Crown Tricks

by Craig Savage

After doing a very careful and tedious takeoff on the moldings for a large Colonial-style house, I suspected my computer when it returned a total of over 20,000 linear feet of trim. But after checking and rechecking that my numbers were correct, the same total continued to pop up. So I began concentrating on how my crew was going to miter and cope over three miles of crown molding. I dearly needed some tips that would speed things along in a cost-efficient manner, and went to my crew for advice. This article is really about their ideas.

Copious Copes

On this project, all the inside joints had to be coped. In a coped joint, one length of molding is cut square and butts tight to the wall. The second piece, the coped end, "keys," or mates, to the butted piece at a right angle.

Two things about this job added to the complexity. First, the majority of the crown molding in this house was built up with two pieces. The first piece was a 1x4 band with a simple bead along the bottom edge. Hash marks on the wall, measured 6 inches down from the ceiling, served to "land" the bottom edge of this banding. A second mark, gauged an inch off the top of the band, indicated where the bottom of the top piece would sit.

Second, our crown fit between the ceiling and wall at an unusual angle. The angle between the wall and the crown measured about 63 degrees. (Most popular crown styles have 45- and 38-degree angles.) This meant that we had to remove copious amounts of wood from the back face of the molding in order for two pieces to mate tightly at an inside corner.

Removing or "backing out" all that material made the crown installation a particularly tedious task and added to the pressure to find a quick way to get the job done.

Cutting the Profile

The crew of five finish carpenters could not agree on how to make the coped joint. Each one had his own style. Their techniques ranged from the traditional — using the old-fashioned coping saw — to the high-tech, which involved using a high-speed mini-grinder. The other three carpenters used hybrid techniques, somewhere between the two extremes.

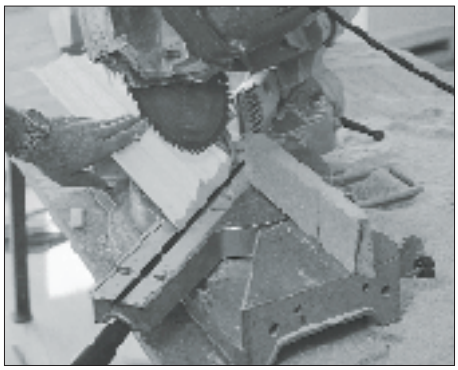

Figure 1. *A coped inside corner starts with a compound miter. The contoured edge along the face of this cut defines the profile to be coped.*

Compound cut. Regardless of the coping technique, the profile of the coped piece must be established first. This profile cut starts with a compound miter. The saw blade must pass through the molding in the same plane as an inside miter would be cut. The face of this cut describes the profile to be coped (see Figure 1).

Cope. The coping saw is historically the right tool for this job. It has a thin blade with 12 to 18 teeth per inch and its C-shaped body allows it to twist and turn as it follows the crown's profile. A good craftsman can make this tool sing, and one carpenter on the job (need I say, he was a product of the '60s) used only the coping saw and an occasional swipe with a utility knife to fabricate perfect joints at amazing speed.

The younger carpenters agreed that electricity helped to speed things up.

Figure 2. *Three ways to cope crown: In the hands of a seasoned carpenter, a coping saw (left) can cut with amazing speed and accuracy. Another carpenter prefers a jigsaw to remove the bulk of the material along the molding's profile (center). Then to smooth out the cut to a perfect feather edge, he uses a mini-grinder with 60-grit paper (right).*

Instead of the coping saw, they used the jigsaw to make the rough cope. Holding the jigsaw at the extreme angle needed to back out lots of material was not easy. One craftsman found it easiest to cut from underneath, watching the blade from above (Figure 2).

Feather edge. After the rough profile cut, the joint needs a little filing, chiseling, and carving. One of the slickest ways to carve the radical "feather edge" that our crown needed proved to be with a 3-inch minigrinder. On our job, the Ryobi grinder was popular, but any model will do. A 60-grit sanding disk mounted on the face of the grinder works best to quickly remove material. Sweeping circular motions moving toward the feather edge worked best.

The cope won't fit until enough material has been backed out. So it's back to the grinder until it fits.

Fitting the Joint

To install the crown, we "sprung" it into place. In other words, we cut the molding slightly long (a fat 1/16 inch) and bowed the middle out as the piece was put in place. When the bow is pushed towards the wall, the sharp coped edge gets forced into the mating piece, creating an airtight joint.

Remember, the joint is only tight along the feather edge. Behind that edge there is a gap where glue has little effect.

To create a more solid joint, we bedded the joint in a bead of siliconized latex caulk. We liberally applied the caulk to the backed-out side of the joint, so when the molding was sprung into place, the caulk squeezed out of the joint. A wet rag finished off a perfect joint.

Putting on the spritz. Another speed tip gleaned from this job is a new product the carpenters call "the spritz." It's a two-part epoxy glue sold by Flex Trim Industries (P.O. Box 4227, Rancho Cucamonga, CA 91730; 800/356-9060) that fills gaps and sets in about four seconds after a catalyst is sprayed (spritzed) on.

This product saved the carpenters the hassle of clamping small multiple-piece corners and tiny molding returns. First, they applied goop on both pieces from a small squeeze bottle. Then, being careful not to glue their hands to the crown, they held the pieces together, and spritzed the squeeze out. Four seconds later, the joint was solid. A small chisel to carve off the hard squeeze out finished the joint. ■

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