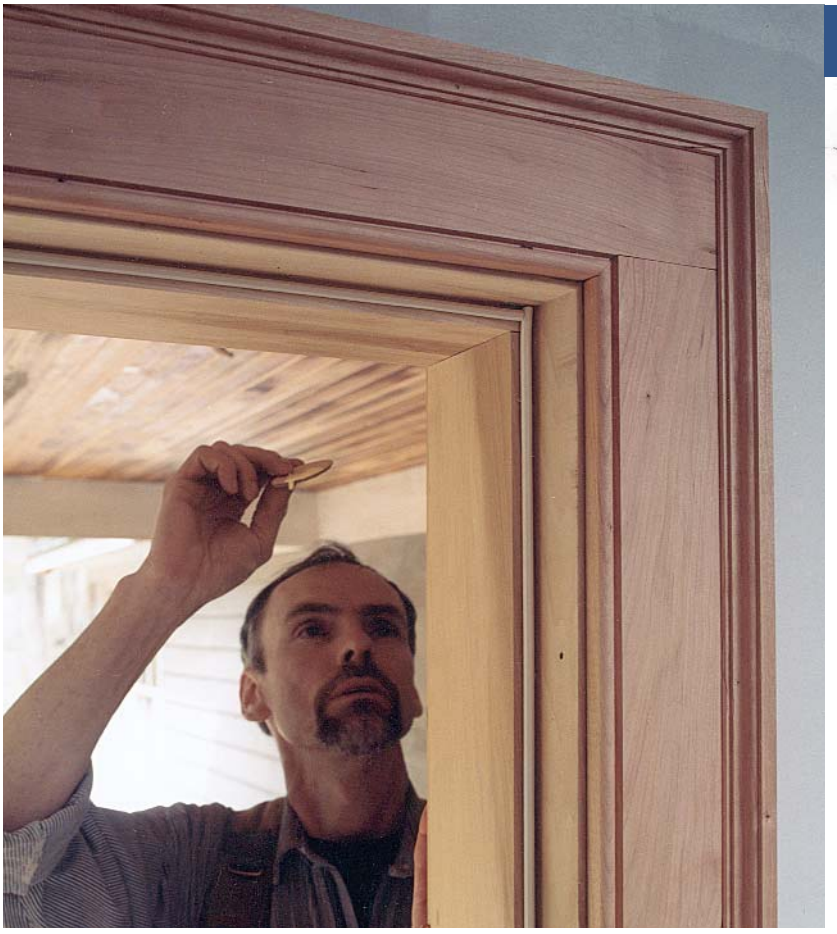
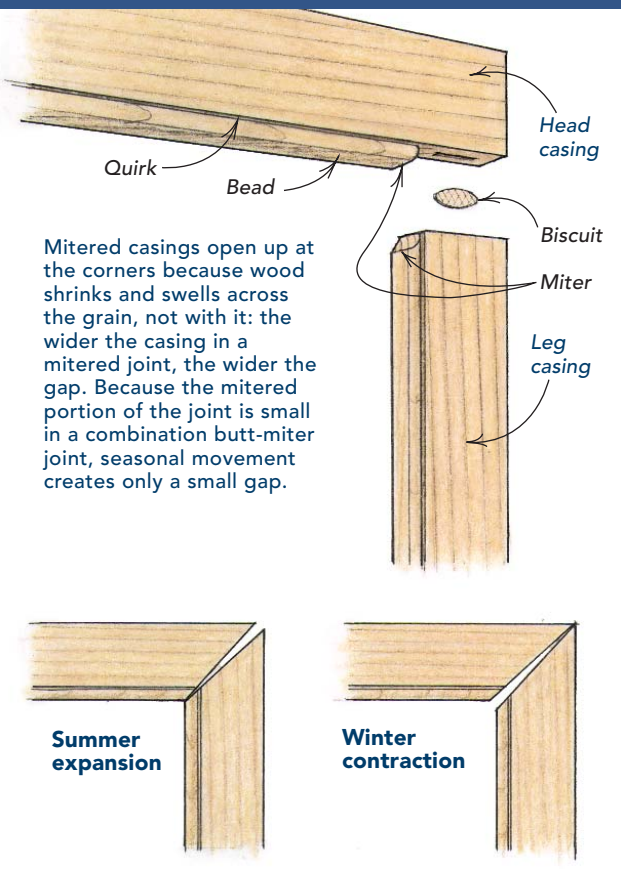
# Turning Corners with Beaded Casing

## A shop-built jig creates a combination butt-miter joint that looks good year round

BY SCOTT MCBRIDE



### A JOINT THAT RESISTS SEASONAL MOVEMENT




I suspect that beaded trim is common in older houses because it was attractive and easy to make by hand. A beading plane, unlike a wide molding plane, doesn't require much effort to push. It's an enjoyable task, if you're not in a hurry. A well-sharpened cutter makes a pleasant "snoosh" sound as it skates along, sending up slender straws of wood in its wake.

Beaded casings in old houses typically are joined with a combination butt-miter joint. The flat portions of the legs and head are butted at right angles, but the beads join in a miter (photo above). Flat casing with an ogee profile along its inside edge also can be joined this way. I don't know of an official name for this joint; I call it a butt-miter joint.

### Hybrid joint combats seasonal shift

Why would you spend the extra time to make a fancy miter joint? Doesn't a plain miter work just as well? No, and here's why: Wood shrinks and swells almost entirely across the grain: the wider the casing in a plain-mitered joint, the wider the gap (drawing above).

In contrast, a butt-mitered joint—no matter the season or the width of the casing—shows only a small gap in the joint's mitered portion. The butted portion of the joint, where the legs meet the head casing, shows little or no gap because the length of the leg doesn't shrink. In addition, a biscuit inserted here and a finish nail



Drawings: Vince Babak

driven through the face of the head casing into the framing further reinforce the joint, directing the cross-grain shrinkage of the head casing to occur from the top down. (Predrilling the head casing before nailing allows the wood to pull a little against the nail.)

### Cut the legs first

As with any casing installation, I scribe a line on the edges of the jambs to gauge the margin, or setback, from the edge of the jamb. Next, I rough-cut the legs and stand them in position, scribing the bottoms of the legs to fit the floor or sill, if necessary. I mark the short points of the miters on the beaded edges of the casing legs where they intersect the scribed line on the head jamb. Next, I make a 45° miter through that point all the way across the leg (drawing right). Then, I square-cut the leg through the long point of the quirk, the groove that separates the bead from the flat part of the casing (drawing right). I mark a centerline on the face of each leg, then cut a biscuit slot into the top before nailing them into place. For now, I leave out the nails in the top 3 ft. of each piece so that I can tweak the tops of the legs slightly when I fit the head casing.

### Marking and cutting the head casing

Two cuts on the head casing are necessary to complete the butt-miter joint. One cut is a miter; the other is a rip along the quirk, which removes a short section of bead from both ends. To mark the head casing to be cut, it's best to place a longer than necessary piece of stock on top of the legs and mark it (top photo, p. 100).

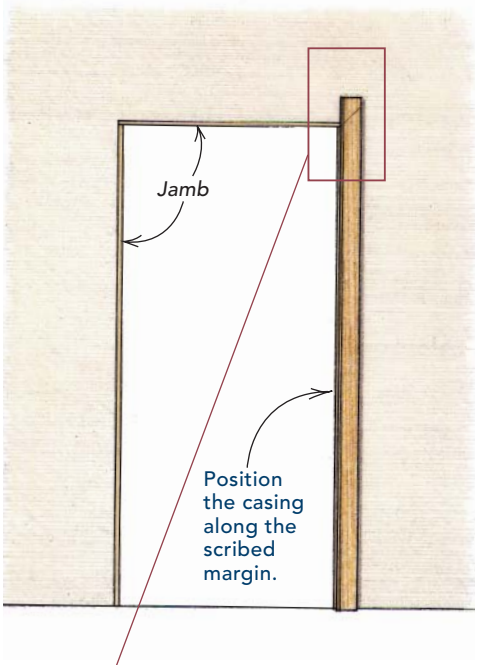
Mitering the head casing is the trickiest part of the job; if you're good with a handsaw you can just wing it, or make a simple jig to guide the cut (drawing top, p. 100). But if you have many of these joints to do—or if you're doing stain-grade work—it pays to tool up. A radial-arm saw works well on the miter cut, but because they weigh a lot, radial saws aren't exactly job-site friendly. A tablesaw is okay for short head casings, but the ones found over wide openings and mullioned windows are too long to wrestle across a tablesaw. So I came up with a jig that's worked out really well.

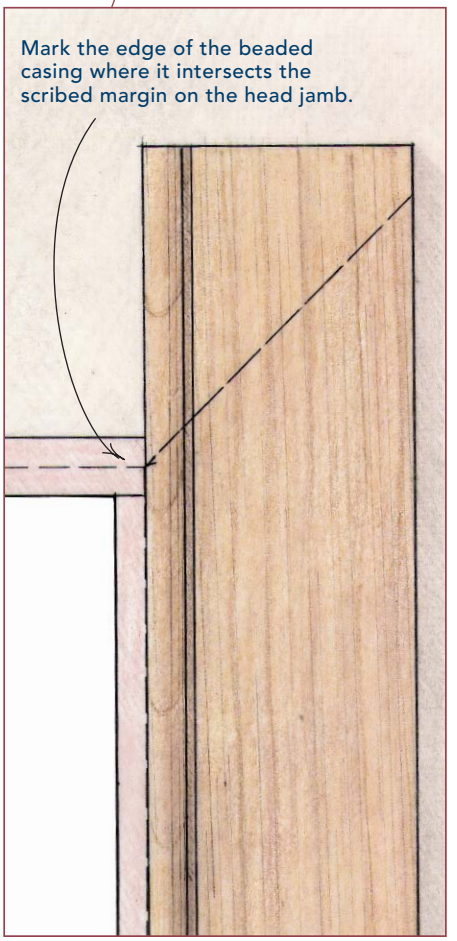
The butt-mitering jig is made from an old circular saw that's bolted to a carriage, which slides in a track. As the carriage is pulled, the sawblade passes through the casing's bead, which sits below in a trough similar to an old-fashioned miter box (drawing p. 101). The

## MARKING AND CUTTING THE LEGS

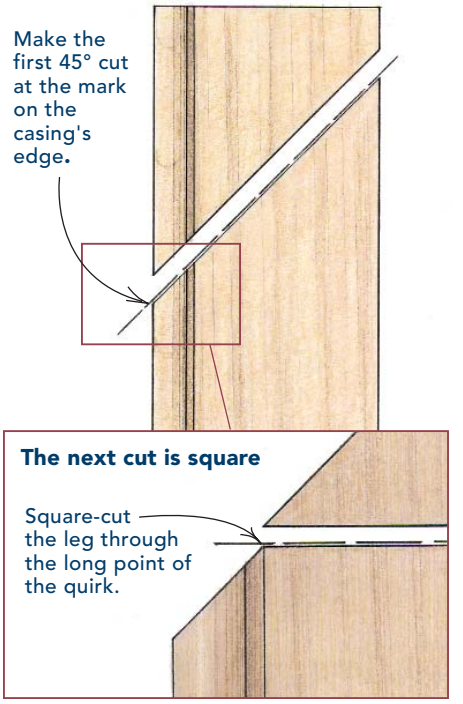
Marking rather than measuring is a fast and accurate way to determine where to make the cut for the butt-miter joint. Begin by holding the jamb leg in place; it should be a little longer than needed and can be scribed first to fit an uneven floor if necessary.

**Mark the beaded casing in place**



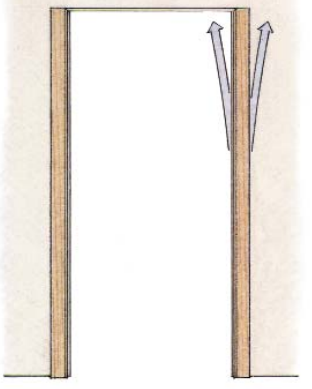

**The legs require two cuts**






Before the casing leg is nailed in place, a biscuit slot is cut into the top.

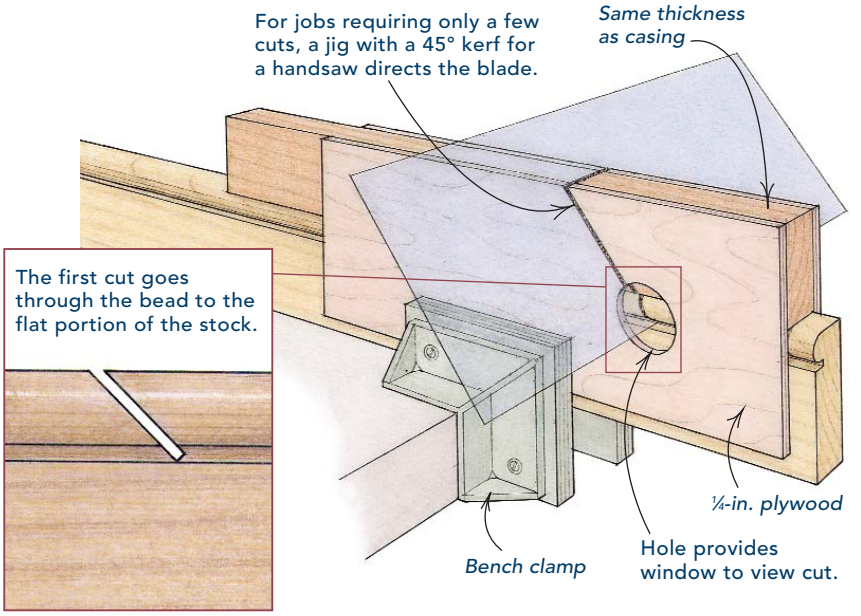
Nailing all but the top 2 ft. to 3 ft. allows the joint to be adjusted slightly later.



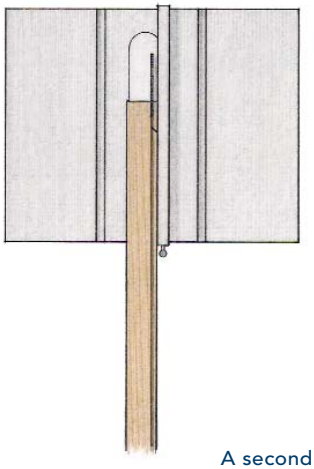
## MARKING AND CUTTING THE HEAD CASING

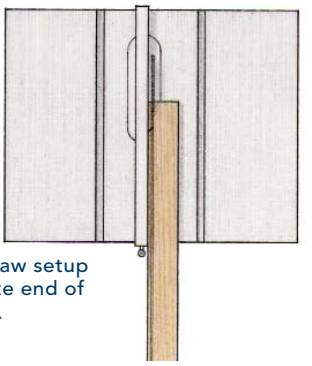


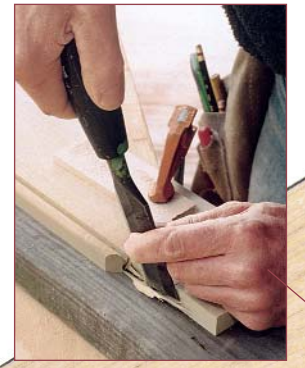

Cut the head casing long, place it atop the legs, and mark it in place.




**Two tablesaws reduce setup time**
A tablesaw makes the second cut along the bead at the end of the head casing; to make a similar cut on the opposite end, you have to reset the fence. Having an extra tablesaw available—one for each cut—puts an end to moving the fence back and forth between cuts.







depth of cut on the butt-mitering jig is set to cut right down through the quirk to the shoulder of the flat portion of the casing.

After making both miter cuts, I rip off the bead with a tablesaw, starting from the end of the stock and cutting until I get to the miter cut on each end. This final cut removes the short section of the bead and quirk, creating a square shoulder on the flat portion of the stock.

So that I don't have to readjust the fence constantly, I set up two tablesaws side by side for cutting opposite ends of the stock. This saves a lot of time if I'm trimming more than a few doors or windows (drawing above).

With the beads removed, I set the head in place to see how it fits. If necessary, I pare the joint with a sharp chisel. When the fit looks good, I transfer the biscuit mark from the leg to the head and mark the ends of the head for trimming (top photo, facing page). I can't use a biscuit joiner for slotting the head because the bead gets in the way. Instead, I use a self-piloting wing cutter chucked in a router. Then I glue a biscuit into the slot on each leg and nail the head casing into place. If necessary, I shim the back of the head casing so that the face of the head and leg casing lie within the same plane (photo bottom, facing page). Finally, I run the backband around the outside edge of the beaded casing. □

Scott McBride is a contributing editor to *Fine Homebuilding* and the author of *Build Like a Pro: Windows and Doors* (The Taunton Press, 2002). Photos by Franklin Schmidt.

## INSTALLING THE HEAD CASING



**After fitting it, mark the head casing for final length and matching biscuit slot.**



**Use a slot-cutting router bit here because a biscuit joiner won't lie flat.**

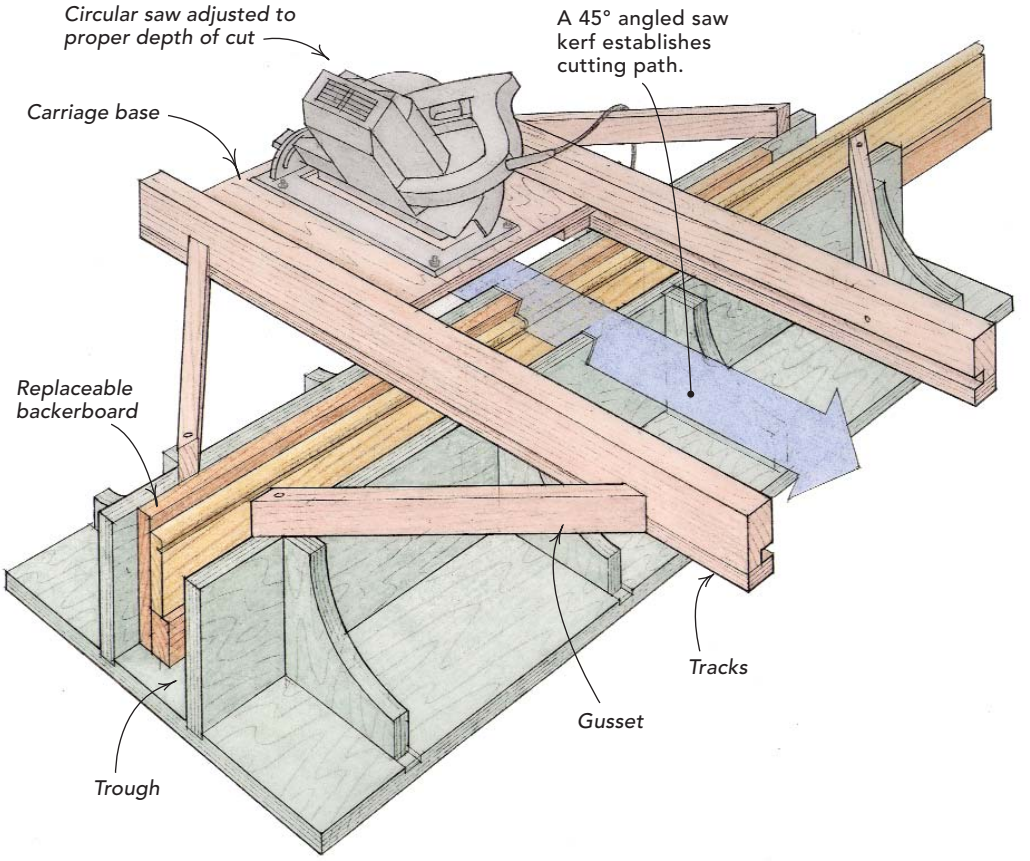




**If needed, shim behind the head casing to align it with the legs.**

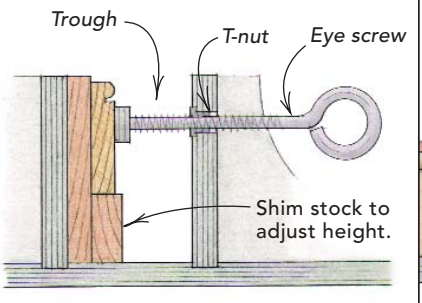
## SHOPMADE JIG MITERS THE HEAD CASING

A large compound-miter saw could make this cut on narrower trim, but for the wider stock in older homes, this jig is ideal. It has three main parts: a plywood base or trough similar to an old-fashioned miter box, a pair of tracks mounted and braced above the trough and a plywood carriage containing a circular saw, which rides in the tracks.




### Eye screw secures stock

An eye screw, which is situated in the center of the vertical members forming the trough, holds beaded casing fast during the cut.




### Saw rides above the casing

