SIMPLE Frame & Panel Trim

Quarter-inch plywood panels and pocket-screwed joinery speed construction of this traditional-looking frame and panel trim

by Gary Katz

Craftsman-style wood paneling is one of the easiest types to install because the stiles and rails have no sticking profile: They're cut square, which means you don't need cope-and-stick router or shaper bits. And with square-cut stiles and rails, there's no need for fancy panel molding either. The trick is to preassemble all the stile-and-rail sections and install the panels before fastening anything to the walls or columns.

We recently finished a job where we wrapped structural columns with a frame-and-panel treatment. The columns supported angled arches, which continued the paneled treatment. Fortunately, the owner wanted a collar of crown molding near the top of each column, which provided a good way to hide the joint between the column panels and the angled panels for the archways.

Careful Layout & Design

I wanted to know exactly what we were up against before we installed anything, so we started with a laser and shot control lines on the OSB substrate of each column. Control lines don't have to represent any specific height or elevation; they just provide a level reference from which all other layout marks can be measured. (I use control lines whenever I'm setting windows and doors, so the jambs and casings will all be aligned.)

Measuring up from the control lines, we quickly discovered that the headers weren't framed level. In one opening

Craftsman-Style Paneling

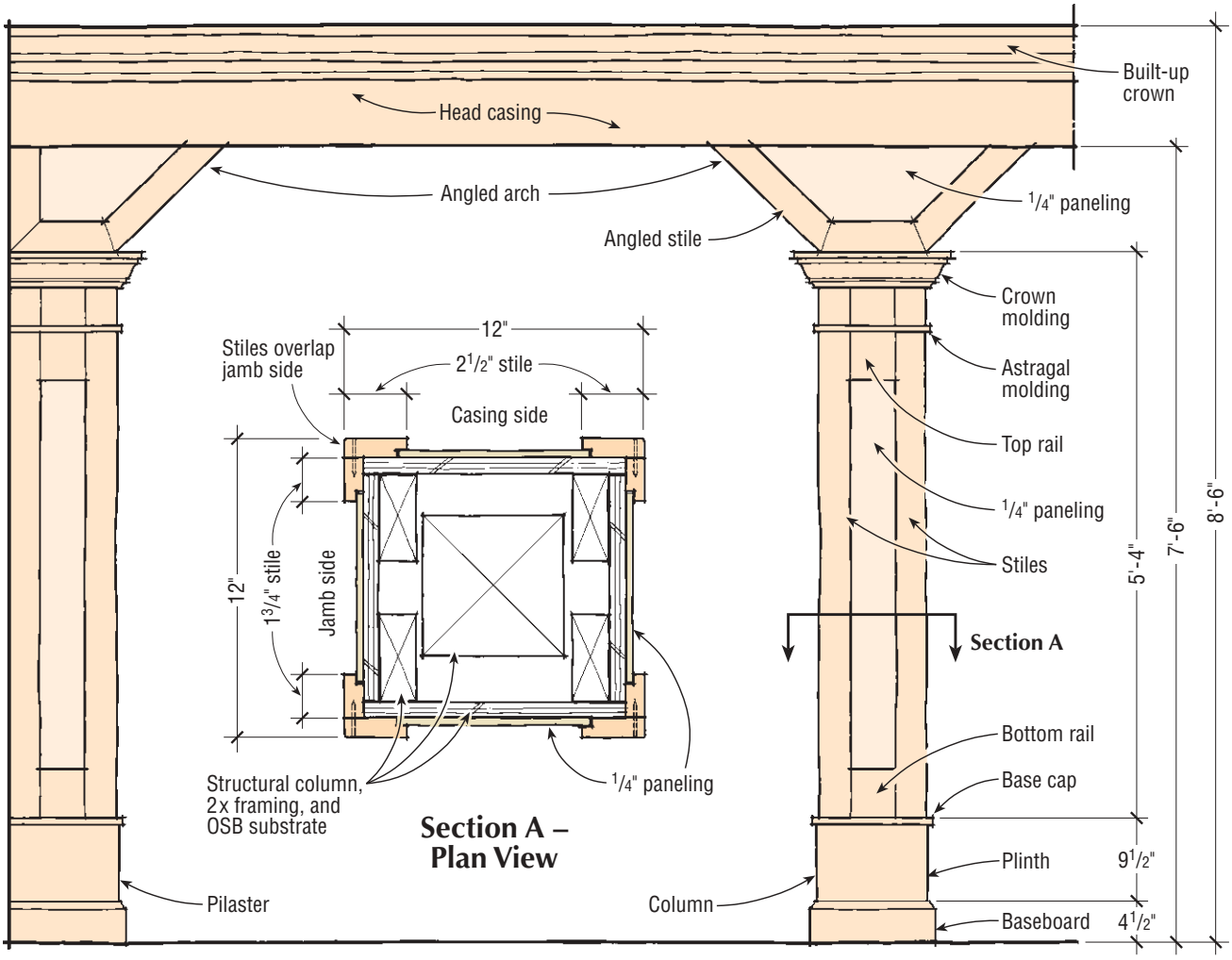


Figure 1. Rabbeted stiles and rails, joined with pocket screws, and 1/4-inch plywood panels create a production version of an expensive-looking paneling job.

the header was crowned down, with a 1/2-inch sag. The floor was out of level, too, as much as 1/2 inch across a single opening. We established the lowest header as our starting point and laid out the paneling for the head jambs from that elevation.

Using the same control lines, we next marked the location for the finished spring lines of each arched opening, so that all the spring lines would match and be perfectly level. The only problem that remained was the floor. I knew there would be two different widths of panels — narrow ones for the inside "jambs" of each opening, and wider panels for the outside "casing" on each opening (see Figure 1). But I was determined to make the panels all the same height. The best solution for the out-of-level floor was a classical one — I just allowed for a second joint between the shaft of the column and the plinth, the perfect location for a base cap. The base cap mimics a classical column, which has a torus molding above the plinth; scribing the baseboard solved the rest of the problem.

Story Pole

Before starting any woodwork, we laid out the dimensions of the column panels on a story pole, just to be sure we had it right. We made the top rail wide enough to accept the crown molding and still leave an exposed rail that was wider than the stiles. We also increased the width of the bottom rail so that it would accommodate the additional base cap molding and still be wider than the top rail (columns look best with the heaviest elements at the bottom).

Burma teak is the most popular type of wood used in Craftsman-style homes in the Pasadena area, but the owner of this home chose alder, which is much less expensive and still a good-looking hardwood. I usually use sheet goods for wainscoting, typically hardwood veneer with an MDF core. But

Figure 2. Pocket screws make for tight joints between rails and stiles (A) and allow the frames to be handled while the glue is still wet. In a quick operation, a carpenter rabbets the frame (B), then installs the panel with glue and staples (C, D, E). The panels were cut 1/8 inch smaller than the overall width to allow for seasonal movement.

for this job, solid wood was the only choice because there was no molding hiding the inner stiles and rails, and the outer edges were visible, too. Though it added considerably to the board-foot price, I ordered all the solid material S4S from a local supplier to save milling time. For the 1/4-inch paneling and 3/4-inch plinths, I used alder veneer with an MDF core.

Assembling the Columns

Wrapping the lower section of each column was the easy part of this job. We used the story pole to determine the heights of all the panels, then cut a stack of stiles and rails. The wide top

Figure 3. Clamps hold the glued panels in place while a carpenter secures the joints and the field with finish nails.

Figure 4. Pilaster columns are scribed to the wall (left), then trimmed to the line with a Makita panel saw (right), held to cut a slight back-bevel for a tight fit at the wall.

Figure 5. The routed inside-corner rabbets on angled panels (above) were finished by hand (right).

rails had to be glued up because the alder boards didn't come wide enough. Since the backs of all the panels were hidden against the columns, we were able to use pocket holes to secure the boards and didn't have to wait for the glue joints to set up. We also used pocket holes to secure the stiles to the rails, which allowed us to move along at a pretty good clip (Figure 2, previous page).

We didn't even wait for the glue to dry before rabbeting the back of each frame for the 1/4-inch panel. We set the panels in a small bead of glue, dropped each panel in place, and then secured it with staples.

Installation went pretty fast, too, at least on the center columns. We eased the edges of every outside corner to emphasize the joinery and provide a little wiggle room: Installing flush corners can be much more demanding. Next, we glued up the corners, holding them in place with clamps so we could adjust the fit before securing the corners and the field with finish nails (Figure 3).

Figure 6. Some of the columns have miters in two directions, requiring careful dry-fitting (above). Even the 1/4-inch panels are mitered (right).

Scribing Panels

Four of the columns butted up against walls. Though there were no backs to those columns, we still made all the panels the same size as the columns in the field, which allowed an extra 3/4 inch for scribing the frames tightly to the walls.

We used the same scribing technique we would use to scribe a door casing that butts a wall. We started by installing the jamb panels first (the inner panels that formed the jambs of each archway), then temporarily clamped the "casing" panels in place. Whenever you scribe casing to a wall (or to anything), it doesn't matter how far off the wall you hold the casing. What matters is that the casing be parallel with the jamb. We positioned the inside edge of the casing panels in line with the jamb panels, then spread our scribes the exact distance from the face of the jamb to the edge of the casing (Figure 4, previous page).

Our 4 3/4-inch Makita panel saw (model 4200N) works great for cutting scribes: The little monster spins at 11,000 rpm, fast enough to cut without tear-out, and it's small enough to follow even the wiggliest walls. We always clamp the workpiece to a table before cutting a scribe, so we can concentrate all our attention on the job. Following a scribe line seems a little easier, too, if you tilt the blade slightly and undercut the workpiece. The slight bevel also makes it easier to get a tight joint at the wall.

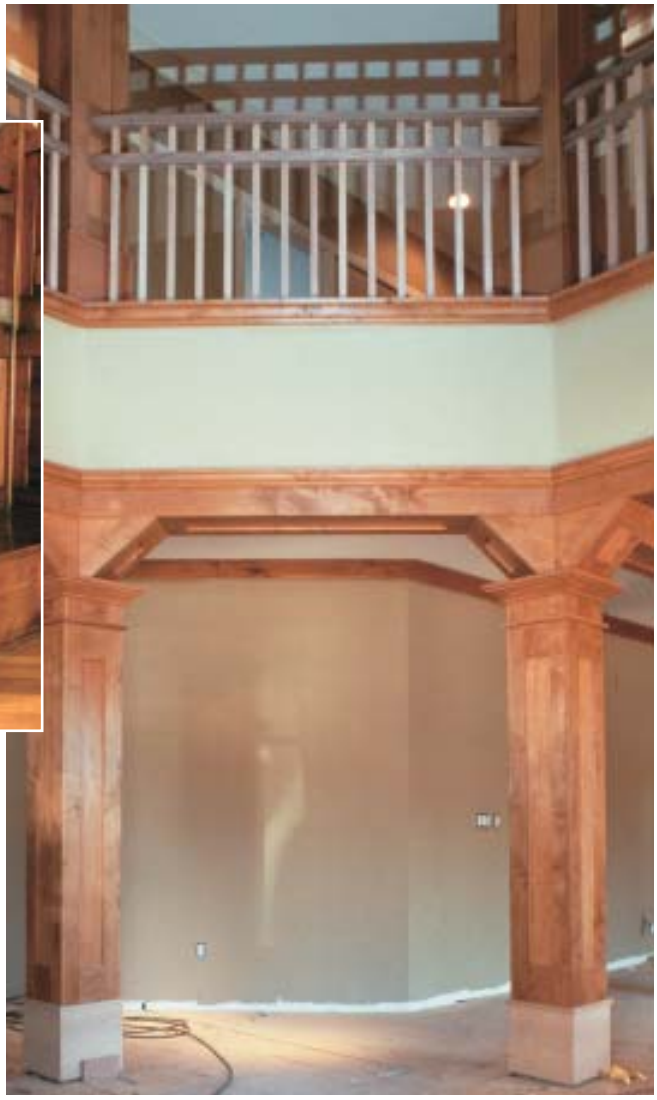
Layout for the Arches

Scribing a few panels on the columns caused only a small wrinkle in our production schedule, but my real fear was the arches. I figured they'd slow us to a crawl. Fortunately, clamps and a pocket-hole jig solved that problem. The panels for the head jambs were easy because we assembled them in rectangles, just like the panels around the columns, then we cut the miters at the spring lines with a sliding compound miter saw. The panels that cased the openings went much slower because we had to dry-fit all the pieces in place.

We started by cutting and mitering all the heads together, then secured them in place with clamps. Next we cut and fit the angled stiles, labeling and marking the location of each piece. We took the marked pieces to the bench, where it was easy to fasten them together with glue and screws, using a 9-inch Kreg pocket-hole clamp. We used the same bearing-guided router bit to let the panels into the frames, cutting the tightly angled corners by hand (Figure 5, previous page).

The panels on the entry side of the room posed their own problem, because the 1/4-inch paneling had to

Figure 7. Some arches were wider than the length of available alder stock. These sections have pocket-screw joints at mid span.



Courtesy of the Gamble House

Figure 8. The column plinths were assembled from 3/4-inch alder-veneer plywood. Baseboard followed flooring. The finished paneling is reminiscent of early 20th-century Craftsman-style woodwork (inset).

be mitered in every corner (Figure 6, previous page). We left each panel a little long, then scribed the pairs to fit perfectly. Some of the panels on the hallway side were even more troublesome, because they were longer than the available alder stock (alder isn't available in lengths longer than 10 feet). To ensure a tight-fitting mid-span joint, we used pocket screws to preassemble the entire span in one piece. We used the same technique we'd perfected on the front side, temporarily fitting the pieces in place, assembling them on the bench, then installing the completed panels (Figure 7).

The finished result was a Craftsman look on a production schedule (Figure 8). It's ironic to think how efficiently we accomplished the job, considering the old-world handiwork that would have gone into original Craftsman style. In this case, it took modern tools and good planning.

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