Flatten Wide Boards on a Narrow Jointer

Simple plywood spacer increases the capacity of your 6-in. or 8-in. jointer

BY MIKE WILSON
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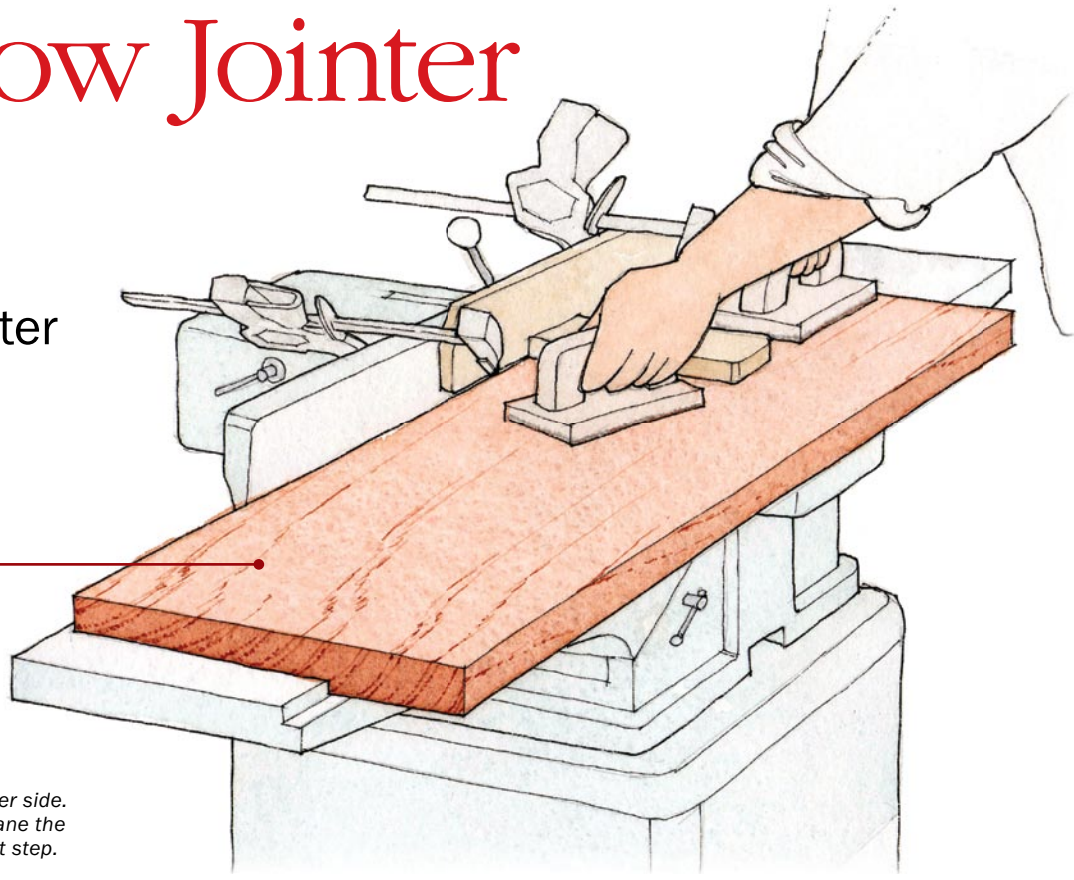
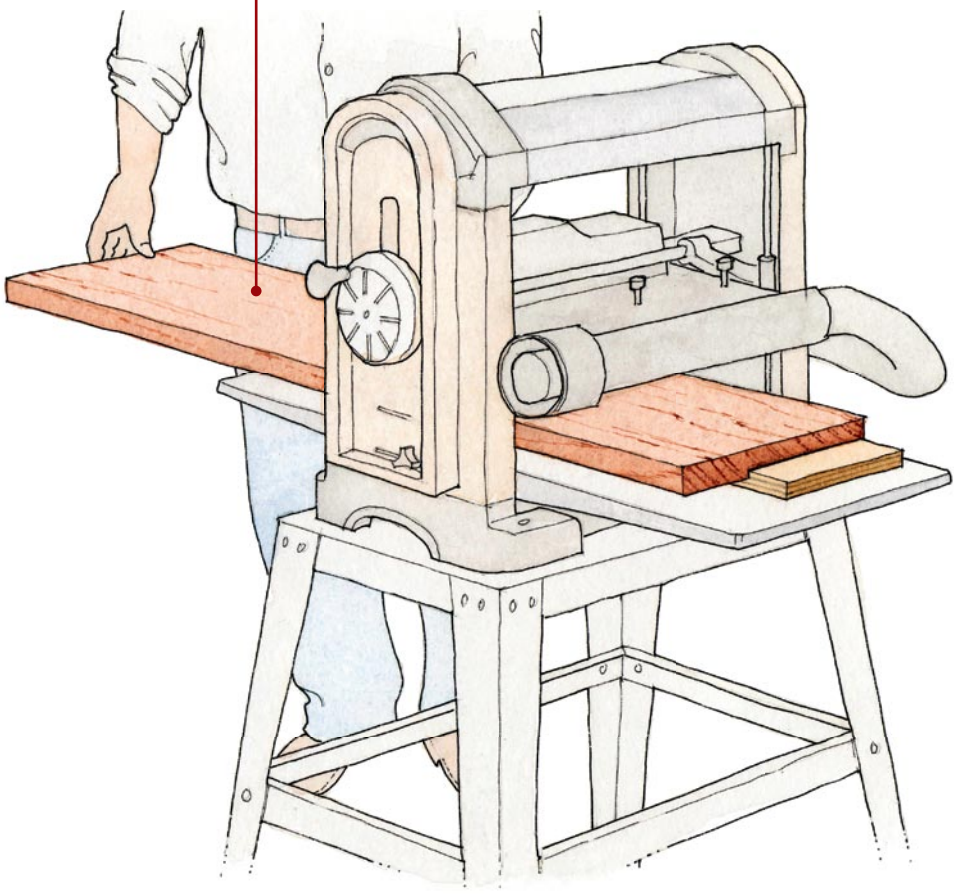


1. JOINT

Surface as much of one side as possible, letting the board overhang the jointer.

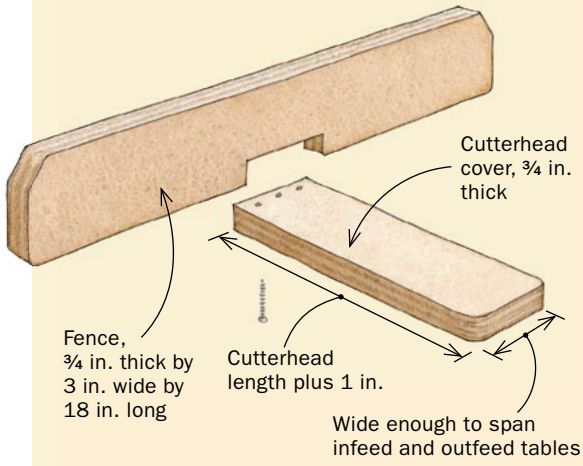
2. PLANE

Add a spacer and plane the other side. Then remove the spacer and plane the first side to eliminate the rabbet step.



SAFETY FIRST

Changing of the guard. *The typical blade guard won't let you surface a board that's wider than the jointer tables, so you'll need to replace the stock guard with a shopmade version.*



Photos: John Tetreault; drawings: Jim Richey

Jointer

As most woodworkers know, it takes both a jointer and a thickness planer to machine a board so both faces end up truly smooth, flat, and parallel to each other. The jointer gets one face flat and the thickness planer makes the other face parallel to the first.

Ideally, the jointer and planer are the same size. But wide jointers cost a lot more than wide planers and weigh as much as 1,000 lb. So most home-shop woodworkers have a planer at least 12 in. wide, but a jointer that's only 6 in. or 8 in. That limits the width of boards they can handle to the size of the jointer. But we've found a way to stretch our jointer capacity by 50%.

Some ground rules

Before starting, it's important to keep a few things in mind that make the procedure safer and just about foolproof.

To use this technique, you'll need to remove the jointer's cutterhead guard because it interferes with an extrawide board during a cut. So you'll need to make a simple guard (see facing page) that clamps to the fence of the jointer and allows a wide board to pass underneath it.

A pair of push blocks is a must. You'll need one in each hand to feed the board.

Finally, be aware that there is a width limit. On a board that is more than 50% wider than the jointer knives, the unsupported edge could tip downward, producing a side-to-side taper. So if you have a 6-in. jointer, limit the board width to 9 in.; if you have an 8-in. jointer, the limit is 12 in. wide.

Secret is a wide rabbet and a spacer

First, joint one edge of the wide board. Then position the jointer fence to make the widest possible cut and set the infeed table to remove 1/16 in. to 1/8 in. of stock—the closer to 1/8 in. the better, depending on how much extra thickness you have.

Next, with the jointed edge running against the fence, make a pass on one side of the board. The cut produces a wide, shallow rabbet in the board.

Hopefully, that first pass will get you a surface flat enough for the next step. If it doesn't, the solution is to make additional passes. To do that on most jointers, however, you'll need to add an auxiliary table (see photos and drawings, p. 70). But if your infeed table is narrower than the knives, you can make as many

Cut a shallow rabbet. *With the jointer fence set to make the widest possible cut and the infeed table set to make a cut 1/16 in. to 1/8 in. deep, feed the board across the cutterhead to make a wide, shallow rabbet (right). If the board is reasonably flat from the get-go, a single pass on the jointer produces a rabbet that's perfectly flat and straight (below).* *See p. 70 if additional passes are needed.*

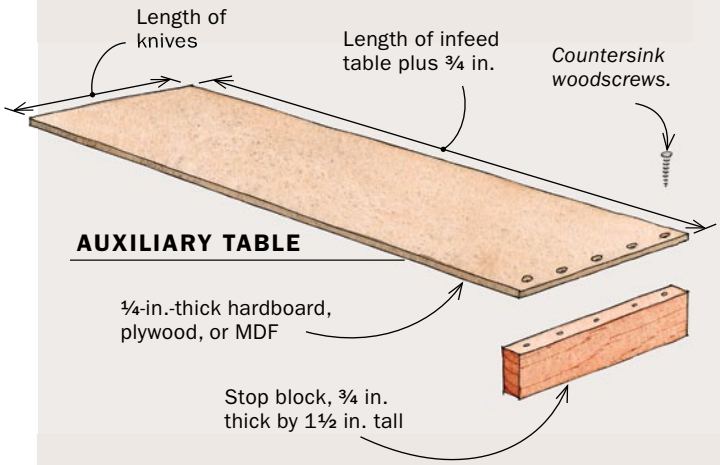
For a second pass on the jointer, you might need a simple jig

If the first pass wasn't enough, you may have problems making a second one. On most jointers, the infeed table is wider than the knives, and your rabbeted step will hang up on the table, tilting the board. But the solution is simple.

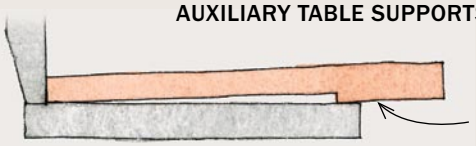
Use ¼-in.-thick hardboard, medium-density fiberboard (MDF), or hardwood plywood like birch to make an auxiliary infeed table. Cut it as wide as the length of the knives (no wider or the boards will end up with the taper) and as long as the infeed table plus ¾ in., to allow room to mount a stop block. The stop block prevents the auxiliary table from sliding forward during a cut.

To install the table, first set the jointer fence to make the widest possible cut. Then lower the infeed table to account for the auxiliary table's ¼-in. thickness.

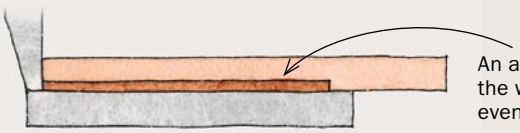
More work required? *A board with extra cup, bow, or twist won't be flat enough after one pass. If the infeed table is no wider than the knives, just make extra passes. Otherwise, you'll need to make a simple auxiliary table.*



AUXILIARY TABLE SUPPORTS THE STOCK



On most jointers, the wide infeed table will inhibit the workpiece from lying flat for a second pass.



An auxiliary table levels the workpiece for an even cut.

No tipping allowed. *The auxiliary table acts as a shim, preventing the board from tipping as you make additional passes. Clamp the stop block to the infeed table to keep it from shifting.*

Set the table. *Lower the infeed table until the surface of the auxiliary table is flush with the outfeed table; then lower the infeed table a bit farther to produce a light planing cut.*

Extra passes. *Now make passes as needed to create a flat and straight rabbet.*

Planer

1. FLIP IT, AND USE A SPACER

Mount the spacer. *Use double-faced tape to hold the plywood spacer against the rabbet. Press the parts together to make sure the tape sticks.*

Plane the top surface. *With the plywood spacer face down on the planer bed, make light passes as needed to flatten the opposite surface of the board.*

additional passes as you need. Once you have a wide, flat rabbet, you can make the simple spacer (which you'll be able to reuse). Just cut a piece of flat and straight ¾-in.-thick plywood at least as wide as the rabbet, and longer than the rabbet by 1 in. or 2 in. Attach the plywood to the rabbeted area with double-faced tape. One edge of the plywood should butt against the shallow lip of the rabbet, and the ends of the plywood should overhang the board.

Now the board goes into the thickness planer with the plywood facedown. Set the planer for a light cut (1/64 in. to 1/32 in.). Then feed the two parts into the machine. Make additional passes as necessary.

Once the top face is smooth and flat, separate the plywood from the board and flip the board so the rabbet now faces up. Then use the thickness planer to make light passes as needed to remove the step and make a full-width cut. That's all there is to it—straight, flat, and smooth. □

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2. FLIP IT ONCE MORE AND PLANE THE STEP

Now the other side. *After the top is flattened, remove the spacer from the rabbet. With the flattened face of the board on the table, lower the cutterhead (above) so the thickness planer will make a light planing cut on the step. Make passes until the step is gone and the whole surface is smooth (right).*