

The story of a custom knob

BY JONATHAN BINZEN

Abiel Rios Wong's small garage shop in Elizabeth, N.J., is lined with machinist's equipment—Bridgeport mill, surface grinder, metal-cutting bandsaw, sandblaster. But for many of the parts he makes for his tools (see the back cover), the heart of the shop seems to be his metal lathe. To demonstrate a bit of how he works, Rios Wong used the lathe to make a knurled brass knob with ebony infill. He made the knob from a length of 1-in. brass rod and a small hunk of ebony cut from the corner of a plank.

Milling the knob



1 Shaping and drilling. With the raw brass rod held in a collet on his metal lathe, Rios Wong turns it to a clean cylinder, squares off the end, then drills and taps it.



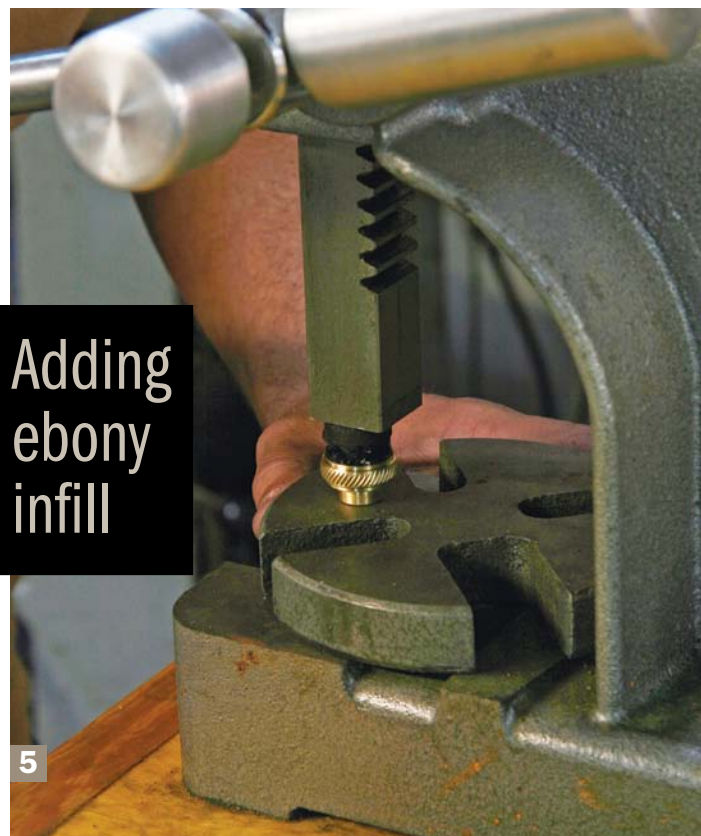
2 Knurling. After defining the neck of the knob, he creates a raised section and patterns it with a knurling tool, which doesn't cut, but operates solely by pressure.



3 Parting shot. After turning bevels on either side of the knurled section, he parts the piece off the metal lathe.



4 Recess time. With the knob reversed and held by its neck in a smaller collet, he turns a recess for the infill.



5 Squish. Having turned a small piece of ebony to a very tight fit in the knob's recess, Rios Wong applies epoxy and uses a bench-mounted arbor press to push the wood infill home.



6 Doming the infill. With the knob mounted in his wood lathe, he turns the ebony infill to a smooth, slightly domed surface.



7 This knob's finished. After using sandpaper and Scotch Brite on the brass and wood, he applies wax and polishes the finished knob.