Interlocking Weatherstripping for Doors

Arguably the best protection against wind and rain penetration, two-piece bronze can be finicky to install

BY CHRIS MORRIS

It's amazing that homeowners can put up with a door that needs a shove to get the dead bolt to operate in the summer. But when the first cold breezes of fall whistle into the house, fixing that door becomes a priority. That's when they call me.

Interlocking Weatherstripping (drawing facing page) isn't the cheapest alternative. Properly installed, however, it can be the most effective. This weatherstripping can be installed on any new or old door or window. In this article, I'll explain how I added interlocking weatherstripping to an existing in-swing door.

Fit the door in the jamb

I prepare the door and opening by taking off old weatherstripping and scraping old paint off the jambs. I make sure the door is not hinge-bound and that the hinges are fastened with long screws through the jamb and into the framing. I need at least ½ in. of space between the hinge and the doorstop to make room for the slot and its mating weatherstrip bead. If necessary, I reset the hinges to get the space.

Next, I go to work on the door, planing the edges wherever they bind until I have a clean, even gap between the door and the jamb on the top and sides. A gap of just under ⅛ in. is usually enough, but the size of the gap is also determined by the season and the weather conditions. For example, if I'm working during the dry winter months, I make the gap slightly larger, say 5/32 in.

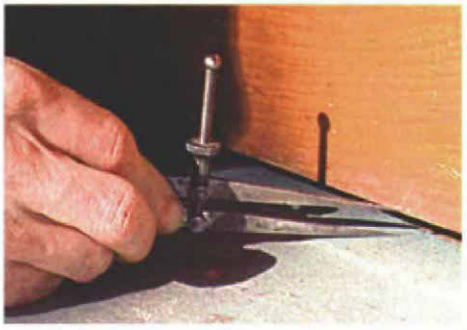
Once the gap is even all around the door, I tune the doorstops with a rabbet plane to get an even fit between the face of the door and the stop (photo left).

Then I check the strikes. If they are set properly, the door should open and close precisely with the strike catching just as the door meets the jamb, but not so tight that the door must be slammed. After the interlocking weatherstripping has been installed correctly, the door should operate just as smoothly,

Don't take off the door yet

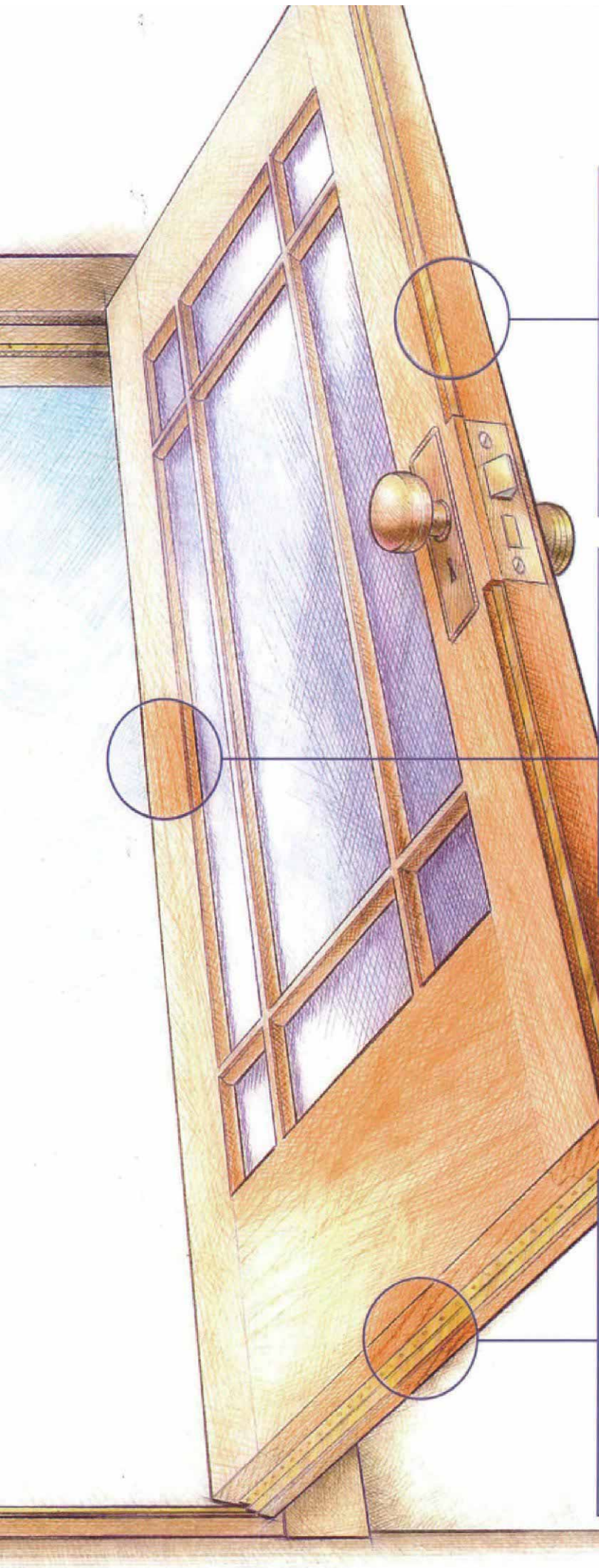
The interlocking weatherstripping I use is made by Accurate Metal Weatherstrip Company (914-668-6043). It is available either

FIT THE DOOR BEFORE WEATHERSTRIPPING

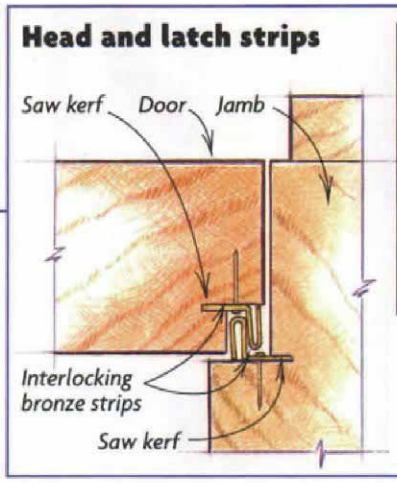


Scribe lines guide installation. Before the door is removed, the author scribes the thickness of the saddle onto the lower rail.

Rabbet plane tunes the opening. After trimming the edge of the door for a side-to-side fit, the stop is shaved until the door closes evenly.

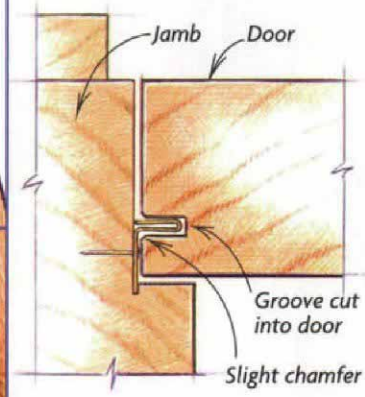


Head and latch strips



On the head and latch sides, bronze strips let into saw kerfs and nailed on both the door and the jamb interlock.

Hinge strip

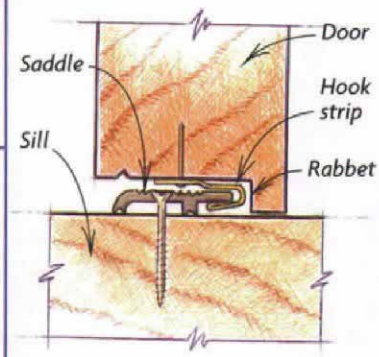


On the hinge side of the door, a bronze strip nailed to the jamb slips into a groove cut in the door.

STEALTH WEATHERSTRIPPING

Interlocking weatherstripping is effective at keeping out weather, but it's hidden from view when the door is closed. Three different configurations make this possible.

Door-bottom strip



At the door bottom, a bronze hook strip on the door engages the saddle screwed to the sill.

RABBET AND GROOVE THE DOOR

Rabbets hide the weatherstripping. Interlocking weatherstripping is concealed in rabbets cut into the edges of the door. The rabbet for the hook strip on the bottom of the door is cut with a circular saw.

Special saw cuts the kerf. A narrow kerf that the weatherstripping slides into is cut with a jamb saw.

Router rabbet. On the top and latch sides of the door, the rabbet for the weatherstripping is cut with a router.

as concealed or as surface mount, and it is manufactured in bronze, zinc-coated steel and stainless steel. I prefer the concealed variety because it is less obtrusive and holds up better, and I recommend bronze because of its longevity and rich patina. The weatherstripping for this door, including the saddle, cost about $85.

Before removing the door to install the weatherstripping, I run a pencil along the doorstop to mark the top and latch sides of the door from the outside. I also scribe a line across the lower rail of the door for the thickness of the saddle plus ⅛ in. for clearance (photo right, p. 80).

Cut the bottom of the door first

Next I take the door off its hinges and lay it on padded sawhorses with the exterior facing up. My first cuts are for the rabbet on the bottom of the door. The hook strip that interlocks with the saddle or threshold will be nailed in this rabbet.

For this 1¾-in. thick door, I set the depth of cut on my circular saw to 1⅜ in. (The remaining ⅜ in. of the bottom rail hides the weatherstrip when viewed from inside.) I make the cut following the scribe mark on the bottom rail (photo left).

A rabbet plane trues up the cut and breaks all the square edges. I also use the rabbet plane to create a small drip channel along the exterior side of the bottom rail to discourage water from working its way under the door. When I'm finished, I seal the bottom of the door with a two-part epoxy.

Next, I remove the lockset if it is going to interfere with the cut. Because I do a lot of these installations, I keep a router set up with a straight bit to cut a 7/16-in. deep rabbet. I set the router fence using the pencil line I drew along the top and latch sides for a reference (photo bottom right). The rabbet should be no closer than 1/16 in. to the line so that the weatherstrip remains hidden behind the stop.

With a 1¾-in. door, I usually don't have enough room to run the weatherstripping past the lockset. In that case, I stop the rabbet before the lock and then continue it on the other side.

Next, I cut a kerf into the corner of the rabbet for the weatherstrip to slide in and lock into place, making the strip rigid and weathertight. This kerf is cut with a jamb saw (available from Accurate Metal Weatherstrip Company), a medieval-looking tool with large teeth and a curved blade that is pulled along the rabbet to cut a kerf about ⅛ in. deep (photo top right).

On the hinge side, the jamb strip slides into a groove cut in the door instead of interlocking with another strip. This groove is cut with a second router that I keep set up with a 5/32-in. slot cutter set ⅜ in. from the router base. Again, the router fence controls the ⅜-in. depth, but a bearing on the cutter could also be used. With the hinges set ½ in. from the inside face of the door, I can cut the groove easily without the hinges interfering. After completing the cut, I chamfer the sides of the groove slightly with a rabbet plane so that the weatherstrip slides in easily.

Attaching the bronze

I can now begin fitting the bronze strips onto the door. With tin snips, I miter the corner where the head strip meets the latch-side strip and cut a notch in the head strip where it meets the slot on the hinge side (photo top left, facing page). Without that notch, the door would bind and crush the jamb strip when it closes. I nail the strip on the edges with brass nails set 2 in. apart using a Warrington-style hammer with a flat narrow head for starting brads (photo top right, facing page). Both solid-brass and plated-steel nails are sold for interlocking weatherstripping. Plated nails don't bend as easily, but they tend to rust over time.

The hook strip on the bottom of the door is the last to go on (center photo, facing page). Here, I space nails 1 in. apart, the extra nails ensuring the longevity of the system. If the door is made of a softwood such as pine, I pierce the bronze strip with an awl and drive the nails in. If the door is oak or another hardwood, I predrill for the nails.

On to the jambs

Next, I prep the jambs. Again, the jamb saw cuts a kerf along the stop on the sides and top of the opening. Remember that the kerf on the hinge side goes in a different direction. I also cut the saddle to the width of the opening and fit it into place on the sill. When the saddle is in the right place, I predrill the screw holes, caulk it in and screw it home.

Now I stand the door upright in its opening and rehang it, us-

ing my foot as a cushion so that I don't crush the hook strip on the bottom. Then I slowly begin to pull the door closed to check the operation of the saddle and hook strip. I adjust this strip in small increments with a pry bar, trying to get this strip to fit snugly but with no friction.

I then set the hinge strip into its kerf on the jamb, aligning it with the hinges to match the slot I cut in the door. I tack the hinge strip into place and try the door. If the strip fits well, I nail it home and try the door again.

Adjustments to the strips can be made in two ways. First, I examine the slot on the door for any dark marks, which are signs of rubbing. I then open up the slot slightly with a side-rabbet plane or a utility knife. These adjustments are fine, so I close the door after each pass with the plane to check the fit. If need be, I can also adjust the strip by tapping it lightly with a block of wood and a hammer.

Next, the head and latch-side strips are tapped into their kerf on the jamb (photo bottom left). I usually begin with the head strip and tack it into place. A brad holder can help to grip the nails while you get them started. Again, I check the fit before I nail the strip home with the same nail spacing that I used on the door sides. Because the strips are hidden when they mate, I find it easiest just to listen for contact and then adjust the strips.

If I was able to install the strip for the latch side of door in one piece, I nail a single strip onto the jamb as well. If not, I install the strip in two pieces, stopping on both sides of the lock to match the strips on the door. I then nail a short section of spring-type bronze onto the jamb to bridge the gap over the strike (photo bottom right). When the weatherstripping is properly adjusted, the door should close easily. D

Chris Morris is a carpenter and builder who specializes in weatherstripping solutions in Woodbury, Connecticut. Photos by Roe A. Osborn.

APPLY WEATHERSTRIPPING TO THE DOOR

Head strip gets notched. A small notch is cut out of the door's head strip to mate with the jamb strip on the hinge side.

The bottom gets a hook strip. After the bottom of the door is sealed, a hook strip is nailed into the rabbet.

Brass nails hold the strips. A narrow-headed Warrington hammer starts small brass nails that are then driven home with a hammer and a nail set.

WEATHERSTRIP THE JAMB

Bridging the lockset. If there isn't enough room to run interlocking strips past the lockset, a section of spring bronze weatherstrip covers the gap.

Jamb strip is tapped into place. Light taps with a hammer ease the strip into its kerf on the jamb. When it has been adjusted to mate with the door, it is nailed home.