

Rails and stretchers

IT'S ALL ABOUT STRENGTH, STYLE, AND INTRIGUE

BY HANK GILPIN

No matter how we discuss the purpose of rails and stretchers, their primary reason for existing is to add strength. Rails and stretchers can be big and important, as on a trestle dining table, or small and delicate, as one might find on a small end table. The big ones, like those connecting leg structures, offer a much-needed anti-racking solution, with shouldered tenons that are often wedged to pull the leg parts snug. The small ones, curved, straight, and even crisscrossed, also ensure strength but add interest and vitality.

Yes, rails and stretchers are really about strength, except when you want to add a little pizzazz to a piece. I like the idea of including a little something extra with the rails and stretchers, one of those details that swims around in your head looking for a place to go. I know we're making nice, usable furniture, but sometimes you just must go for it and include something just for the pleasure of doing so.

Hank Gilpin makes furniture and wood sculpture in Lincoln, R.I.

High stretchers and low rails

Both of these tables use long stretchers placed up high to provide lateral control, and side rails down low, adding front-to-back strength. The American elm table (top) is Gilpin's solution to working with a thin ($\frac{3}{8}$ in.), potato-chip top. The rails are located close to the bottom of the legs where they splay out. The sea grape table (bottom) has subtly curved rails and stretchers that mirror the shapes of the top. The stretchers double as supports for the drawer box.



Add a stretcher

Sometimes side rails alone aren't enough. When you need additional support, add a stretcher to lock those rails together.

Rail to rail. The curved stretcher connecting the rails on either side of this maple desk is located toward the back to allow for a chair and a person's legs. Two verticals support the stretcher from above, for more stability and a cool design.



Six legs and three rails to design around. On Gilpin's figured birch sideboard a double-arched stretcher spans the piece, tying into all three rails. With all the upper structure of the case, this was an aesthetic detail, not a structural one.

Multiple stretchers

Extra stretchers open design options, and each added connection diminishes the potential for an “oops” moment when a leg is kicked or dragged across the floor. Everything is stiffened.



An experiment with scraps. These small tables made with shop scraps of maple, buckeye, and Jamaica dogwood play with the rail-to-stretcher idea. On the narrower table Gilpin uses one stretcher between the rails, but he added a second rail on the wider ones. They firm up the structure and evolve the design.



Elevate a simple form. The long, low, double stretchers on this quartersawn sycamore hall table curve in toward each other and connect to the side rails with through-tenons. They stabilize the structure while their curves lend the piece more intrigue and complexity, playing off the subtle curves of the legs and the ends of the table.

Repetitive patterns. This sea grape display table, designed in an updated Arts and Crafts style, was built to house a collection of tiles. With its multitude of legs, rails, and stretchers, it is structurally bombproof.



Pull out all the stops

Gilpin's advice: Don't limit yourself to the conventional. Use joinery and construction to play with design. Your stretchers and rails don't have to be squares and rectangles.



Rounding it out. The round top on this English yew end table is mirrored below where the stretchers meet. The stretchers are all elegantly locked together and strengthened with the little shelf that provides what Gilpin calls "a double whammy addition of strength and use."



Tenons and lap joints take over. The lean structure of this wavy red oak and walnut table is shored up with intersecting, overlapping stretchers that lock all four legs together.



Crisscross apple sauce. This mahogany and birch table is a bit of a showoff. Made from wood salvaged from a 1930s dining table, the four splayed legs connect with six alternating stretchers (three between each pair of opposing legs) that cross and overlap each other in the center.

