Dress Up a Vent Pipe with a Copper



he prefabricated boots often used for vent-pipe flashing rely on a rubber gasket to keep out water; that gasket can break down over time. For less than \$50 in materials, I make a custom copper boot that will outlive any prefabricated one and looks a lot better. It's made by joining two pieces of 16-oz. copper sheet stock. The pan is hemmed and bent with a metal brake or a handheld folding tool. The sleeve is formed by wrapping the copper around a scrap piece of pipe or by using a slip roller. All joints are bonded with an acetylene-fired soldering iron and 50/50 solder.

Like prefabricated boots, these custom-made ones are installed with the standard shingling procedure. Finally, if you're wrapping a cast-iron vent pipe instead of PVC, wrap it with a bituminous membrane before installing the boot to keep the iron from corroding the copper.

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Drawing: Dan Thornton

Flash roof penetrations with a soldered copper pan and sleeve for an elegant detail that lasts a lifetime



Tin the sleeve stock. To ensure that the solder seals the joint fully once it's formed, run a thin, smooth layer of solder along the two edges that will overlap.



Spin it. Wrap the sleeve stock around a scrap of PVC that's the same size as the vent pipe. Roll it gradually and slowly to avoid kinking the copper.



Solder the joint. Tack the joint every 2 in. first to hold it together. Then run a thick bead of solder down the length of the joint.



Test-fit the boot. Lock the sleeve to the pan with the ½-in. tabs, then slide the boot over the vent pipe. Square the pan to the shingles. Then rotate the sleeve until it sits correctly. Finally, scribe the tabs to mark their exact location.



Run a heavy bead. After tacking the tabs to the pan, seal the joint with a heavy bead of solder. Work slowly, taking care not to overheat the metal. If solder starts to run through the joint and beneath the pan, take a break until the piece cools.

Practice on a test piece first. Cut the sleeve down until it extends only 1 in. to 1½ in. past the vent pipe. Then, using a hammer, tap the sleeve to bend, and fold it into the pipe. Work slowly, and take care not to crimp or kink the copper.



Lock the boot in place. Use clips to lock the pan in place. Once the clips are installed, bend down the long tabs, but don't hem them. Nailing through the pan will place stress on the joints when the copper expands.

