



## Tightening Old Windows

by Walter Jowers

Next to putting insulation into the attic, there's no more effective way to save energy in an old house than tightening up the windows. And, there's no more effective way to ugly up an old house than replacing the original windows with a bunch of dowdy, featureless replacement windows.

I see a lot of old-house rehabs where the first thing the builder does is snatch out the old windows, tearing up interior and exterior finishes in the process. Then, in go the vinyl-clad thermopanes, and up goes a sign on the lawn that says something like, "Energy-Efficient Design by Window Wizards." The customers want new windows, they say. The old windows were rotting, wouldn't open and close properly, clattered in the wind, and leaked air.

But there are alternatives. Compared to replacing the windows, I think it's a lot easier to do a good job of tightening up the existing windows. Sure, tightened-up original windows may not be as tight as thermopanes, but look at it a little differently: If you keep the existing windows, you save

the energy that would have been used to cut the lumber for the new window sash, the petroleum that would have been used for the vinyl cladding, the gas for the truck that would have delivered the new windows, and so on. The existing windows, unless they are literally crumbling into dust, can usually be made to work well enough, at least in Nashville.

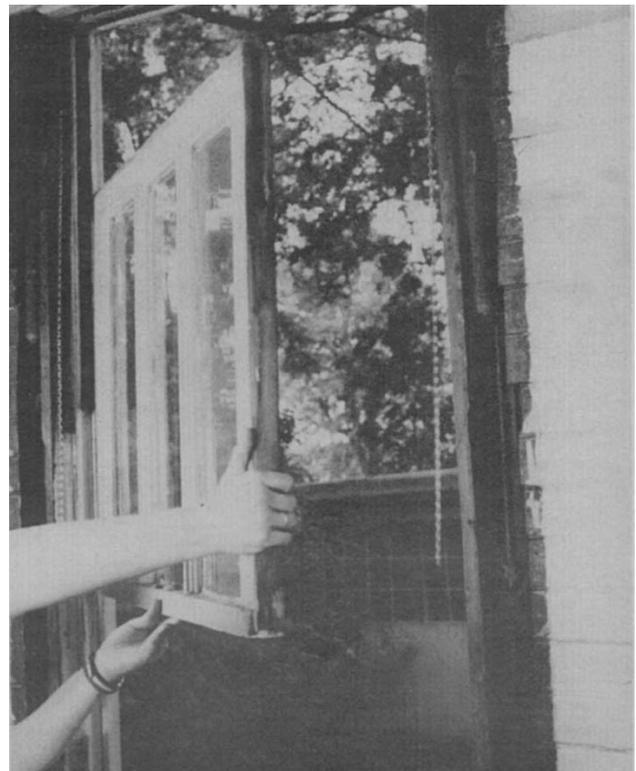
When I moved into a 1917 house here, I found 30 double-hung sash, some rotting, all rattling, and all with no weatherstripping at all. Here's how I fixed them:

### Taking Them Apart

Room by room, as I painted the interior, I took the windows apart. Most of the sash cords were broken. I exposed the window pockets by removing the interior casings. I checked the pulleys. If they rolled okay, I left them in place and oiled them with WD-40. I removed any painted, bent, or stuck pulleys (two screws apiece) and threw the painted ones into a bucket stripper; an hour later, I could wash the paint off under a garden hose. Then, with pliers, I straightened out any dings and dents,



With a flat bar, pry off the parting bead to free the top sash.



With both sash out, it's a good time to patch any rot, scrape off any paint buildup, and install weatherstripping in the sash runs.



With the interior casing removed, the sash-cord weight is exposed. Spray foam can now be used to seal cracks around the window.

oiled the pulleys and put them back in place.

With the window pockets open, I stuffed fiberglass insulation into all the big cracks, and squirted foam-in-place polyurethane into smaller cracks. When sealing this area, you have to remember that sash weights will run in these pockets; you have to keep the insulation out of the way of the weights. Next I removed the stop molding from one side of the window, freeing the bottom sash, and removed the parting bead to free the top sash. I took the sash out, and scraped off any paint build-up that would interfere with the sash running in the wood tracks.

While I had the sash out, I installed spring copper weatherstripping in the sash runs. Spring copper weatherstripping is relatively inexpensive and easy to install. You just nail it in place with brads—a staple gun makes the job go really fast. The stuff lasts virtually forever, unlike some of the vinyl weatherstrips that

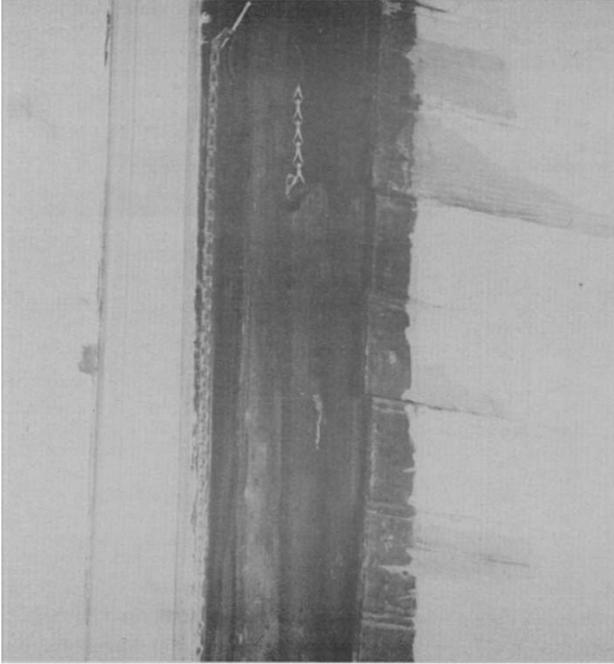
crack after a few years in sunlight.

None of my windows had extensive rot, so I dug out small rotten areas with a chisel and filled the holes with Minwax High Performance Wood Filler (Minwax Company, Inc. P.O. Box 426, Little Falls, NJ 07424). This is a two-part epoxy filler; when mixed 50/50 it hardens in about 15 minutes, and it can be planed, cut, or sanded like wood. If there had been extensive rot, I would have used a wood consolidant on the soft wood before I put in the filler. For this purpose, Minwax makes a companion product to their filler; it's called Minwax High Performance Wood Hardener.

I primed over the filled areas and any bare wood; then I rubbed the edges of the sash with a bar of paraffin, so they would slide easily in the runs.

### Putting It Back Together

Next I replaced all the sash cords with sash chain. Sash chain costs a good bit more than sash cord, but I



*The old sash cords are replaced with new long-lasting chains. Note that the weight is just a couple of inches off the pulley to allow proper clearance.*

didn't want to do this job again anytime soon. Installing the chains is an easy job. First, knot the chain and slide it through the hole in the end of the sash weight. Then place the top sash at the bottom of its run. Pull the weight for the top sash until it's just a couple of inches from the top of the window pocket, then place the chain in the slot in the sash, and nail the chain into place. Cut off the excess chain with a pair of pliers. Repeat for the weight on the other side. To re-chain the weights for the bottom sash, just push the sash to the top of its run, and adjust the chain length so the weights don't quite hit the bottom of the window pocket.

Before you re-install the stud moldings that hold the sash in place, install spring copper weatherstripping at the meeting rails of the window and at the head and sill of the window. Put the moldings back in place, re-

install the casings, and install window locks. The locks aren't so much to keep out burglars (they won't do that), as to pull the meeting rails of the sash together to block air infiltration. Then caulk all around the windows, inside and out, and paint them.

The full treatment for each window, including sash chains, rot repair, priming, and weatherstripping took three to four hours, depending on the condition of the individual window. So for a rather modest investment, your clients can have windows that are durable, attractive, and plenty tight. For more northerly climates, you'll probably also want to add a storm window for the added R-value. ■

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