	45°	None
SHOP FOX H5782	800-840-8420	\$80	3 $\frac{3}{8}$ in.	18°	45°	Pin
WOODCRAFT 144755	800-225-1153	\$70	3 $\frac{3}{8}$ in.	24°	45°	Pin
WOODTEK 116-738	800-645-9292	\$80	3 $\frac{3}{8}$ in.	24°	45°	None
AUTHOR'S BEST VALUE CHOICE YORKCRAFT 7868	800-235-2100	\$60	3 $\frac{3}{8}$ in.	24°	45°	Ball-point

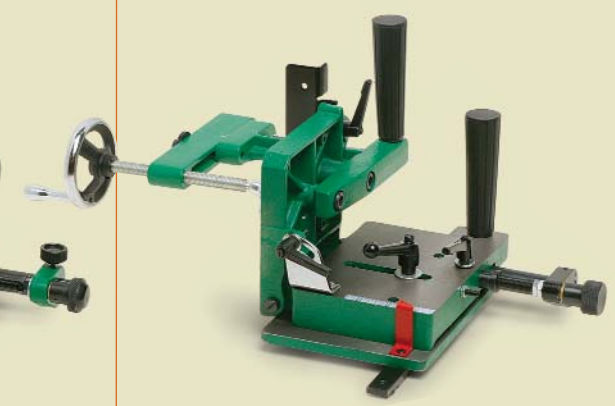
YORKCRAFT 7868

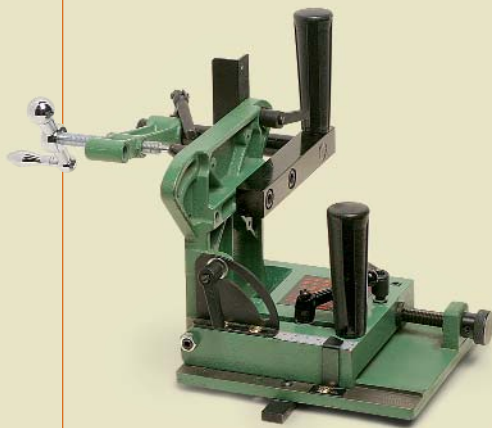


WOODTEK 116-738

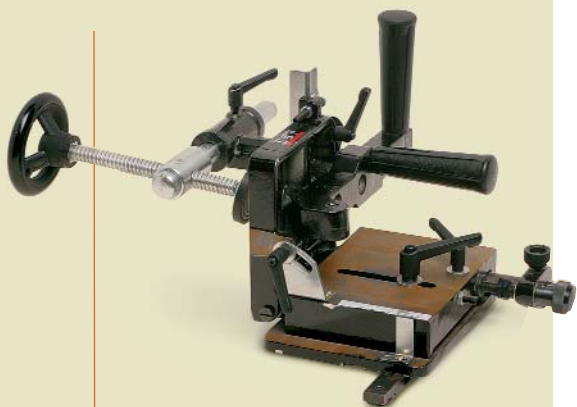


WOODCRAFT 144755

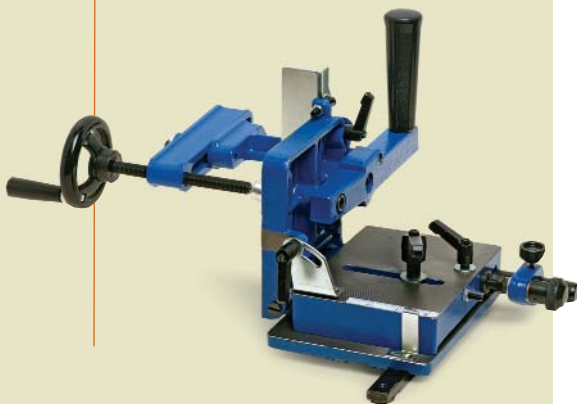




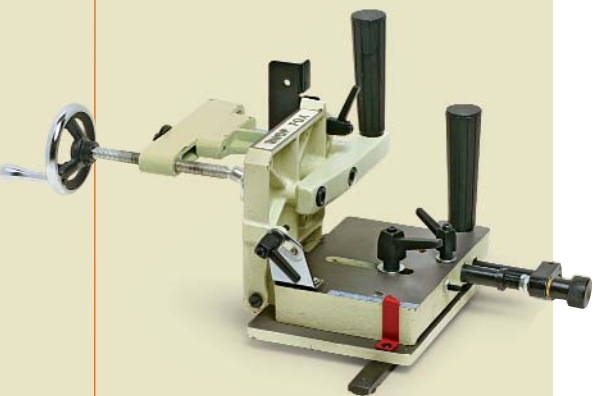
GENERAL 50-050



JET/POWERMATIC 708295



ROCKLER 29840



SHOP FOX H5782

position of the clamp on these jigs. A knob would have made the process easier.

Delta 34-184—This Delta jig offers two handles, both positioned vertically. The main fence tilts left to about 18°. The secondary fence tilts forward up to 45° and includes an adjustable stop that automatically returns the jig to 90°. You need only turn a knob to adjust the clamp position.

Garrett Wade, Jet/Powermatic, Rockler, Yorkcraft, and Woodtek—Each of these jigs has a main fence that tilts left to about 24° and a secondary fence that tilts forward up to 45°. And they all have an adjustable stop that allows you to get back to exactly 90°. All of these jigs have one vertical and one horizontal handle. The Jet/Powermatic also could be set up with two vertical handles.

Jet/Powermatic makes it easy to position the clamp arm—you just turn a handle. Garrett Wade, Rockler, Yorkcraft, and Woodtek make you look for an Allen wrench.

General—The left-tilt mechanism on the General achieves 45°—no other jig tilts that far—but the horizontal handle must be removed to provide clearance. In addition to the typical 45° backward tilt, the General is the only jig that tilts forward the same amount. But in both cases it lacks an adjustable stop to establish repeatable 90° settings.

The clamping arm swivels up and down, as well as back and forth, to accommodate a wider range of workpiece sizes and shapes. But it has only two front-to-back positions. So, to switch from one to the other, you have to remove the handle, then unthread the rod from one position, rethread in the other one, and remount the handle.

There are four holes in the jig for the two handles, giving a range of options both horizontally and vertically.

Oddly, the General jig does not automatically align itself parallel to the tablesaw blade when tightened in position. There was play between the fence and base, about 1/2 in. over 3 in., which is more than enough to cut a misaligned tenon. To avoid the problem, you need to make sure the fence always bears against the same side of the base when you tighten it.

Also, the fence didn't reach all the way to the blade on my Powermatic 66 saw, which has a slot that's 5 1/2 in. from the

blade. So I had to add a scrap block to the fence of the jig to serve as a spacer.

Choosing a favorite

Each of these jigs was able to do a good job cutting tenons. So the differences among them came down mainly to ease of use.

My favorite among this bunch of jigs was the Delta 34-184. Positioning the workpiece proved to be quick and easy, making it the simplest jig to use. It had an easy-to-adjust clamp system. The bar can be tweaked for a



Adjustable handle. Most of the jigs offer at least one alternate handle position.



Knob makes adjustments easier. When wide stock dictates that the clamp arm has to be slid forward, Purdy preferred the jigs that locked the arm with a knob (shown) over those that called for an Allen wrench.

snug fit in the miter slot. And the front-to-back tilt includes an adjustable stop.

If you're on a tight budget, consider the Yorkcraft. It made satisfactory cuts, yet it sells for \$60, some 30% less than the average price of about \$88 for these jigs. □

Strother Purdy is a furniture maker in Bridgewater, Conn.