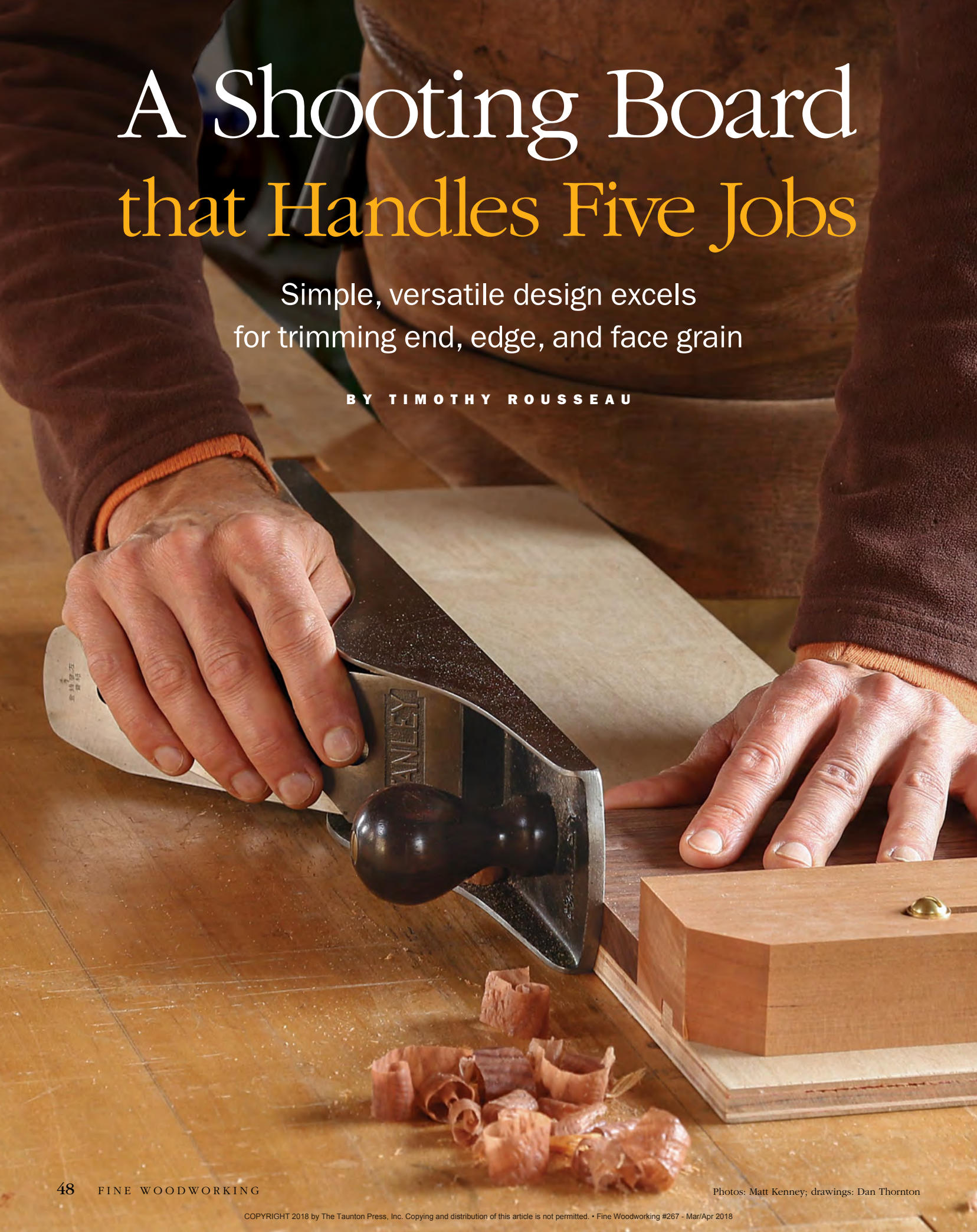


A Shooting Board that Handles Five Jobs

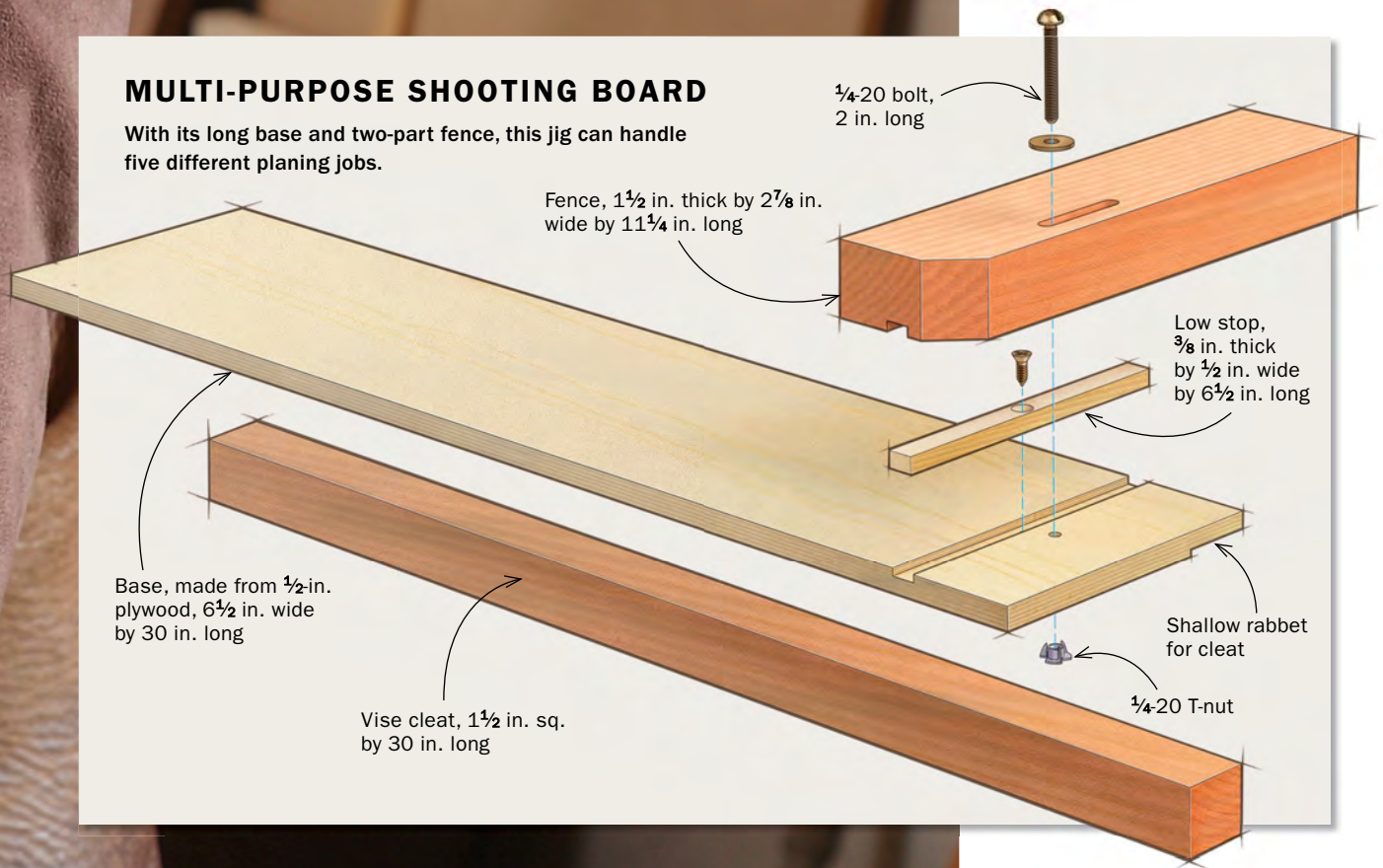
Simple, versatile design excels
for trimming end, edge, and face grain

BY TIMOTHY ROUSSEAU



MULTI-PURPOSE SHOOTING BOARD

With its long base and two-part fence, this jig can handle five different planing jobs.



As an instructor at the Center for Furniture Craftsmanship, I have seen many different shooting boards through the years. After using them at the school, I often made versions of the best ones for my own shop. They really started to pile up, which bugged me, because I am by nature a distiller, constantly evaluating my tools, machines, jigs, and techniques to find the cleanest and simplest solutions.

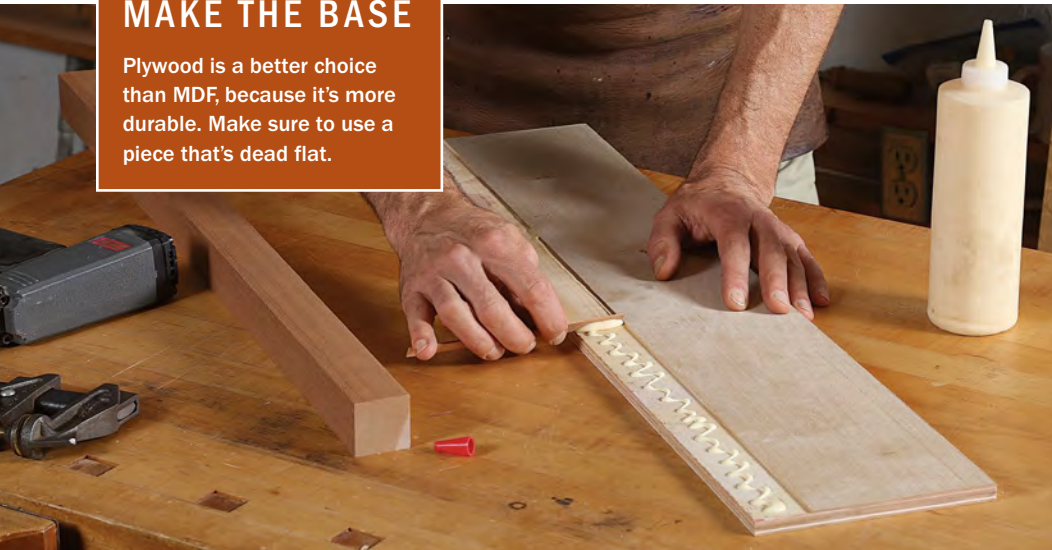
The shooting board shown here retired most of the others. Made from one piece of plywood and three pieces of solid wood, it is simple but amazingly versatile, as it can be used for five different planing jobs.

Like most shooting boards, it's good for trimming end grain and miters. But it also works great for shooting the edge of a board and serves as a planing stop, too, handling

Quick to make

MAKE THE BASE

Plywood is a better choice than MDF, because it's more durable. Make sure to use a piece that's dead flat.



Glue for the rabbet. The rabbet's short shoulder is tall enough to register the cleat parallel to the edge of the base, while the glue creates a strong bond that prevents the cleat from shifting in use.



Pop in some brads. They hold the cleat in place as the glue dries.



Cut a dado for the stop. It's doesn't need to be deep— $\frac{3}{16}$ in. works great. Locate it 2 in. or so from the end.

both thin and thick parts. I'll show you how to make it, and demonstrate how I use it for all five tasks.

Simple to make

The base of the shooting board is made from $\frac{1}{2}$ -in. plywood. Beneath it is a hardwood cleat that runs the length of the base and fits your bench vise. On top is a two-part fence: A low, narrow stop is screwed into a dado and a tall, wide fence fits over the stop.

Start with the base. Cut a shallow rabbet in the bottom of the base along one edge. This will register the cleat and ensure that it's parallel to the base. Spread glue in the rabbet, clamp the cleat in place, and then drive in some brad nails.

After letting the glue dry, take the base to the tablesaw and cut a shallow dado at one end for the low stop. (Leave the blade height set for now. You'll use it again.) For a right-hander like



Insert a T-nut from below. After drilling a counterbore and a through-hole, hammer in the nut from the bottom.



Put the stop in the dado. Start wide and plane it down so that it just fits, then screw it down in the middle.

ADD THE FENCE

Used to trim both square end grain and miters, the fence is quick to reposition and easy to keep true.



Groove the fence to fit the stop. Set the rip fence to cut a groove down the middle of the fence. The blade's height should be the same as it was for the dado in the base.



Miter the back corner. After cutting a slot for the bolt, clip the back corner of the fence at 45°.



Check for square. The fence is normally a bit out of square at this point. Look for high spots and mark them with pencil.



True the fence. Plane just the high spots at first and then take a full-length shaving.

me, the dado should be at the left end of the base. If you and your bench are lefties, put it at the right end. Next, drill the counterbore and through-hole for the T-nut. This nut receives a bolt that helps hold the tall fence in place. Knock the T-nut into the hole. Fit the low stop into the dado and then screw it into place.

The fence, made from hardwood, now gets grooved on the bottom to fit over the low

stop in the base. Cut the groove with the same setup used to cut the dado in the base. Then cut a slot parallel to the back edge of the fence for the bolt that threads into the T-nut. I cut the slot with my horizontal mortiser, but a handheld router and edge guide are just as effective.

Next, use the bandsaw to cut off the back corner of the fence at 45°. The angle doesn't need to be perfect, because

you'll true it when you use the shooting board for miters.

Fit the fence onto the low stop and lock it down. Then check it for square, marking the high spots with a pencil. Take the fence off the base, and plane down those high spots. Reattach the fence and check for square again. Repeat until the fence is perfectly square to the base's edge.

That's it. The shooting board is ready for work.

Simple to use

Paired with a sharp No. 6 bench plane, this shooting board can do so much: trim end grain and miters, shoot edge grain, and plane face grain on boards that are thin or thick, wide or narrow. Whatever the task, the cleat on the bottom should be clamped in a vise.

The most common use for a shooting board is cleaning up and trimming end grain. For this, the tall fence should be

5 ways to use the jig

What's better than a set of accurate and easy-to-make shooting boards? A single one that handles five planing jobs with no fuss.

1

CLEAN UP END GRAIN

Cleaning up end grain is a shooting board's basic function. Press the workpiece against the fence with just a bit overhanging the base. Take a pass, slide the workpiece out again. Take another pass. Repeat until the end is clean and square.

90° SETUP



Zero-clearance fence. Set the fence just a hair over the base's edge. Rousseau does this with the bolt snug, tapping the fence's other end with a mallet (above). Then plane the fence flush to the base's edge (right). This prevents tearout on the back edge of the workpiece.



locked in place with the bolt. I always set the fence so that it overhangs the edge of the base just a fuzz. I then use my plane to shoot it flush to the edge of the base, creating a zero-clearance fence that prevents tearout when you trim end grain.

Another way to use the shooting board is for shooting edge grain. There's nothing tricky about it. With the fence set to 90°, place the board's end grain against the fence, with the edge hanging over the base's edge. Plane the edge. You'll get it straight and square in no time.

The shooting board can also be used to plane face grain. For thin boards, I take off the fence and plane against the low stop. For face-planing wide boards, I slide the jig to the left so about half its length hangs off the end of the bench and then clamp it in the vise. This gives me more space along the front edge of the



2 JOINT EDGES

With the end grain against the fence, you can also shoot long grain. Rousseau clamps the workpiece to the base to help stabilize it. Because breakout isn't a concern, the part can overhang the edge and fence.



3 PLANE THIN PARTS

After removing the fence, you can use the low stop for planing boards as thin as $\frac{3}{16}$ in. thick. The base provides a stable, flat planing platform.



4 A STOP FOR WIDE BOARDS

To face-plane wide boards, slide at least half the base off the bench and then clamp it in the vise. Set the workpiece against the end of the base and plane. Because the base is low, you won't clip it with the plane at the end of a stroke.



5

TRIM MITERS

When shooting miters, there's always a danger that the plane will pull the workpiece forward as it cuts. The solution is to take smooth, easy passes. Thin shavings are better than heavy ones, too, because it takes less force to make them.

bench. Butt the board against the base and plane it.

Finally, with a quick adjustment, the jig excels at trimming miters. You remove the bolt, flip the fence over, and set it at 45° to the edge of the base with a combination square, making sure the back corner of the fence is against the low stop and the 45° face is overhanging a bit so you can plane it flush for zero clearance. Then clamp it down. I prefer this over a dedicated fence always set to 45°, because there's no guarantee a dedicated fence will remain at 45° through the seasons. With this jig, I can always quickly set it dead perfect. □

Timothy Rousseau, of Appleton, Maine, is a professional furniture maker and instructor at the Center for Furniture Craftsmanship in Rockport, Maine. See him at Fine Woodworking Live 2018 (finewoodworkinglive.com).

Online Extra

For a closer look at Rousseau's shooting board, watch the video at FineWoodworking.com/267.



45° SETUP

Not slippery when wet. Before using the fence for miters, Rousseau spreads water on the bottom, which makes the fence and base grip each other a bit so the fence won't slip as you clamp it.



Clamp the fence. Set its angle with a combination square. Be sure the fence's back corner is in contact with the low stop. This will keep the fence from shifting backward under the force of planing.