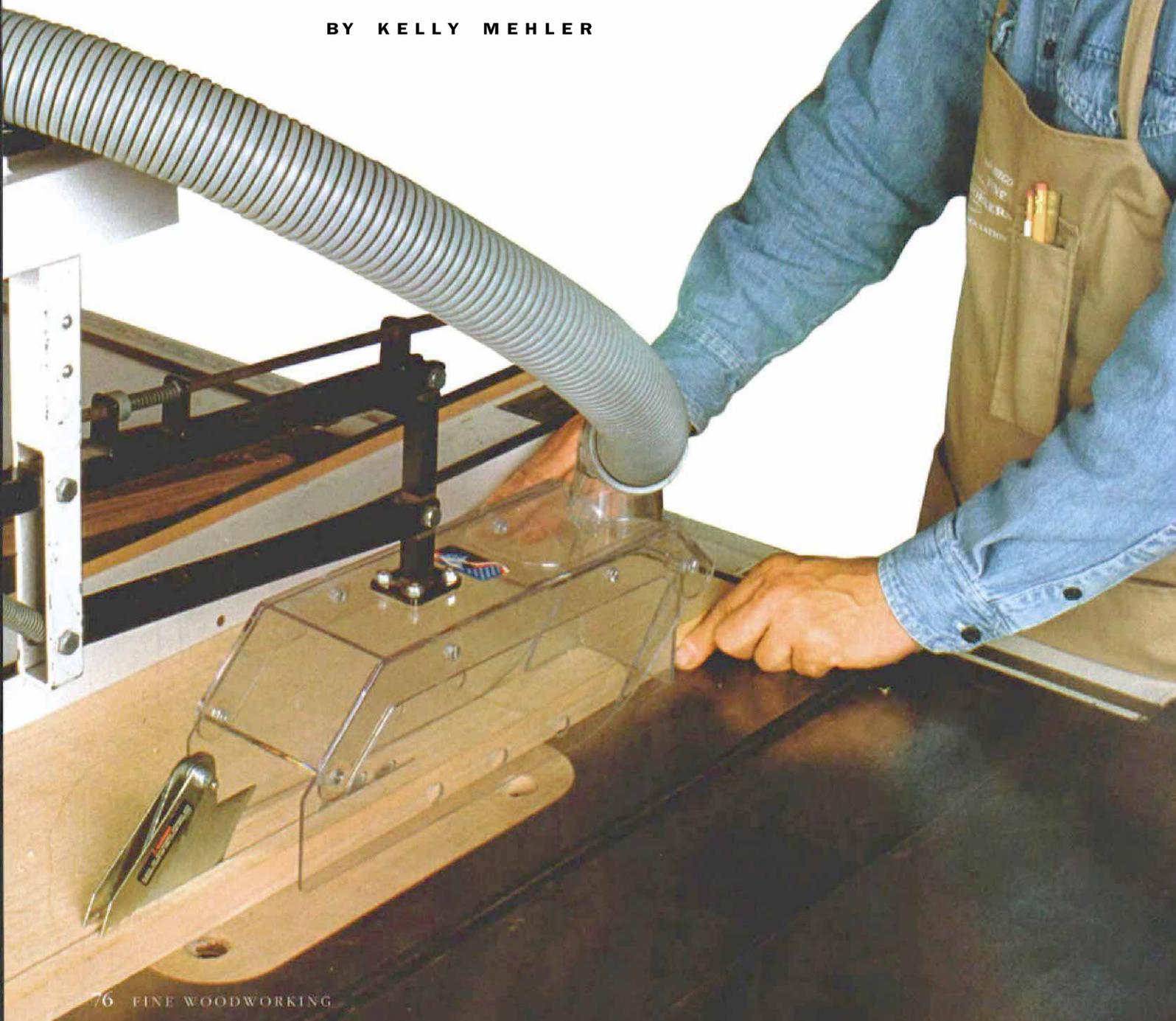


# Tablesaw Splitters and Blade Covers

A survey of retrofit safety devices  
that are convenient to use

BY KELLY MEHLER



Standard tablesaw guard systems in the United States are no good. There, somebody has said it. Nearly every woodworker knows this, but we all have to listen to the experts remind us in books, magazines and on television to use our guards. *They* have removed the guards on *their* tablesaws, they tell us, so we can better see the operations they are demonstrating. Nonsense. The reason why they and so many woodworkers discard standard guards is because they are inconvenient.

Underwriters Laboratory recommends that a splitter, antikickback fingers and a blade cover be included on every tablesaw sold in the United States. American manufacturers combine these components into a three-in-one system that bolts to the saw's carriage assembly. This combination system severely limits the flexibility of the machine. So it usually is cast aside in a dark corner of the shop, collecting dust.

Among the problems with the three-in-one system is that the user is limited to making through-cuts. Because the splitter sits higher than the blade, any partial cut such as a groove or a joint can't be done without removing the entire system. Use of crosscut sleds and other jigs is also impossible with the system in place. So it comes off. But taking off these systems and putting them back on in perfect alignment with the blade is neither quick nor easy.

Making matters worse is the fact that if anything gets in the way—the cover, the splitter or the antikickback fingers—the entire system must be removed. Today you can buy splitters and blade covers that attach separately, and one can remain in place doing its job when the other must be removed.

Because most three-in-one systems won't stay up when lifted, common tasks around the blade are difficult to perform (such as measuring to the rip fence, checking the blade height and changing the blade). And ripping narrow work is difficult if not impossible with a standard blade cover in place.

European saws provide the best solution for tablesaw safety: a splitter that sits just below the level of the top of the blade and never has to be removed. Mounted to the arbor assembly, it moves up and down and also tilts with the blade. The blade cover is usually narrow and unobtrusive, can be removed easily and provides for efficient dust collection. However, for an American tablesaw, the best option is to purchase these safety devices as accessories.

### Why you need a splitter and blade cover

In my opinion, using a tablesaw without appropriate guarding at the blade is not an option. You may be very clever in how you

avoid danger on the saw, but without the two most important safety devices—a splitter and a blade cover—you are relying on your wits alone to prevent catastrophe. One thoughtless moment when you are tired, daydreaming or in a hurry, and disaster could strike. According to an estimate by the U.S. Consumer Product Safety Commission, there were more than 30,000 emergency-room admittances for tablesaw-related injuries in 1999. Many such incidents can be avoided by using a splitter and blade cover.

Add-on splitters and blade covers are much more convenient than standard equipment and are therefore more likely to be used. Getting comfortable with them on my machine was no more trouble than getting used to putting on a seat belt.

**A splitter should be your priority**—A splitter is the most important piece of safety equipment because it virtually eliminates the potential for kickback—both the most common and the most vicious tablesaw accident.

Workpieces tend to rotate onto the back of the tablesaw blade,

where they can be lifted and thrown toward the user at up to 120 mph. Most woodworkers have a story of a near-miss, and horrific accidents are not uncommon.

The splitter forms a barrier to this rotation (see the drawing at left). Without the specter of kickback always looming in the background, the user can work faster and with greater peace of mind (and a brighter future).

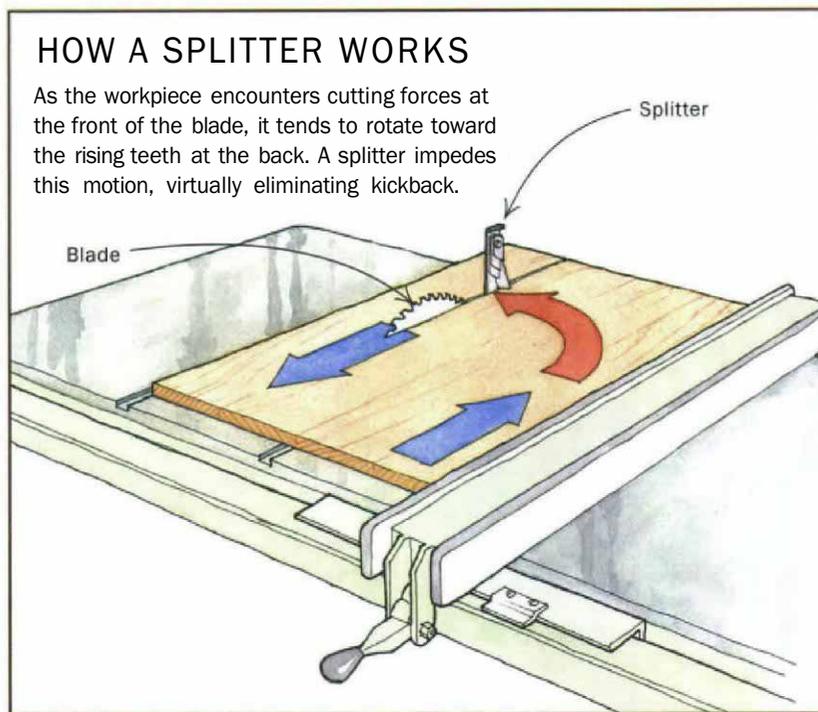
The splitter would be more aptly called an antikickback plate. On the other hand, the antikickback fingers, or pawls, included on most splitters are misnamed and are unnecessary equipment,

in my opinion. They don't prevent kickback but occasionally prevent what I call "pushback," in which the blade pushes the workpiece straight back. And they can't even serve that minor function consistently.

### Three splitters

Most American tablesaws are able to support a splitter retrofit, with the exception of benchtop portables. There currently are three splitters available. However, because of differences between machines, not every splitter fits every saw. For instance, Delta makes two of the three choices, and Delta splitters are made to fit Delta tablesaws. On the other hand, Biesemeyer produces models that fit a wider range of saws.

**Biesemeyer splitter is solid and adaptable**—Biesemeyer's Anti-Kickback Snap-In Spreader fits many tablesaws, both Ameri-



## TABLESAW SPLITTERS

### Biesemeyer Anti-Kickback Snap-In Spreader

The Biesemeyer splitter is sturdy and convenient. A spring-loaded rod releases it and locks it precisely in position.



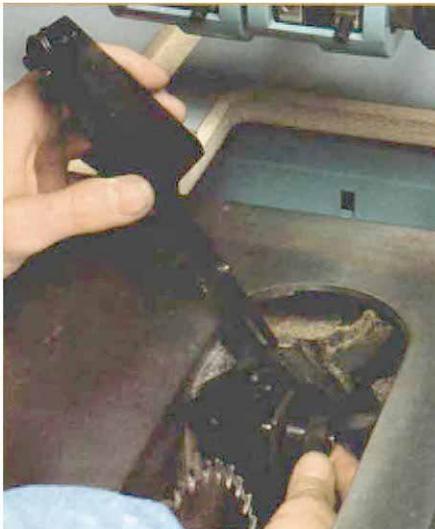
### Delta Disappearing Splitter

The Disappearing Splitter never has to be removed, making it the most convenient of the three. The splitter is simply pushed down below the table surface when not needed. However, it fits only right-tilting Delta Unisaws.



### Delta Removable Splitter

Kickback protection for less money. The Removable Splitter is separated from its holder by loosening a knob, making it slightly less convenient than the other units. It is included with the Delta Deluxe Blade Guard or can be purchased separately.



MODEL	PRICE
Biesemeyer Anti-Kickback Snap-In Spreader	\$120
Delta Disappearing Splitter	\$137.95 (part No. 34-868)
Delta Removable Splitter	\$29 (part No. 1349941)

can and imported. The Biesemeyer has a cast-iron holder that attaches to the cradle assembly of a table saw. It has a solid feel resulting from its hefty holder and thick splitter. However, the almost 1/8-in.-thick splitter will not work with thin-kerf blades.

**Delta's Disappearing Splitter is easy to use**—The Disappearing Splitter was designed to fit the right-tilting Delta Unisaw as part of its Uniguard Blade Guard. The Uniguard has been discontinued in favor of the Deluxe Blade Guard, but the Disappearing Splitter is still available.

What I have always liked about the Disappearing Splitter is its ease of use. It never has to be removed from the saw. The splitter simply is pushed down and out of the way.

Thin-kerf blades can be used with the Disappearing Splitter, but the splitter's thin and narrow body also allow it to be easily bent. This calls for caution when handling large or heavy workpieces. Another drawback of this splitter is that it fits only Delta Unisaws, and only right-tilting models.

**Delta's latest fits more models**—The newer Delta Removable Splitter fits all Delta cabinet and contractor table saws. Delta designed this removable splitter to go with its Deluxe Blade Guard, but the splitter is available separately.

This splitter is removed from its holder by loosening the large, round knob that clamps it in place. While not as convenient to remove as the other two, this splitter still is easy to use. Like the Delta Disappearing Splitter, the Removable Splitter can be used with thin-kerf blades. It is slightly wider than the Disappearing Splitter and not as prone to bending.

**Splitter recommendations**—It's critical that you select the splitter that is the most convenient for you and your machine.

The Delta Disappearing Splitter and the Biesemeyer Anti-Kickback Snap-in Spreader are similar in price, but they both have limitations. The Disappearing Splitter is the most convenient but fits only the right-tilting Unisaw. The heavy-duty Biesemeyer comes closer to the blade than the Disappearing Splitter, reducing

SOURCE	APPLICATIONS	CONVENIENCE	DURABILITY	COMMENTS
<b>Biesemeyer</b> (800-782-1831; biesemeyer.com)	Delta and Jet cabinet and contractor's saws; Powermatic 72, 66, 64; General 350	Good	Excellent	Heavy duty but doesn't work with thin-kerf blades
<b>Delta</b> (800-223-PART; deltawoodworking.com)	Delta right-tilting Unisaws	Excellent	Adequate	Easiest to use but fits only right-tilting Unisaws
<b>Delta</b>	All Delta cabinet and contractor saws	Adequate	Good	Included with Delta Deluxe Blade Guard

the likelihood of kickback, but it must be removed from time to time. The newer Delta Removable Splitter isn't as easy to remove and replace as the others, but it is by far the least expensive. The bottom line is that I would use any one of these three splitters on my tablesaw, as long as it fit my machine and blade thickness.

### Six blade covers

The blade cover does not protect against kickback; however, it does present a barrier between the user's hands and the spinning blade, preventing accidental contact.

All six blade covers available have many advantages over stock covers. First, each of these covers is separate from the splitter, allowing it to be moved out of the way without affecting kickback protection. Also, each interferes minimally with everyday cutting tasks because it easily can be moved out of the way and quickly dropped back into place.

Each of these covers allows for small horizontal adjustments; the blade can be tilted, and the cover can be offset to rip narrow pieces and let push sticks pass by. The covers also can be pushed to the far right of the table to make room for tall workpieces or jigs. And each cover can be removed for oversized work that requires an unusual amount of space. Four of the six covers offer dust collection.

**Deluxe Blade Guard is a good value for Delta owners**—The Delta Deluxe Blade Guard is designed for Delta tablesaws and fence systems. It will not work with fence systems that ride on a rear rail. According to Delta, you can cut off up to 12 in. on both the main support tube and the extension arm for mounting the assembly on a tablesaw that doesn't have a long extension table. The extension arm doesn't move very far to the right of the blade, but it can be removed easily to make room for tall jigs or workpieces. For cutting very long and wide boards, the entire assembly can be rotated below the work surface after loosening a few mounting bolts.

Like the other blade covers, the cover for the Deluxe Blade Guard is a transparent, "basket" type. However, it is split into two,

which allows one side of the cover to remain on the table, doing its job, while the other side may swivel up to allow a cutoff to pass underneath. There is no provision for dust collection, but this may not be a big consideration for those who collect dust from underneath the saw and haven't been using the blade cover anyway.

The Deluxe Blade Guard includes the Delta Removable Splitter and a plastic tray that mounts on the main support member and is designed to hold a note pad, tape measure, push stick and the splitter, when not in use. A light and a holder for the tablesaw's on/off switch are available as accessories.

**Biesemeyer is well designed, with one exception**—I tested one of the 50-in. models of the Biesemeyer T-Square Blade Guard System, but larger and smaller sizes are also available. The support frame bolts to a Biesemeyer back fence rail (a back rail is available for those who don't have a Biesemeyer-style fence).

I had only one problem with this system: the extension arm that allows the cover to be moved horizontally. To make lateral adjustments you must walk around the extension table to the end of the main support member to crank a long internal screw. While the latest models have a quick-release lever that frees the extension arm for a large, rapid move, I still found it inconvenient to go to the far end of the saw to release the screw. I solved the problem by removing the threaded rod altogether, which allows the cover to slide back and forth easily and then be locked in place, all without leaving the operating position.

The counterbalanced assembly lets the cover ride up and down easily over the workpiece while staying parallel to the surface. Also, it takes only one hand to lift the cover away from the blade (for measurements, for example), where it locks into place. A dust-collection kit is available for \$95 and consists of a 2-in. dust port and 10 ft. of heavy-duty 2-in. hose.

**Excalibur's blade cover fits all saws with extension tables**—The Excalibur Overarm Blade Cover is bolted directly to the side of the extension table, close to the back corner. Side attachment means that the Excalibur can be used with any fence system,

## TABLESAW BLADE COVERS

### Delta Deluxe Blade Guard with splitter



The system includes the Delta Removable Splitter and features an innovative two-part blade cover. This complete system is a good value, though it doesn't offer dust collection.

### Biesemeyer T-Square Blade Guard System



The Biesemeyer blade cover is light, easy to use and offers excellent visibility. But it's more expensive than most of the others, especially when dust collection is included.

### Excalibur Overarm Blade Cover



The Excalibur is a solid system with excellent dust collection. The cover can be locked in place anywhere up to 8 in. above the table.

MODEL	PRICE	SOURCES	APPLICATIONS	CONVENIENCE
<b>Delta Deluxe Blade Guard with splitter</b>	\$250	Catalogs; Delta (800-223-PART; deltawoodworking.com)	Works with Delta, Biesemeyer-style fences that don't utilize rear rail	Good
<b>Biesemeyer T-Square Blade Guard System</b>	\$400 (for 50-in. model)	Catalogs; Biesemeyer (800-782-1831; biesemeyer.com)	Works with Delta, Biesemeyer-style fences that don't utilize rear rail, but ceiling and floor mounts are available	Excellent (after modification)
<b>Excalibur Overarm Blade Cover</b>	\$380	Catalogs; Sommerville Design & Mfg. (800-357-4118; excalibur-tools.com)	All tablesaws with extension tables	Good
<b>Exaktor Industrial Overarm Blade Cover</b>	\$290	Exaktor (800-387-9789; exaktortools.com)	All tablesaws with extension tables	Fair
<b>Brett Guard, cantilever mount</b>	\$490	HTC Products (800-624-2027)	All saws with extension tables; accommodates only Delta Disappearing Splitter	Good
<b>Brett Guard, original mount</b>	\$280	HTC Products	All saws but accommodates only Disappearing Splitter	Good

because it won't interfere with rear fence rails. A lower support column extends to floor level, but there is no provision for attaching it to the floor. To stabilize the heavy boom and hold the main support arm parallel to the saw table, two metal braces triangulate from the lower column to points under the extension-table frame. The system puts a lot of torque on the end of the extension table, which can cause it to twist.

The blade cover attaches to steel support tubes that are also used for dust collection. The tube assembly is sealed for excellent efficiency. The blade cover is basically a metal frame with clear plas-

tic panels. The rear panel can be removed to accommodate the table saw's original splitter or any retrofit splitter.

**Exaktor shares features with Excalibur**—The Exaktor Industrial Overarm Blade Cover is very similar to the Excalibur cover, with some exceptions. First, the front of the blade cover is not angled backward to allow the cover to ride easily over a workpiece. The user must either lift the blade cover onto the workpiece or lock it somewhere above the workpiece's thickness. Second, it takes two hands to both lift and push the inner support tube for

**Exaktor Industrial Overarm Blade Cover**



*The Exaktor blade cover is similar to the Excalibur. However, the flat front on the cover doesn't ride up and over workpieces, and the extension arm is difficult to adjust.*

**Brett Guard, cantilever mount**



*The Brett Guard is heavy duty and easy to use. But using a splitter with it is problematic.*

**Brett Guard, original mount**



*The original Brett Guard mounts on the saw's left edge. It can be added to any saw, but its position limits cutting capacity on the left side of the saw table.*

DUST COLLECTION	COMMENTS
No	Comes with Delta Removable Splitter, accessory tray
Yes (\$95 extra)	Blade cover locks in upper position with one hand
Yes	Mounting system puts stress on extension table; best dust collection
Yes	Similar to Excalibur with drawbacks, but better mounting system
Yes (model with dust port is \$39 extra)	Very heavy duty; comes with poor splitter
No	Limits capacity on left side of saw table; comes with poor splitter

side-to-side adjustments because the fit is a bit rough. Also, there is no channel in the main support boom to keep the smaller boom, which holds the hood, from rotating down when the locking knobs are loosened. And when the smaller tube rotates, the hood doesn't operate parallel to the table surface or workpiece.

Two slots at the rear of the blade cover accommodate a splitter. The trouble with having the splitter sit in a slot is that the cover cannot be slid to the left or right when pushing narrow pieces through the blade or when crosscutting using the miter gauge.

On the other hand, the Exaktor is less expensive than the Excal-

ibur, and its mounting system is sturdier, so it places less stress on the extension table. The blade-cover assembly can be purchased separately for ceiling or other custom installations.

**Brett Guards are in their own category**—The Brett Guards differ from the other systems in the blade cover itself. Instead of a basket-type cover, a Brett Guard has a thick but shallow plastic box connected to a control housing that is adjusted manually. Unlike gravity-type covers, it presents a fixed barrier that does not ride up and over the workpiece on its own. While this thick, sturdy cover can hold down a workpiece, providing some kickback protection, it also leaves the blade somewhat exposed after the workpiece has passed.

There are two types of Brett Guards, both manufactured by HTC. The original Brett Guard attaches to the left edge of the saw table, significantly limiting the working area on that side but providing a blade-cover option for shops with limited space. The cantilever-mounted Brett Guard is supported by an overarm frame like the other blade covers reviewed here.

The Brett Guards are easy to use, but the small splitter plate attaches like a standard splitter and is just as inconvenient. And the only splitter accessory that fits behind the large cover of a Brett Guard is the Delta Disappearing Splitter, which fits only right-tilting Unisaws.

**Blade-cover recommendations**—All of the covers are preferable to the standard three-in-one system. However, I favor the Biesemeyer system because of its overall ease of use. The only disadvantage of the Biesemeyer cover is that it won't work with fence systems that use the back rail. For woodworkers who have a Delta tablesaw or Biesemeyer-style fence, especially if budget is a consideration, I also recommend the Delta Deluxe Blade Guard. There is no provision for dust collection, but this factor may be outweighed by the cost savings. Finally, the Excalibur Overarm Blade Cover offers good value with superior dust collection. □

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