Jointing by Hand

Planes make tight edge-joints, quietly and efficiently

by Richard Starr

***Looking for contact**—Author Richard Starr inspects two jointed boards for fit. If he sees light through the joint, he goes back to the bench for more planing.*

Joining boards edge to edge is a skill every woodworker needs. Maybe you can't find a board wide enough for a panel you're making, or you need glued-up stock because it will be more stable than a single board. You might want book-matched pieces or different species of wood side by side. Edge-glued joints can be inconspicuous and stronger than wood itself, but only if the mating edges have been jointed straight and true.

Power jointers certainly have their place in the shop for truing edges. But if your machine is out of whack or if you have to joint unwieldy boards, you can't beat handplanes. They're quick, quiet and satisfying. I joint with two planes: a 14-in.-long jack for rough work and a 24-in.-long jointer for final correcting and smoothing.

Plane boards in pairs, if you can

I lay the boards side by side on my bench and shift them until I get a pleasing grain arrangement. A triangular witness mark drawn across each joint indicates mating edges and keeps matching grain aligned. I fold a pair of the boards so the adjoining edges are side by side. If the boards are not too long or too thick, 1¼ in. or less, I clamp the pair in my vise with the edges even (see the photo on the facing page).

By jointing two boards at once, I don't have to be concerned if the edges are not exactly 90° to the faces (see the drawing on the facing page). I joint boards in pairs for all the edge-joints I'm preparing for glue-up. I plane thicker boards one at a time.

Use a jack and then a jointer

If the board edges are noticeably rough or wavy, I chop down the high areas using a jack plane set for a coarse cut. Using the jack saves time and wear on my carefully tuned jointer plane. When the edges look pretty flat, I take the boards out of the vise and unfold them, stacking them edge to edge on the bench.

A small space between the boards at the center is a welcome sight, but large gaps at the ends mean I need to shave down the center some more. It helps to hold the joint up to a light to see where the gaps are. When the boards touch at the ends and leave a tiny crack at the middle, I'm ready for the jointer plane.

I keep my No. 8 jointer adjusted for a fine cut, with the nose of the cap iron set back between 1/32 in. and 1/16 in. from the tip of the blade. The jointer plane bridges low spots and skims off high spots.

But if the surface is convex from end to end, the jointer tends to take off wood the entire length of the board. That's why I prefer a very slight concave shape end to end. To eliminate a bow shape, I start cutting with the blade several inches from the near end and then lift the plane off a few inches short of the other. Taking a few passes is usually enough.

To keep the plane from diving when it overhangs each end of the board, I put hard pressure on the front handle of the plane at the beginning of the stroke. I push down at the rear tote at the end of the pass. Extra downward pressure at the center of the board encourages a slight hollow.

Photos: Alec Waters

Planing two edges at once saves work. *After matching boards to be joined, Starr folds and clamps them slightly tilted in a vise. Planing both boards at once helps stabilize the plane. And boards planed out of square will mate correctly.*

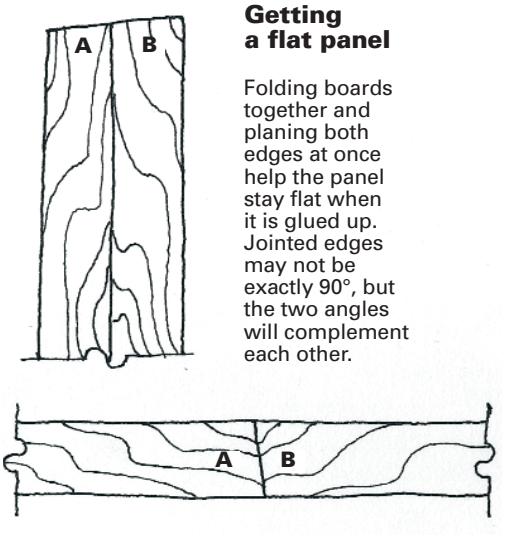
Check your progress

Many woodworkers glue up boards with a small gap, 1/64 in. or so, at the center of the joint (a spring joint). This gap closes when the joint is clamped.

However, I prefer straight edges for gluing, so the last thing I do with the jointer is plane the edges dead flat end to end. I plane from the ends toward the middle and then plane the surface until I get a continuous shaving from one end to the other. Missing sections on the shaving indicate low spots. A narrow section indicates a low spot on one side. With either problem, I keep on planing, testing the fit frequently.

If it's easy to rotate one board against the other, there's a high spot in the middle. Don't try to compensate for a poor fit with high clamping pressure. When the edges mate right, I can fold the boards back and forth and feel them click tightly (see the photo on the facing page). Now I'm ready to glue them up. □

Richard Starr teaches middle school in Hanover, N.H. He is the author of Woodworking with Kids (*The Taunton Press, P.O. Box 5506, Newtown, CT 06470).*



Getting a flat panel

Folding boards together and planing both edges at once help the panel stay flat when it is glued up. Jointed edges may not be exactly 90°, but the two angles will complement each other.

Drawing: Matthew Wells