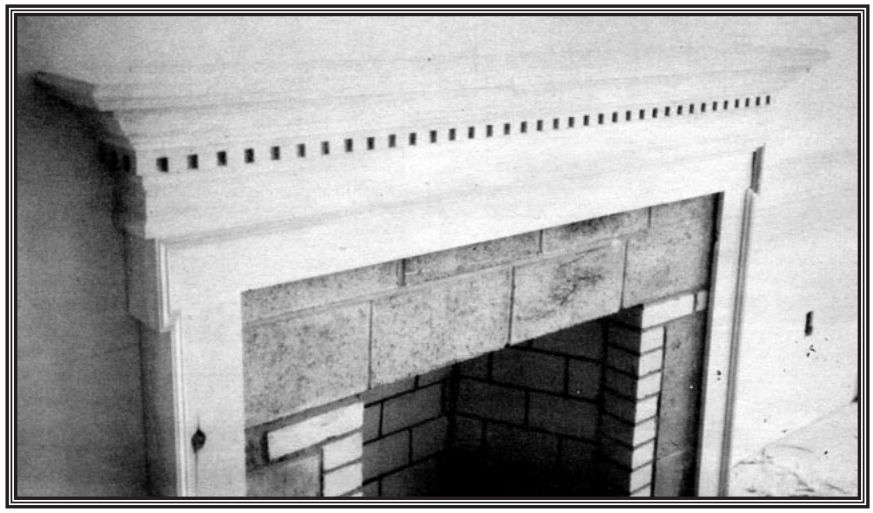
Custom Mantels from Stock Moldings

by Bill McLearn



With a little imagination you can build a formal fireplace mantel with parts from your local lumberyard

Have you ever run into a fireplace opening that is too big for a standard mantel? I've found a way to solve this problem and save money in the process. The local lumberyard has a whole rack of "standard" moldings. With a little imagination and planning you can arrive at a better mantel than the stock ones, and save money at the same time.

First you need an idea of the style mantel you want. I suggest you first look at a catalog of standard mantels. Morgan Products (601 Oregon St., Oshkosh, WI 54901), for example, has about six to choose from that come in various sizes. The mantel I'll describe here was based upon Morgan's "Georgian" model. It comes in several sizes, but none of them was big enough for this fireplace.

Planning

Depending on the style of the mantel I'm building, I may need a wide frieze, as I did here. But I don't use wide boards because of their tendency to warp. There are a couple of ways to avoid wide stock. One is to use pine plywood if you can design the work so the edge plies will be covered. The other is to use two pieces of 1x stock to get the needed width, which is what I did in this case. I used a 1x10 for the lower, exposed part of the rail, and a 1x6 "box" on top of that. The 1x6 steps out and laps over the 1x10, which helps make the profile more interesting. I used No. 1 pine for all the flat areas of this mantel.

Site Measurements and Layout

Before getting started with the actual construction you have to do some preliminary layout. I draw plumb lines on both sides of the firebox to indicate the outside edges of the 1x6 stiles. (The exact placement is partly dictated by the dimensions of the fireplace-surround material — in this case, marble.) I then determine the height of the shelf and draw a level line on the wall 1 1/2 inches below it to mark the top of the support blocking for the mantel shelf.

Next I determine the depth of the stile sides by measuring from the face of the wall to the face of the block or finish material. (If the surface of the fireplace is not even, as with stone or old brick, I'll use a scribed piece of molded baseboard or window stop around the inside to match the uneven contour.)

Finally, using 2-inch cutoffs of all my moldings, I lay out a mock cross section to find out the reveals and the total height and projection of the moldings.

Blocking

Working to the inside of my layout lines, I next fasten blocking to the walls on each side for the stiles, and above the firebox for the frieze. I attach a 2x4 cleat below the top layout line to support the mantel shelf. This piece is fastened with lag screws into the framing, since the mantel shelf takes the most abuse.

After attaching the blocking, I cut and install the boards — 1x4s in this case — that make up the sides of the stiles, nail the frieze across the front, then add the stiles, butting them tight to the bottom of the frieze.

In order to get that classical looking jog in the band molding (see photo) I have to add an additional piece of 1x, ripped in this case to 5 1/4 inches by 10 3/4 inches long, to each end of the frieze (see Figure 1).

The Upper Tier

I built the 1x6 "box" next, attaching it flush with the top of the 2x4 blocking already installed to support the mantel. Its inside dimensions match the outside dimensions of the 1x10 frieze, which it overlaps by about 1 1/4 inches. I cleated it to the wall at the ends and fastened it to the blocking in the middle with short lengths of 2x4. This helped keep the face from bowing in and bouncing when I was nailing the crown molding later.

Mantel shelf. For the mantel shelf I typically use two pieces of 1x10, because it's less expensive than a piece of 2x10 pine, and by gluing them together with opposing growth rings, they resist warping.

I install the lower piece directly to the framework with screws and glue, then finish-nail the top piece to the lower one, again with plenty of glue and clamps along the edges. I also screw from underneath — the screw heads are covered by the crown — taking care not to come out through the top.

Molding

For this mantel I used five moldings: belly casing (NAMCO or New England Millwork B650), dentil (NAMCO or Denison-Cannon KM134), crown (Brosco 8009), band (Brosco 8463), and flat astragal (Brosco 8171)..

Belly casing. The first molding installed was the belly casing. In the mantel described here, it's placed about 8 inches above the bottom of the rail and butts against the bottom of the 1x6 box (see Figure 2).

Belly casing is a casing that was used at the turn of the century and is enjoying a comeback in recent years. Around doors and windows it's often used with plinth blocks and rosettes (those square pieces at the corners where the clamshell casings are mitered).

I cut the end pieces first with their open miters and fit the front to them, but this is a personal preference. Either way works as

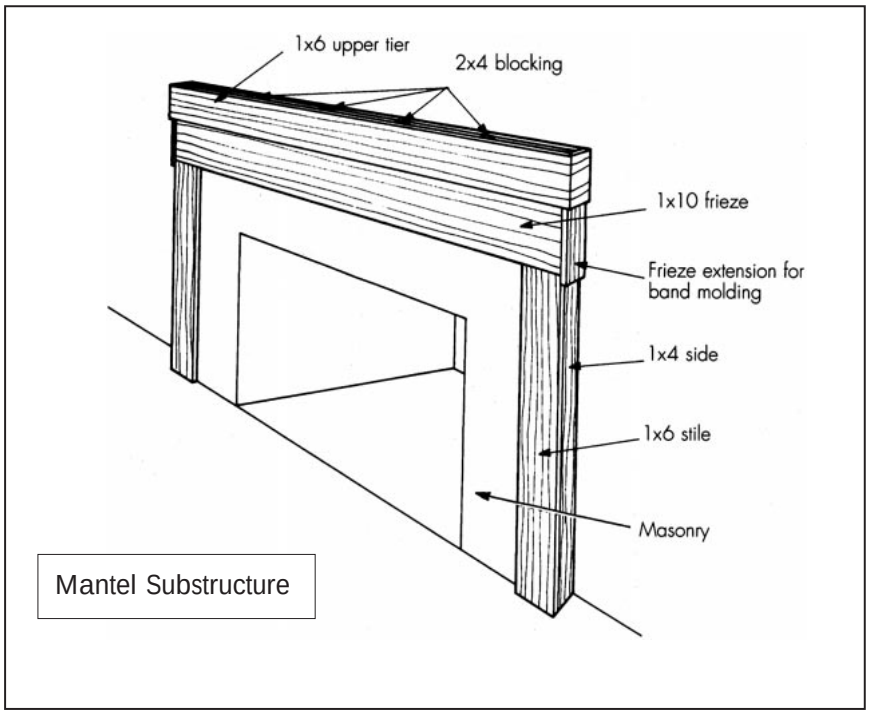


Figure 1. *The author builds the basic mantel from 1x dimension lumber. The widths of the frieze and stiles may vary depending upon the style of the mantel and the type of surround material.*

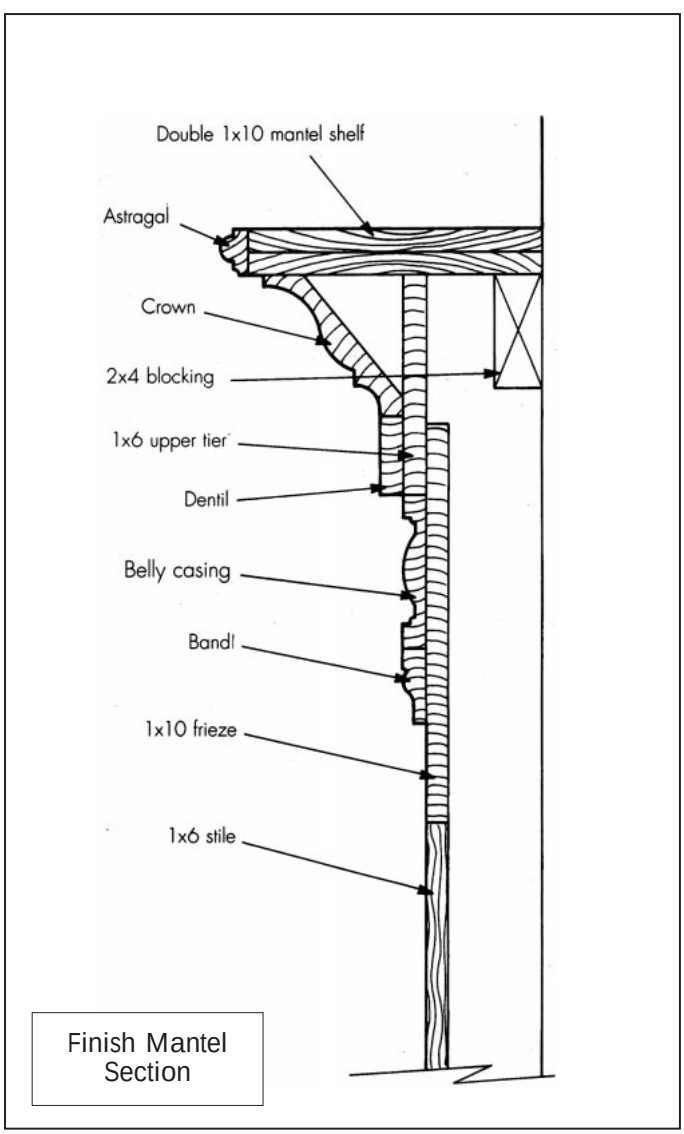


Figure 2. *McLearn uses off-the-shelf moldings to build up a classical-looking composite profile.*

long as the fit is good.

Dentil. Next came the dentil molding. I centered the face piece so it has the same configuration at each end; that is, I didn't want a space at one end and a "tooth" at the other. With the dentil, it's better to do the sides after the front is applied so you can match the tooth or space.

Crown. The crown molding was put on next — probably the trickiest piece in the whole mantel. For those of you who know how to cut it, bear with me here.

To cut a crown miter, either with a power or hand miter box, you have to pretend that the base of the miter box is the ceiling and the back piece is the wall. I've done thousands of these miters, and I still have to stop and think how to set the molding in the miter box. Think it out! The key to measurement is to remember what part of the molding is actually going to hit at the corner of the piece underneath. A trial piece of scrap will save you money and an ulcer. Order enough.

I start with the front piece, as it has two miters, and finish with the sides.

Band. I next applied the band molding around the edges of the 1x pine. I started with the top piece, which fits with the flat edge placed tight to the belly casing. I followed with the vertical pieces, saving that little horizontal jog until last. I use only glue for this piece to prevent splitting.

A warning here: This 3/4-inch piece of band can be a finger loser if you're using a power miter box. Do not attempt to cut this from a piece that's less than 10 inches long. Only bad things can happen.

Astragal. Finally, with glue and 6d finish nails I applied the flat astragal to the edge of the mantel shelf to hide the seam. This profile is very close to the molded edge I was trying to match. The astragal is 1 3/4 inches wide, 1/4 inch wider than the laminated shelf. I used this to advantage by leaving the remaining width on the top and planing it off to get a good joint and a slightly custom look in the profile. I smoothed it up with sandpaper.

Finishing Up

While I had the sandpaper in hand, I cleaned up all the joints, and the mantel was ready for painting.

The cost of materials purchased for this mantel was $87.37, including tax. It took about eight hours' construction time, and produced a mantel both the homeowners and I are proud of.

So next time you see a picture of a mantel you'd like to build, use your imagination and try to visualize it with off-the-shelf moldings. You'll be amazed at what you can do. ■

Bill McLearn is a contractor in Hull, Mass.

Sources of Supply

My lumberyard, Hingham Lumber in Hingham, Mass., stocks moldings from several millwork companies in the New England area. Your local lumberyard will probably have something similar, or be able to order it for you.

— *B.M.*

Brosco
Brockway-Smith
146 Dascomb Rd.
Andover, MA 01810
508/475-7100

Denison-Cannon
267 Boston Rd.
N. Billerica, MA 01862
800/451-6665

NAMCO
North Atlantic
Millwork Corporation
22 Patton Rd.
Rumford, RI 02916
401/438-5800

New England Millwork
60 Hilltop St.
Dorchester, MA 02124
617/282-8770

Winter
PO Box 2780
Taunton, MA 02780
508/823-9090