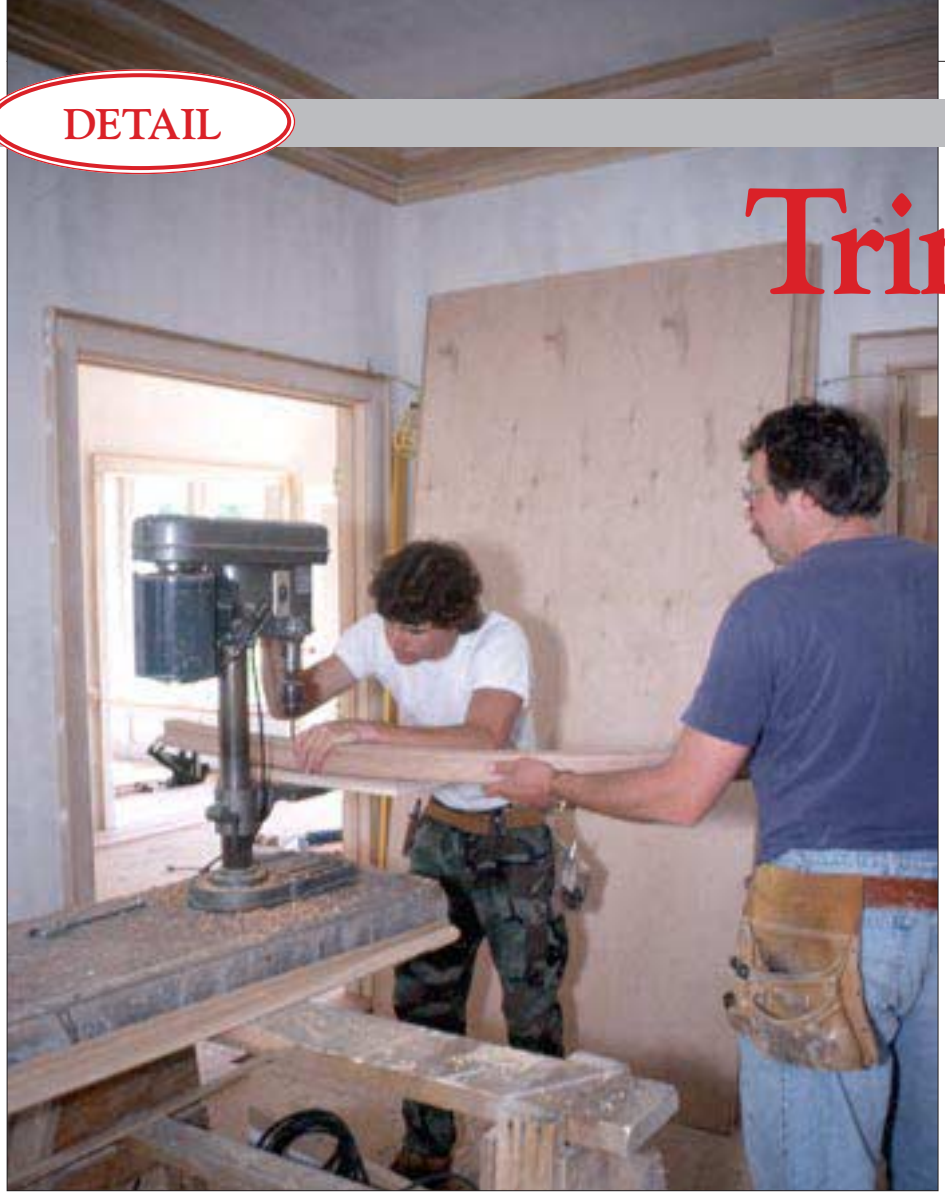
DETAIL

Trimming a Curved Balcony

by Don Jackson



PHOTOS BY CAROLYN BATES

Working in a shop on site, carpenters for Hubbard Construction drill baluster holes in the bottom of a curved railing.

They started in the swimming pool and ended up with a simple site-built steam box, but along the way builder George Hubbard, of Hubbard Construction, in Williston, Vt., and job foreman Bob Blodgett learned how to bend wood efficiently right on the site.

The 4-foot-radius curved balconies — two of them — came about as an afterthought, though you'd never know it to look at them. "The plan didn't originally call for a porch on the front of the house, but the best views were in that direction," said Hubbard. "So we built the balconies to give access to a second-story porch above the front portico."

Though the frame-and-panel finish treatment was familiar, this was the first time the company had tried bending wood. They learned by trial and error. "I first tried tying bricks around the molding and throwing it out in the pool," said Hubbard. "That didn't work — it helped the wood bend, but there was too much springback. Ultimately, we ended up soaking *and* steaming everything, then clamping the longer pieces on a radiused form to dry. It took nearly every clamp we've got."

Low-Tech Steam Box

For soaking, the carpenters saturated the moldings, wrapped them in sheet plastic, and put them in an 8-inch-diameter PVC pipe overnight. From there the wood went into the steam box.

"Steam is really dangerous," said Blodgett. "You should be extremely cautious with steam. Whenever you open the box, wait before reaching in. I learned this the hard way — it peeled the skin right off my arm. Whatever you do, don't make your steam box so tight that pressure builds up in it. The temperature in our box never got above 208°F — 212°F is ideal — but it didn't seem to matter."

The steam box consisted of 2x10s screwed together, with horizontal dowels as shelves for the moldings. Steam was provided by a kerosene space heater with a five-gallon metal can full of water on top, blocked up on joist hangers. Ordinary 2 1/2-inch PVC pipe, with the joints screwed together so they wouldn't slip apart, carried the steam from the can to the steam box. "It was all nice and low-tech," noted Hubbard.

The carpenters selected the best quartersawn stock for bending. On average, they steamed each batch from a half hour to an hour. The longer pieces of molding presented no problem. After being steamed and clamped on the form, they held their shape and could be fit and mitered. The short pieces were trickier. They had more tendency to spring back — especially the last 2 inches — but were too short to be clamped on the form. "We had about four minutes between taking the molding out of the steam box and fitting it in place to cut the miter," said Blodgett. "By the time the miter was cut

A. *Bob Blodgett puts glue on the tops of the candlestick balusters in preparation for railing installation.*

B. *Many hands make tight work, as the predrilled railing slips into place.*

C. *Blodgett predrills a hole for lagging the end of the curved railing to the newel post.*

D. *A kerosene heater with a metal can full of water on top supplies steam to the site-built 2x10 steam box.*

E. *Inside the steam box, 1/2-inch dowels support the moldings for steaming.*

F. *After steaming, the long moldings are clamped on a radiused form to dry.*

G. *After coming off the form, the longer moldings are glued, clamped, and tacked in place.*

H. *Because of their tendency to spring back, the shorter moldings must be attached with countersunk screws.*

I. *The finished balcony blends perfectly with the surrounding wall treatment.*

the wood was too cool to bend, so we had to resteam it." The short pieces required nails *and* screws to lie flat.

Stock Stair Parts

The balusters were a stock candlestick style. The curved railing was made out of standard bending rail, which comes from millwork manufacturers in strips ready for gluing in a radius. "We had a local millwork shop glue up the curved railings, but next time we'll probably bend the rail on site," said Blodgett, "to make sure the radius matches exactly. There was a small variation between the floor and the rail, but it's not visible."

Both men say they would like to build more curved balconies. "It probably took three men three weeks to build those balconies, from framing to finish. But we learned a lot and if we had to do it again, we could trim off at least a third of that time," said Hubbard. ■