On the Job

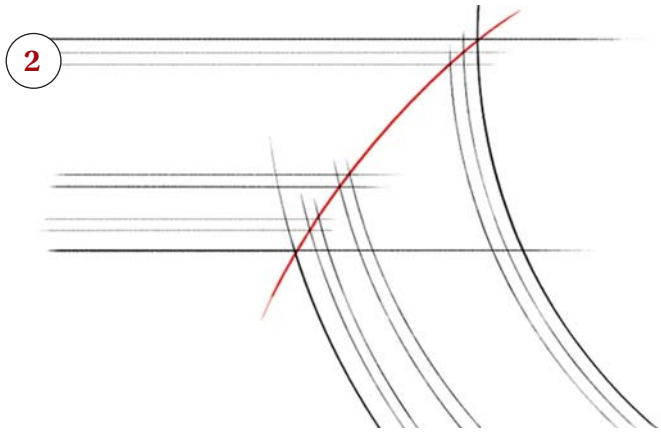
Tricky Miters: Where Straight Meets Curved

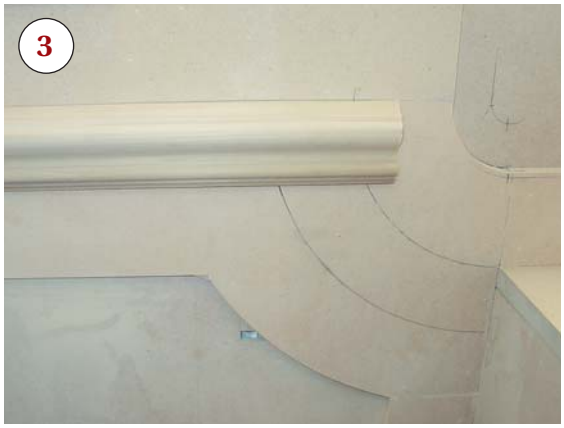
by Jesper Cook

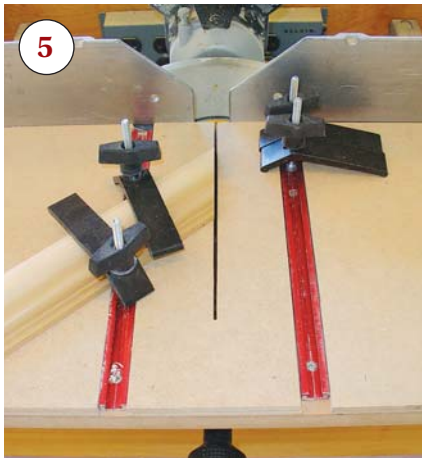
The first time I encountered this joint **(1)** — which I've since seen referred to as a "hunting miter" — I attempted to treat it like any other miter. But it was immediately obvious that something was wrong: The mitered moldings met at the corners, but the profiles wouldn't align. This problem becomes very noticeable on a wide, detailed molding. In order for the profiles to line up properly, the miter must be curved **(2)**. Here are the steps I follow to produce the joint.

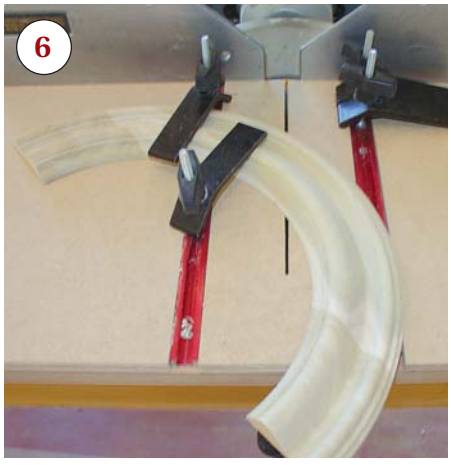
I first trace the outlines of the two pieces on the wall and mark the intersection points on both **(3, 4)**. I make the cuts slightly long, using a clamping fixture **(5, 6)**.

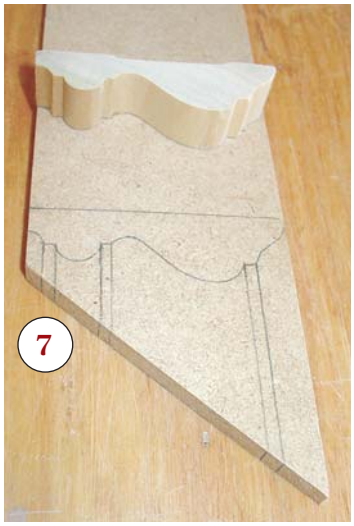
Next I make templates out of 1/4-inch MDF for cutting







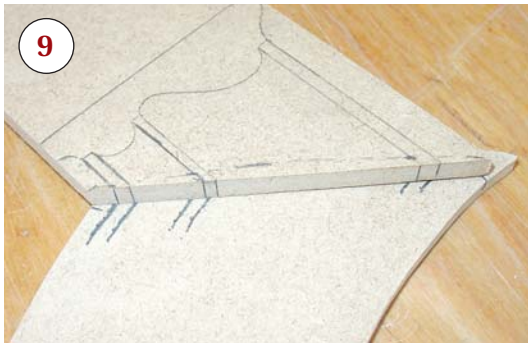


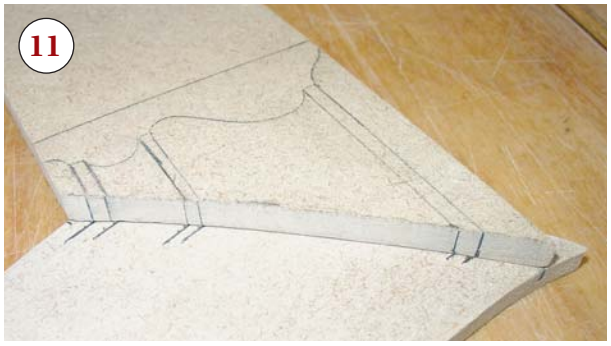


the curved joint. I start with two pieces of MDF the exact width of each piece of molding. The straight template is easy: I trace the profile, then project its flat sections to the edge of the miter as reference points **(7)**.

The template for the curved profile is trickier. Because each of the reference points is at a different radius, I shift the piece along the template blank and make a series of dots; connecting the dots gives me reference lines in the area where the joint will fall **(8)**. Placing the two templates together shows how the profiles would meet if cut as a standard straight miter **(9)**. With a bit of guessing, I plot the curved joint, using a flexible protractor as a guide **(10)**. Cutting this curve aligns the profiles **(11, 12)**.

I screw the templates to the backs of the moldings **(13)** and use a top bearing bit to cut the curves **(14)**. With some fine-tuning, this joint will be perfect **(15)**.



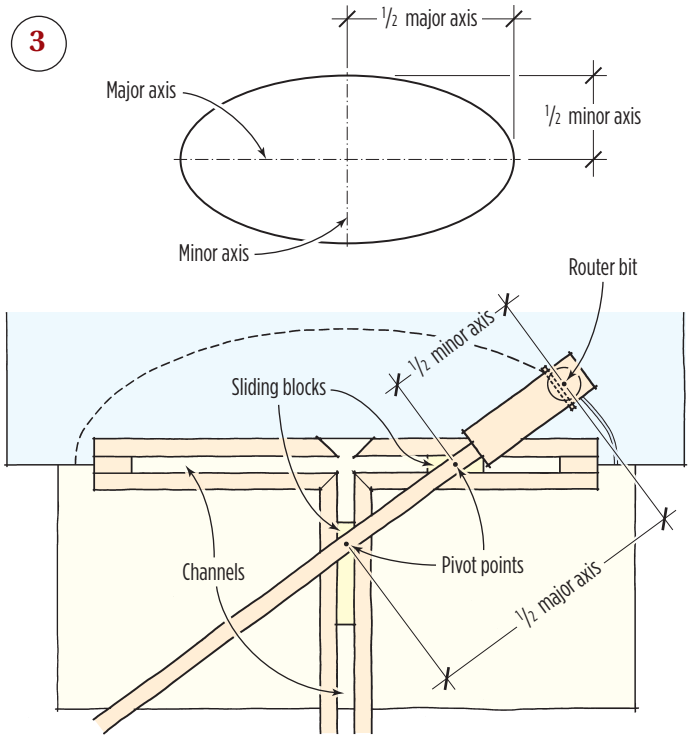


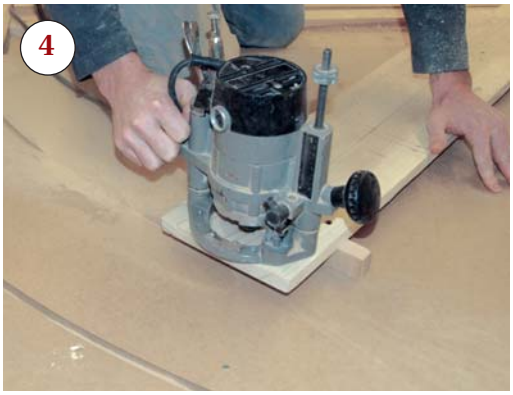
Jesper Cook is a finish carpenter in Los Angeles.

Giant Jig for Big Ellipses

Most carpenters know how to draw an ellipse using string, a pencil, and a couple of nails. But once it's drawn, cutting and sanding a perfectly smooth elliptical curve takes some time.

Stew Junge of Landmark Finish in Boxford, Mass., had a lot of elliptical head casings to make, so he built this large router jig. It's a temporary setup: strips of wood nailed to the floor in a "T" configuration, spaced apart so that blocks of wood can slide between them **(1, 2)**. The router trammel is attached with a single screw to each block so that the screws can pivot and the blocks can slide in the channels created by the wood strips. The shape of the ellipse is determined by the distance between the edge of the router bit and each of the pivot points **(3)**.





Using a spiral cutter, Junge cuts the ellipse in multiple passes, lowering the bit gradually into the stock — in this case a sheet of MDF. A block of wood screwed to the end of the trammel supports the router above the work **(4)**. Changing the size and shape of the ellipse is simply a matter of moving the pivot points. — *David Frane*

Tree Huggers at Work

by Dave West

We were building a new home on a site where a previous house had stood for years, and the client was adamant that we protect three irreplaceable ornamental trees during construction. After talking with the crew, we decided that surrounding the trees with snow fencing wouldn't cut it. Instead, we came up with our own wooden armor, which resembles giant snow fencing.

To make it, we laid 2x6s side-by-side — separated by gaps of roughly 2 inches — across a pair of sawhorses, and attached them to each other with galvanized plumber's strapping and 1¼-inch screws. Then we simply rolled the assembly up, stood it against the tree, and unrolled it around the trunk, securing it with the loose strapping at each end.

The entire process took a couple of hours and cost about $200 in materials — a lot less than I would have paid had any harm come to those trees. At the end of the job, the owner asked us to leave the armor on while the landscaping took place.

Dave West *owns Meadowview Construction in Topsfield, Mass.*