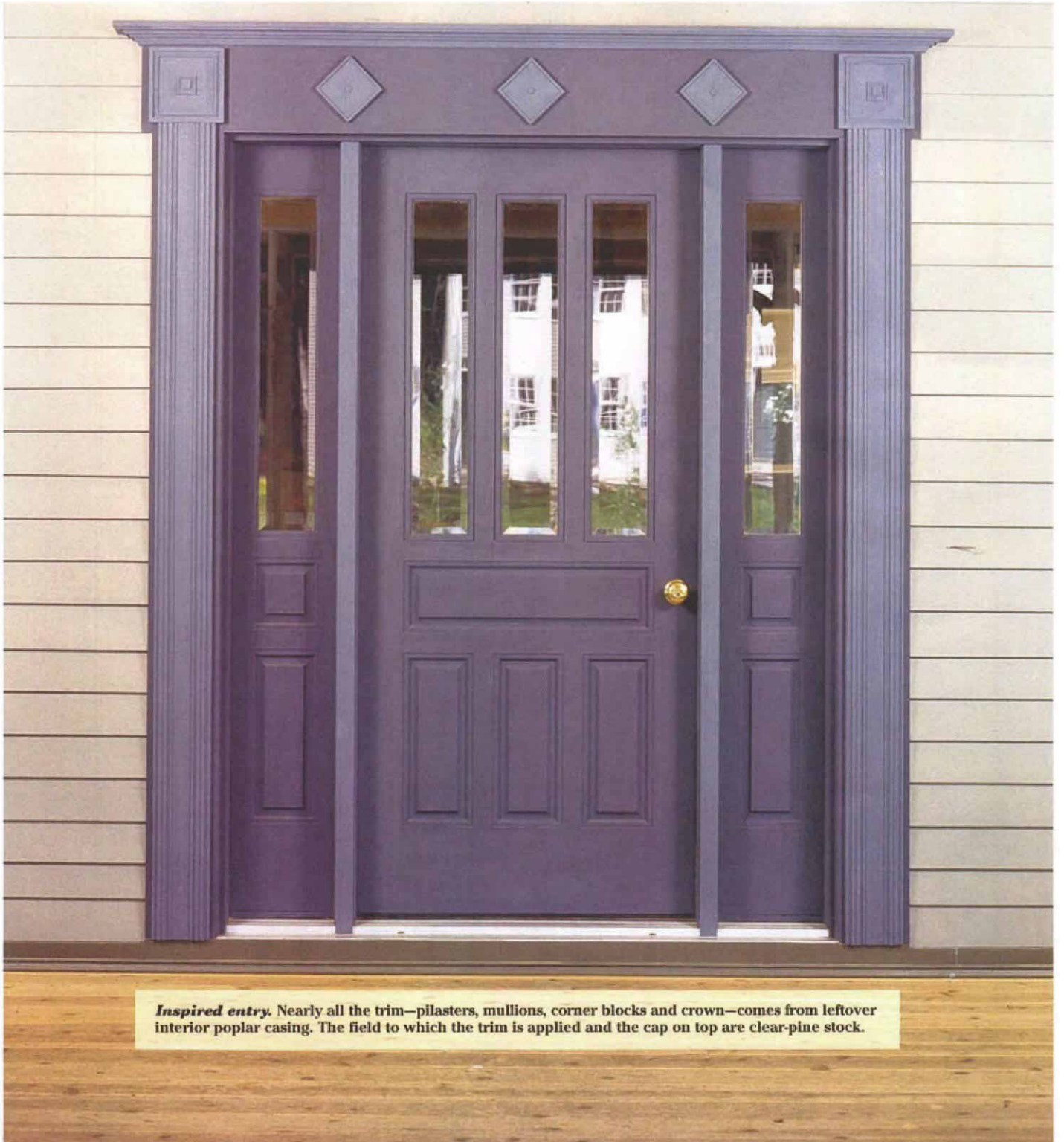
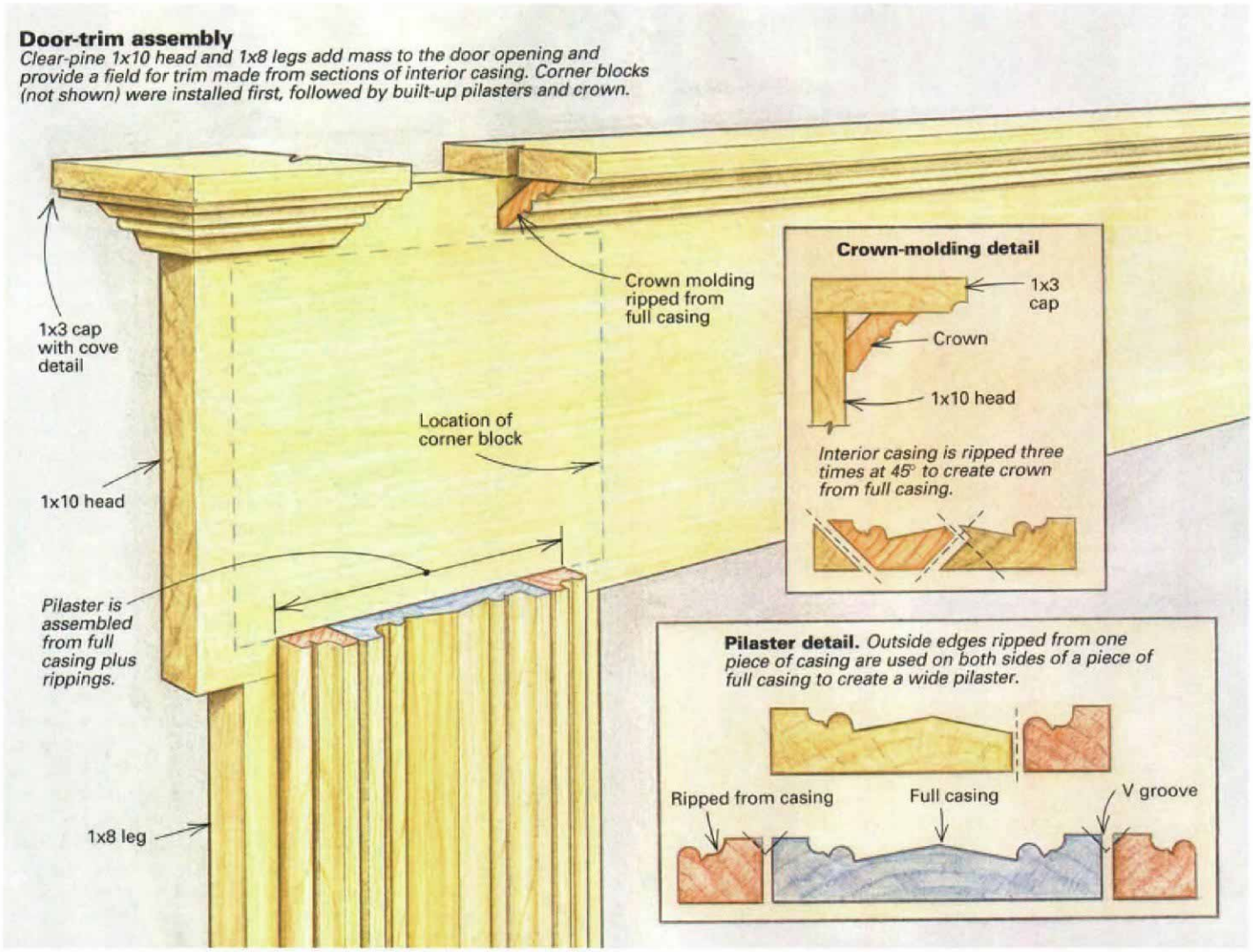
Trimming the Front Door

Ripped, mitered and reassembled interior moldings add a custom look to a front entry

by Richard Taub



Inspired entry. **Nearly all the trim—pilasters, mullions, corner blocks and crown—comes from leftover interior poplar casing. The field to which the trim is applied and the cap on top are clear-pine stock.**



Consider the front door, if you will. There is something about this entrance that, if done tastefully, really invites a person into the home, eager to see more. Why, then, are so many front doors stamped in standard, prefabricated trim? You know what I mean: the same old dentils, sunbursts and broken pediments. They're usually southern yellow pine and can cost anywhere from $200 to $350. My partner, Steve Vichinsky, and I recently built a Victorian house with a large hip roof, an octagonal turret and a wraparound front porch. Considering all the work we had put into this house, I wanted to do something special with the front door.

My goal was to build something quickly that was pleasing to the eye and well made. I took a spin around town, looking at the ornate, older homes here in Amherst, Massachusetts, to get design ideas. A day and a half later I had a front door with custom trim (photo facing page) that looked great and was less expensive than the prefab stuff. Plus it was a lot of fun to make.

Interior trim used outside—A local millwork company had milled up all my interior trim for the windows and the doors (photo right). The casing was ¾-in. by 3¾-in. poplar. The first ⅜ in. on both sides of the face was milled square to the edges (detail drawing above). Next to these flat sections were 3/16-in. coves and then a ⅛-in. V-groove. Two 5/16-in. beads were next to the V-grooves. The rest of the trim came to a beveled peak in the center of the casing. I also had plinth blocks made for the doors, bullnose pieces to separate the casing from the plinth blocks, rosettes for above the doors and the windows, and detailed baseboard.

As I stood looking at a finished, trimmed-out room, it suddenly hit me: "Why can't I use the interior trim outside?" I stepped outside. Thinking of the houses I had seen, I knew this front door had to be built out in both width and depth to match the scale of the house. The interior trim alone wasn't beefy enough.

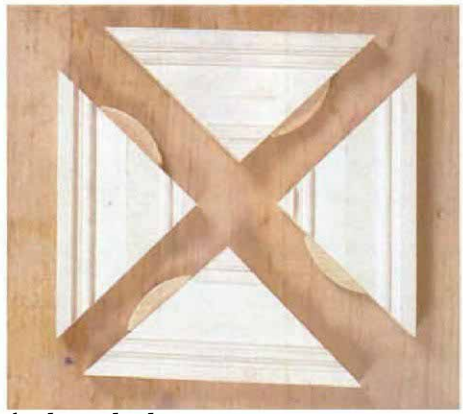
Fattening the trim—To give the opening more width, I nailed 1x8 clear-pine stock to the sides of the door and 1x10 over the top (drawing above). The head, or top piece, extends 1 in. past each leg. This gives a nice effect where the legs

Interior detail. **Custom-milled corner blocks and casing inside the house inspired the design for the front-door exterior trim.**

Drawings: Bob Goodfellow

Cutting the corner-block components. **Two 45° cuts make a triangle, and four of these triangles make a square corner block. The full width of the casing was used for the end corner blocks.**

Another use for the biscuit joiner. **After carefully cutting and aligning the four triangles, biscuits are inserted in slots to keep the joints tight through all of New England's weather cycles.**



A closer look. **Both the large corner blocks and the small diamonds were assembled with biscuits and epoxy (above), then nailed to the pine. Note how the overhanging head aligns with the siding (left).**

meet the head, later accented by the siding. An overhanging head is a common feature of most fancy, exterior door trim. I now had a blank field of pine with which to work.

I tacked a short length of the 3¾-in. interior casing to a vertical 1x8. It looked good but was too narrow. I took another piece of casing and ripped on the table saw a 1-in. strip from each side. I added these strips, which included the ⅜-in. flat, the 3/16-in. cove and the 5/16-in. bead, to both sides of the first piece of casing. With a 1-in. strip on each side, the flat section facing in, the resulting ¾-in. flats felt heavy. So I set my table-saw blade at 45° and put a light chamfer on the edges of the rips and the casing. When I put the three pieces together again, the resulting V-grooves broke up the ¾-in. flats, and the width of the three pieces together looked good. All I needed was a full-length version for each side of the door.

Mitered corner blocks—Now I had to come up with something for the head. I thought of using the interior rosette corner blocks, but they were too small. Then I realized that I could make my own corner blocks, once again using the interior trim. I did some tests by putting together mitered sections of the casing with hot-melt glue (see sidebar facing page). Cutting the mitered pieces really isn't too tricky, but if you don't cut the pieces accurately, none of the profile lines will meet. With a sharp blade on my chopsaw, I cut the the casing across the face at 45° and again at the opposite 45° to make a right-triangle offcut (top photo, left). Four of these triangles together made a comer block. I tried different sizes and settled on the largest one, which had triangles cut from the full width of the casing. Large comer blocks seemed more dramatic and better suited to the house. I particularly liked the border that the ⅜-in. flat created around the perimeter of the corner block.

Now that I had my corner blocks, the trick was to join the four pieces permanently. Having just finished joining all the interior trim with my biscuit joiner, I realized that joining the mitered corner blocks with biscuits would be a perfect application for this tool (middle photo, left). I numbered the triangles and put them together face-down with the joints aligned. I marked one line across the center of each joint, cut the biscuit slots and then glued the corner block together (bottom right photo, left) with highly weather-resistant epoxy.

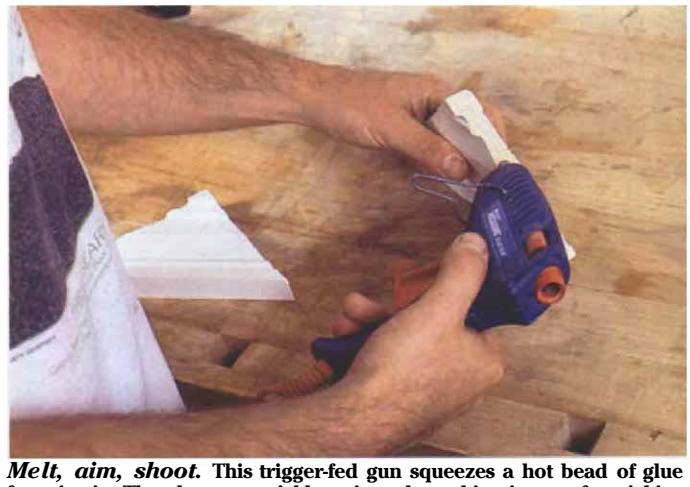
Laying out the field–Twelve hours later, when the epoxy had dried, I centered the two corner blocks over the 1x8 legs and nailed them in place. Then I measured the height of each corner block and cut two lengths of casing and four lengths of strips to fit tightly beneath the corner blocks. I centered and nailed a piece of casing on each 1x8 leg. Then I toenailed the smaller rippings on each side of the casing to draw them in tight and countersunk all the nails. Now I had two 5¾-in. pilasters on top of my 1x8 stock, leaving a ¾-in. reveal on each side. This gave me the depth that I wanted. The depth showed up more when the trim was painted two different colors (for more about color schemes, see *FHB* #74, pp.

Using hot-melt glue

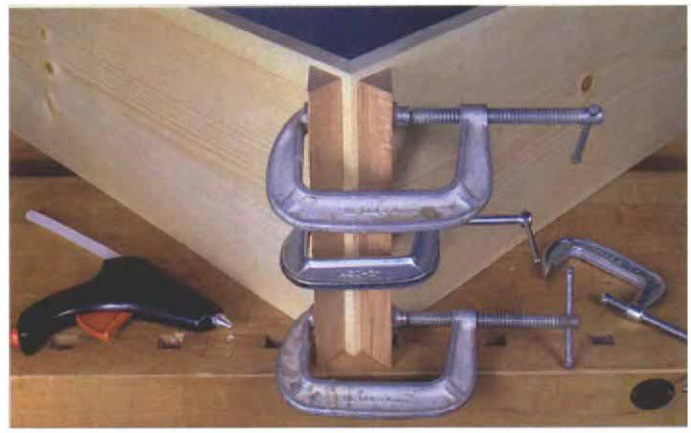
When I was in the Wendell Castle Workshop (a furniture-making school outside Rochester, New York), I found, like most other woodworkers, that there is nothing like mocking up a piece, either full scale or scaled down, that you've worked out on paper. A mock-up quickly tells you whether or not the piece works technically and aesthetically.

Mock-ups and miter clamps—For mock-ups, hot-melt glue is incomparable. Once that gun gets hot, the glue melts out and sets quickly (60 seconds to 90 seconds). You squeeze out a bead of glue, stick your pieces together and move right along. Before long, you have a working model in front of you. The only problem with hot-melt glue is that it's so easy it can make you lazy. In situations where you need to see if more intricate joint details will work, such as a mortise-and-tenon joint instead of a bridle joint, put aside the glue gun and do the joint the way it should be done.

When I glue up long mitered joints, joining the sides of a 12-in. box, for example, I make triangular clamping blocks. I lay a bead or two of hot-melt glue on the blocks and stick them on each side of all the miter joints, centered from top to bottom (bottom photo, right). A C-clamp pulls the joint together as it grabs the clamping blocks. This puts clamping pressure directly on the center of the miter joint. It's a good idea to keep the glue gun hot, in case a block comes loose during a glue up. This could be a disaster, but if you're fast, you can remelt the glue, squeeze a bit more on, stick the block back down, let it cure for one minute and continue with the clamp up. The glue is so elastic that it easily pares off with a sharp chisel and can be further cleaned by some sanding.



Melt, aim, shoot. **This trigger-fed gun squeezes a hot bead of glue from its tip. The glue sets quickly as it cools, making it great for sticking together a prototype to see how it'll look.**



Temporary clamping blocks. **To clamp miter joints, triangular clamping blocks can be made with hot-melt glue. The blocks can be easily removed later without damaging the mitered pieces.**

If you plan to use clamp blocks to pull a piece together, and the piece needs a lot of clamping pressure, blocks glued on with hot-melt glue will never do. Once you start to really torque down on the clamps, the glue bond will break.

I always clamp up the pieces dry before using glue. Dry clamping tells me if the piece will pull together with minimal pressure or if it needs more serious persuasion. Also, I always have another plan ready if the glue fails to hold up under the clamp pressure—maybe some other conventional clamping means, such as band clamps (which happen to work well on mitered frame pieces of any dimension).

Glues and guns—Even though hot-melt glue is fairly strong, it cannot take the place of other wood glues. I don't recommend hot melt for gluing a finished piece because it cures so fast that you can't get a tight joint. Hot-melt glue just doesn't have the holding strength of yellow glue or epoxy.

As for glue guns, there are many on the market, and they are all fairly comparable in both design and price (about $10 to $25). Some, like my Master Mechanic 208-MM (top photo, left), are trigger-fed. This model loads easily; just slip the stick of glue in the back, and the trigger feeds it through the heating element. My gun gets extremely hot—about 380° F at the nozzle tip—so the glue squeezes out very nicely. I've found that the less-expensive models (usually not trigger-fed) don't melt the glue as nicely and won't allow those few extra seconds to work with the piece.

Hot-melt glue itself comes in an array of types and colors. The yellow sticks are basic, all-purpose hot-melt glue and are good for most household projects and repairs. I use the clear hot-melt glue, which is made for craft and hobby use, as well as for building or repairing stuff that doesn't take a lot of pressure or abuse. I wouldn't use it to repair a dining-room chair, but I would use it to fix a loose piece of trim. Hot-melt glue will bond to most porous materials within 90 seconds. There is also a brown hot-melt glue used as a fast-setting waterproof caulk for filling seams. I do not use this glue. Waterproof siliconized acrylic caulk gives you a lot of working time to fill a seam, and it cleans up easily. To get the same results with brown hot-melt glue, you must squeeze out the glue quickly and subject yourself to the heat of the glue as you press it into the seam with your finger. In other words, you would never get a good, clean, painless job. However, the brown hot-melt glue is useful for gluing something that might be exposed to moisture. —*R. T.*

40-45). The mullions between the sidelights and the door are much narrower, so I used the center beveled section of the casing ripped to 1½ in.

I now had an empty field of 1x10 trim above the door and the sidelights. Because the house has many angles and shapes, I thought diamonds might look nice in this empty field. So once again I started playing with mitered sections of the casing and came up with a smaller corner block. I made three identical corner blocks biscuited and glued together just like the large corner blocks. Turning them on their pointed ends gave me the diamond effect I was looking for. I nailed them onto the 1x10 head trim (bottom left photo, facing page), one above the center of the door and one over each mullion. All nails were countersunk to minimize stains; the painters would later fill these holes before painting.

Can you top this?—Now I needed to cap the head jamb. I routed a cove detail on a piece of 1x3 clear pine and nailed it, cove-side down, to the head. It made a little shelf. Then on the table saw I ripped another section of casing, making three passes with the blade at 45° to create a nice crown-molding detail (drawing p. 47). I cut 45° compound miters on each end, centered this piece beneath the 1x3 and returned the crown into the sheathing to complete the trim. □

Richard Taub is a home-builder and furniture-maker in Amherst, Mass. Photos by Rich Ziegner except where noted.

Bottom photo: Susan Kahn