Running Crown Production Style

by Gary Katz

For an efficient job, install the crown in a logical order and control every step of the process

I used to waste a lot of time installing crown: For example, I'd cut two short pieces to make up an outside corner, two more pieces to make an inside corner, and then walk back and forth between the wall and the saw, using these pieces to make sure I was positioning the crown correctly before I cut it.

Over time, with the help of some other experienced carpenters, I developed the approach I'll describe here; it allows me to install crown a lot faster with fewer mistakes.

Better Measuring

First, don't even try to remember measurements for crown molding; it's too confusing. To make my cut list, I start on a long wall and take down measurements in the same order that I'll install the lengths of crown (**see Figure 1, next page**). Starting installation with a long piece makes it easier to snap the last piece into the corner, as you'll see later.

I measure across the wall at the bottom of the crown, not up near the ceiling where the drywall compound is likely to bulge the surface. While a tape works fine for shorter distances, it's much faster to use a laser measure for long walls — you only have to move the stepladder once.

I use consistent symbols on the cut list: a V or check mark for inside corners, OC for outside corners, C for cope, B for butt. The measurement itself is always in the middle, the left-hand cut is on the left side of the measurement, and the right-hand cut is on the right.

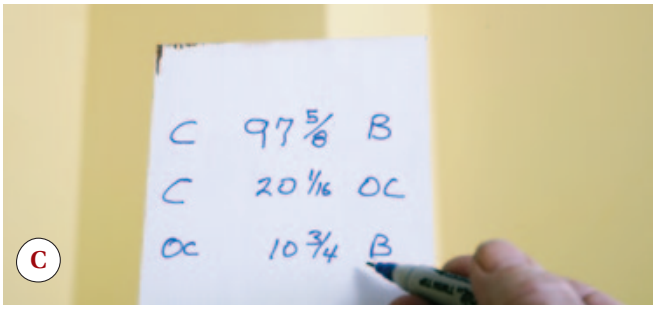


Figure 1. A tape works fine for shorter measurements (A), but a laser measurer makes it easy to measure two long walls from a single ladder setup (B). The author records measurements in a logical order as he works around the room (C).

Control the Cut

The fastest way to cut crown is in an upright but upside-down position. That way, there's no need to adjust the bevel setting; you just have to swing the table to change the miter angle.

Burn this rule in your mind: The base of your saw is the ceiling. Repeat that every time you load a new piece of crown onto your saw. And remember, when you position the crown, don't just roll it over on its back, but twirl it like a whirlybird blade so that the left end is on your right side and the right end is on your left side.

Because crown molding has no back, it's difficult to hold it against the fence at the same angle for every cut — though we've all tried. The problem is that you absolutely have to hold it at exactly the same angle: If the piece slides up or down the fence by even 1/32 inch, your miters will be way off and you'll waste time fussing with the joint.

The best way to secure crown at your saw is with a continuous crown stop (**Figure 2**). I use a piece of 1x6 and clamp it to the wings on my miter-saw stand. The stop must be installed

Figure 2. With the crown upside-down, the author measures its horizontal projection (A), then rips a gauge block that width to use in setting the crown stop (B).

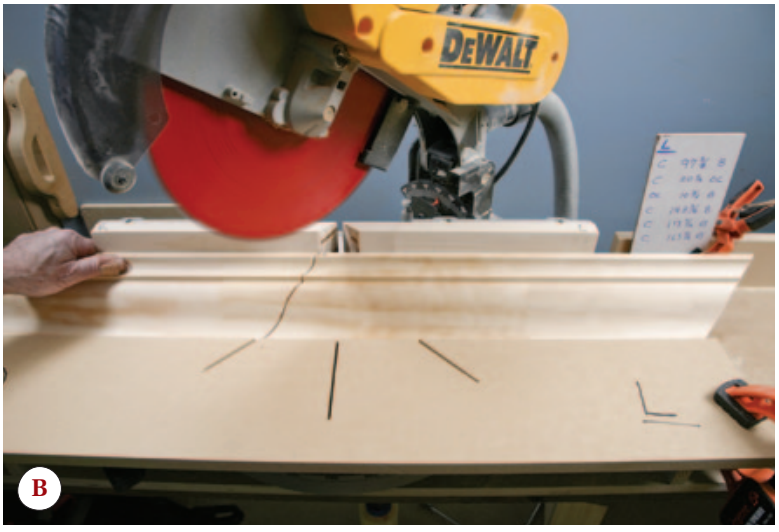


Figure 3. To use the "creep method" for cutting crown, make a shallow cut close to the line (A), then — with the material firmly pressed between your thumb and the fence — slide it into position for the final cut (B).

perfectly parallel to the fence. To make that easier, I rip a gauge block. I hold a small piece of crown in position against the fence and measure how far the crown projects at the base — that's the ceiling projection. I rip the crown gauge to that width, then use it to position the 1x6 stop. Once the stop is secured, I mark a big R on the left side and a big L on the right side, just to remind myself that the ends are reversed in cutting position.

Fine-Tuning the Cuts

Ever since I stopped removing the guards from my miter saws, I've been using the "creep method" to make cuts (**Figure 3**). Besides being safer, it's faster and more accurate than eyeballing down the blade.

I start by making a shallow cut just wide of the mark, and finish by making a cut that splits the pencil line in half — every time. To do this, I firmly place my hand — usually my left hand, with my fingers butted tightly against the fence — so it won't move. Then I use my thumb as a micro fine-adjustment tool to slowly creep the measurement mark up to the blade.

For coped corners, I first cut the 45-degree miter, then I hook the tape measure on the long point, make my mark, and cut the piece to length (**Figure 4**). Before removing the molding, I switch the saw back to 90 degrees and cut off the tip of the coped joint, so it's a square butt cut. That makes it easier to get a tight joint.

For outside corners, I align the short point of the miter with my wooden auxiliary fence. The wood fence allows me to pull a precise measurement whether the piece is 4 inches long or 104 inches long.

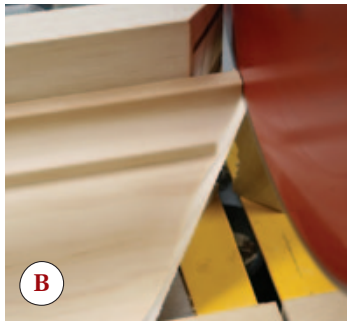


Figure 4. After measuring and cutting a coped end to length (A), the author cuts off the tip before removing the piece from the saw (B). When cutting outside corners (C), he pulls the measurement from the auxiliary fence, with the short point of the miter flush with the fence.

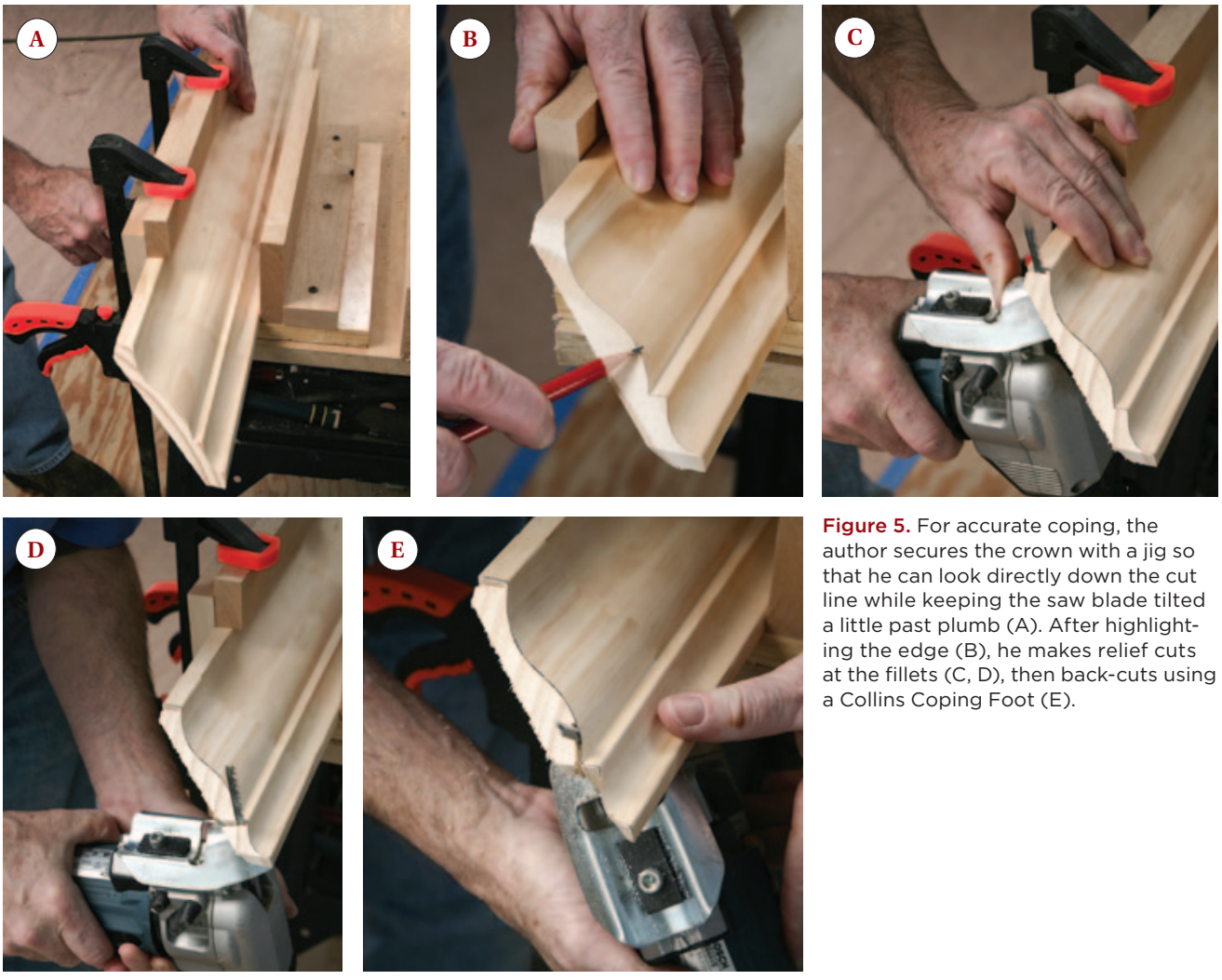


Figure 5. For accurate coping, the author secures the crown with a jig so that he can look directly down the cut line while keeping the saw blade tilted a little past plumb (A). After highlighting the edge (B), he makes relief cuts at the fillets (C, D), then back-cuts using a Collins Coping Foot (E).

Accurate Coping

Coped joints are more durable than miter joints: They stay closed even when the wood moves because of changes in humidity. And though at first they may seem harder to cut, coped corners are actually much faster to install than miters.

When you cut mitered corners, the pieces have to be cut exactly the right length, otherwise the long points of the miters dig into the walls and you can't align the miters. But when you cope your corners, the pieces don't have to be cut precisely — in fact, they should be a little long, which helps create a tight joint.

Also, when you miter inside corners, you have to measure the wall angle — if it's not 90 degrees, you must make an allowance. But a coped joint will fit tight even if the corner is out of square by 2 degrees. And, as carpenter and millworker Bill Shaw taught me, if the corners you're working on are out of square by more than 2 degrees (that's over 3 inches in 8 feet), you've got bigger problems than running crown!

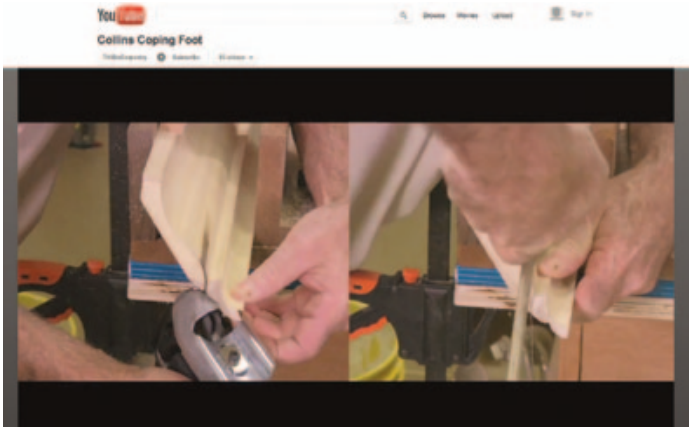
Work to the right. Installing crown can be as easy as running baseboard, but there's one big difference. When I install baseboard, I always move to my left, which puts all the coped cuts on the right-hand end of every piece. It's much easier for me to cope baseboard on the right end because the piece extends out to my left, so I can hold the molding with my left hand while I cut it.

But with crown molding, I always move to my right so that all the copes are on the left-hand end of every piece. (It seems like everything you do with crown is upside-down and backward!)

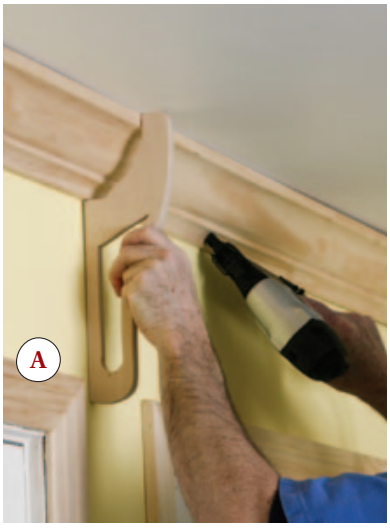
Controlled coping. Coping doesn't have to be a nightmare. I follow the advice of David Collins, a finish carpenter and the inventor of the Coping Foot, and use a coping jig, which makes cutting copes a lot easier. With the mitered crown held snugly in an upright position, I can look straight down the miter and see exactly how much to back-cut; a pencil line highlights the cut line (**Figure 5**).

After making straight relief cuts along the fillets, I typically angle the jigsaw blade slightly to the inside, to ensure a tight joint.

By the way, since mastering the Coping Foot several years ago, I never use a coping saw — it's just too slow. If you want to see how slow, use a smartphone's barcode scanner to scan the QR code at the top of the opposite page; it will take you to a short YouTube video that illustrates the point. (Or go to tiny.cc/coping-foot.)



To see a modern-day version of John Henry vs. the steam hammer, scan the QR code below with your smartphone. (Or go to tiny.cc/coping-foot.)



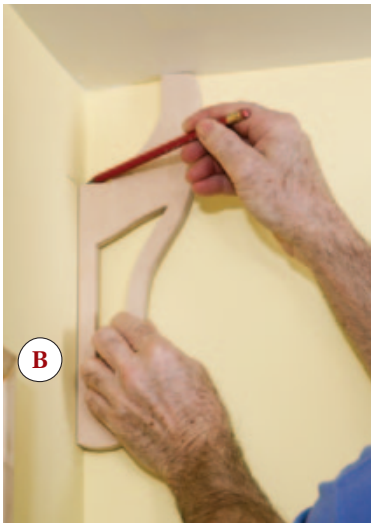


Figure 6. A crown holder (A) positions the molding for precise installation, and is also an ideal layout tool (B). It's simple to make from a scrap of plywood (C).

A Couple of Other Handy Jigs

There are a few other jigs that come in handy and are worth taking the time to make.

Crown holder. I used to lay out a crown installation with a small gauge block cut to match the drop of the crown. I would go around the room and use the block to mark the position of the crown's bottom edge. The problem was that the inside corner of the wall and ceiling I was pressing the block against had the usual buildup of drywall tape and mud, so the vertical drop was inconsistent.

David Collins showed me a much better way — the crown holder (**Figure 6**). With this simple jig, you'll be laying out the crown from right where it hits the ceiling, not back in the corner. All your reference marks on the walls will be exactly at the bottom of the crown.

Make the crown holder from a piece of thin plywood about 12 inches long. Measure across the top and mark the projection of the crown, then use a cutoff to mark the bottom. Cut clean straight kerfs at both marks, then relieve the material in the middle any way you want. Use this jig to make reference marks around the room, and to position the crown when you nail it up.

Crown hook. I don't always have a helper, so I use a crown hook to support one end of long pieces (**Figure 7, next page**). It couldn't be easier to make: Drill a keyhole in a strip of sturdy sheet metal, then bend the strip of metal. Drive a small screw or tack a nail into the top plate where it won't interfere with the crown, slip the hook on to hold the crown, and slip it off just before you fasten that end of the crown.

Corner mockup. Subtle elevation changes at outside corners can cause problems: If you make slight adjustments to the outside miter joint, you might throw off the cope joints in either direction. So to avoid wasted time, I often make a corner mockup, with perfect 90-degree joints (**Figure 8, next page**), and use that to assess the corner and make my reference marks. It's better to know ahead of time if I'm going to have to do some fudging to get tight joints.

Attacking the Room

Like most of the rooms where I install crown, the room photographed for this article is mostly a straightforward rectangle,

Figure 7. When working without a helper, the author uses a crown hook (A). The jig is easy to make from a scrap of sheet metal: Drill a keyhole (B) and bend the metal (C). Install the hook with a loosely driven screw placed so that it won't interfere with the crown (D).

Figure 8. Using a corner mockup (A) to lay out outside corners (B) saves time when cutting the joints.

Working the Room Left to Right

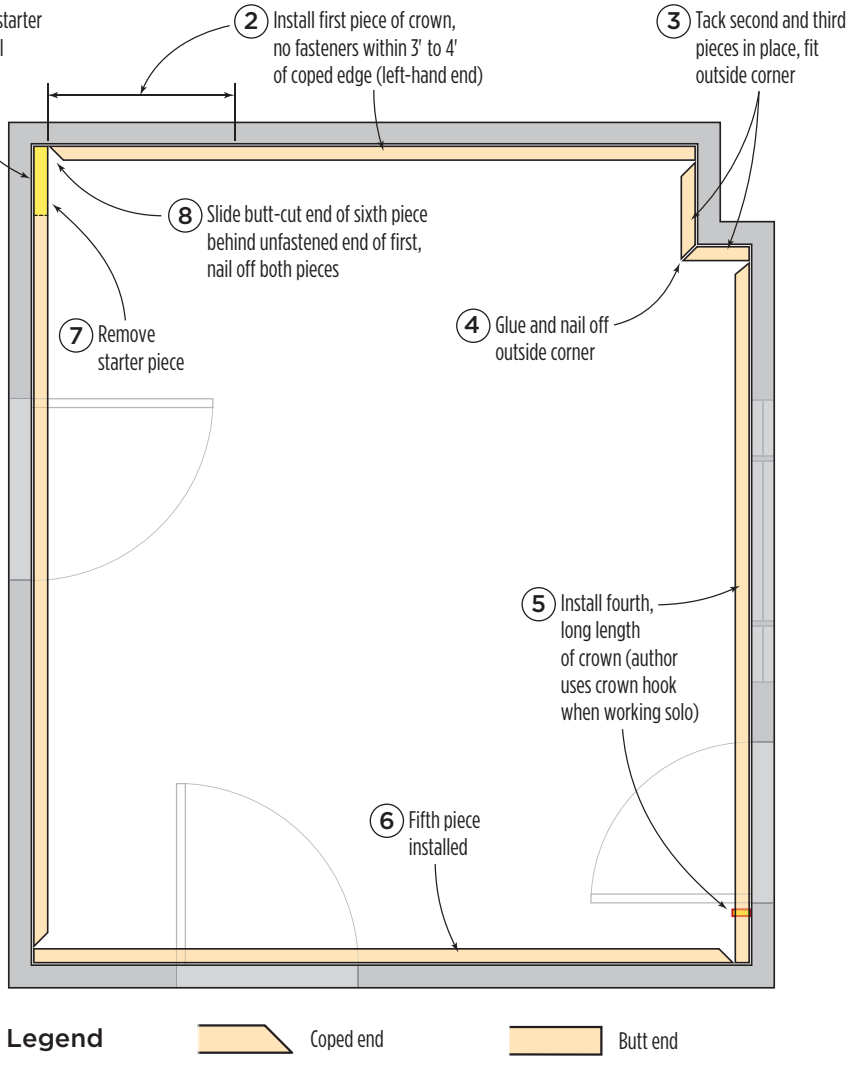


Figure 9. The author works around the room from left to right, with copes on the left ends and butt cuts on the right. The process starts with a temporary starter piece carefully positioned and tacked into place in the corner of the last wall (photo, above).

except for one outside corner bump-out; this plan works well to illustrate the approach I use whenever possible (**Figure 9**). As I already mentioned, I work the room from left to right, and I always install the first piece of crown on a long wall.

To make sure the left-hand end of the first piece is positioned perfectly, I tack a short temporary starter piece on the last wall so I have a way to fit the first cope. I use my crown gauge when tacking the starter piece to make sure it's positioned accurately; later, when I replace the temporary starter with the final piece of crown, I want the butt cut to fit the cope like a glove.

I then go to the middle of the first wall and use the crown holder to position the first piece of crown at exactly the right elevation (**Figure 10, next page**). I nail only to the right; I don't fire any fasteners within 3 to 4 feet of the left-hand corner. That's because later on, I'll need to flex that coped end away from the wall in order to slip that last butt-cut end behind it.

Outside Corners

When I get to the outside corner (**Figure 11, next page**), I tack the first piece — the inside-corner-to-outside-corner section — with an 18-gauge brad nailer. This allows me to fit the outside corner before fastening the pieces permanently; I know that I may have to trim the outside corner a hair, and I want to make sure I can remove the piece if necessary. To make sure I get long-lasting, tight joints, I glue outside corners, secure them temporarily with spring clamps, then fasten them with a 23-gauge pin nailer.

Next Long Wall

On the next section I use the crown hook (**Figure 12, page 41**). Notice that I've cut the piece a little long, which causes it to bow away from the wall in the middle. That's fine; I just fit and fasten the corners first, then press the middle section to the wall when I

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Figure 10. The coped end of the first piece of crown is snugged against the starter piece (A). The author fastens only the right half of that piece so that it can be flexed away from the wall when the last piece slips in (B).

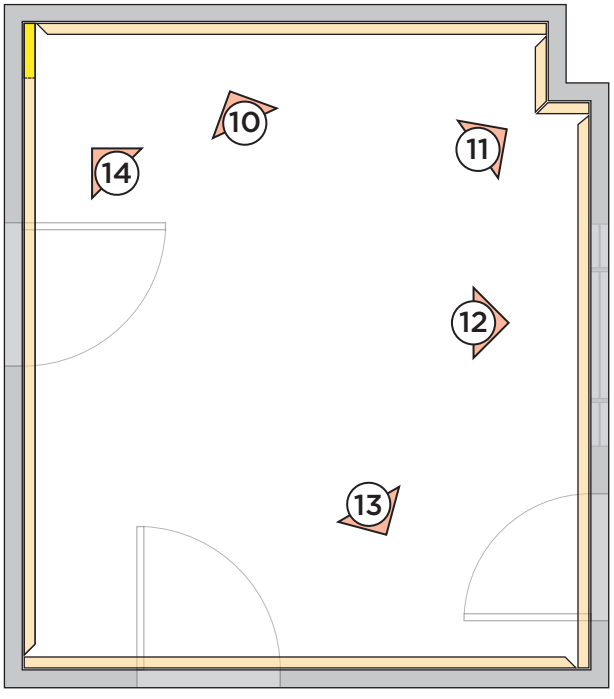
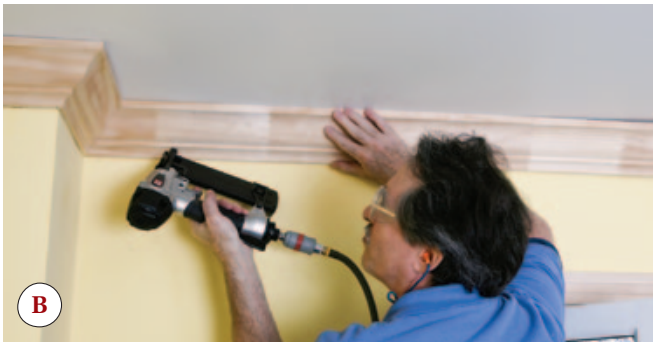


Figure 11. Outside corners are gently tacked so the miter can be adjusted if needed (A). The author glues and spring-clamps the joint to ensure it never opens up (B).



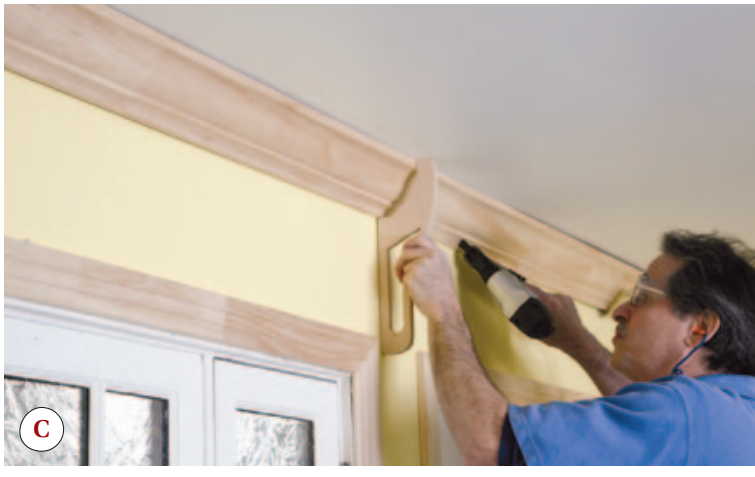


Figure 12. When working solo, the author uses his crown hook to support one end of the molding (A). He starts fastening at the coped end (B), then moves to the center of the wall, using the crown holder for accurate placement (C).

Figure 13. The end of the piece shown in Figure 12 is aligned with the layout marks on the wall (A) to ensure that the coped end of the next piece (B) fits snugly, with no need for fine-tuning the joint.

Figure 14. When the author reaches the last wall, he removes the temporary starter piece (A), then flexes the first piece away from the wall with his right hand while supporting the last piece in his left hand (B). He slips the last piece in behind the coped end of the first piece and nails it off (C).

nail it — which also helps tighten up the corners.

Occasionally, by the time I get to the butt-cut end, the crown isn't sitting on the wall at the correct spring angle. I use a small pry bar and tap the crown to coax it into the proper position, ensuring that the following coped end will fit snugly (**Figure 13, previous page**).

Last Wall

When I reach the last wall, I remove the starter piece and pull the left-hand end of the first piece of crown away from the wall (**Figure 14**). I then slide the butt-cut end of the last piece of crown in behind the first piece. If the last piece is fairly long, I nail it off toward the left-hand end or in the center of the wall; if it's short enough, I support the entire length in my left hand while I tuck it behind the first piece. I nail the last piece off, then finish up back at the first corner (**Figure 15**), in this case nailing first the top and then the bottom.

Getting a tight fit often depends on the nailing sequence. Sometimes I nail the ceiling first, then push the bottom of the crown tight to the wall before fastening it. Sometimes I do the opposite. If you haven't installed crown before, you'll know exactly what I mean the first time you try it.

Some rooms require a different strategy — where pop-outs or obtuse angles must be tackled first, for example. Sometimes you run into a situation where a double-cope is the best solution. But for the most part, if you cope the first piece and keep moving to your right, you'll have a lot more fun installing crown. Remember, if a piece is a little too long, always cut a hair off the butt side. If the piece is a little too short — shame on you! Always cut them a little long!

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Figure 15. Finally, the still-unattached coped end of the first piece is snugged into place (A) and nailed off (B, C).