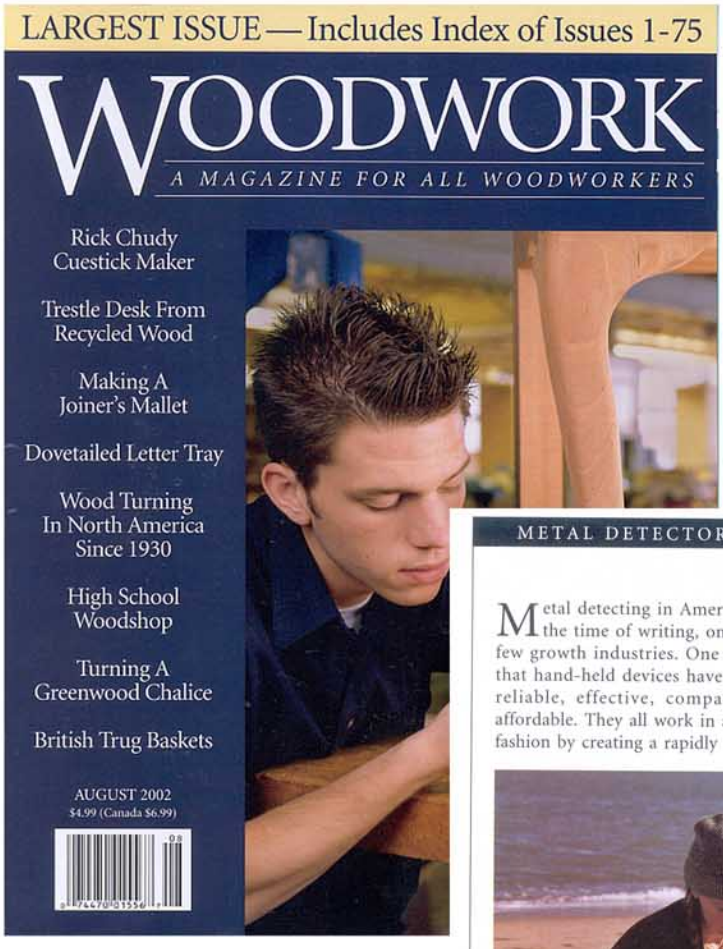

WOODWORK MAGAZINE
August 2002

METAL DETECTORS

Metal detecting in America is, at the time of writing, one of our few growth industries. One result is that hand-held devices have become reliable, effective, compact—and affordable. They all work in a similar fashion by creating a rapidly fluctuating magnetic field which produces an electric current in any conductor within range. This conductor in turn produces its own magnetic field and in so doing gives the game away and becomes "visible" to the detector.

For the woodworker, being able to scan suspect lumber (from either side) to a depth of 3"–4" is usually ample. What you're looking for are buried fastenings—drift bolts, nails, screws, and other metallic intrusions. It's most unlikely that there will be hardware encased by the living tree, although I do recall a mill in Sussex, England that came across a blunderbuss that had been hidden in the crotch of an oak tree some 300 years previously.

Fellow beachcomber Amanda Jobbins checking driftwood for hidden fastenings. At maximum sensitivity, the depth limit of this device is about 4". The "Lumber Wizard" could easily detect a horseshoe under a stack of telephone directories.

Rather than try out all the makes and types of metal detectors on the market, I picked the Lumber Wizard™, which is widely available and designed with the needs of woodworkers in mind. An advantage of this tool is that it's quite long (15"), so you can reach in between timbers and poke around. It signals the presence of metal with a red LED light indicator, a shrill whine, handle vibration—or all three.

I did a few experiments at home and found that the Lumber Wizard™ had no difficulty detecting an iron horseshoe underneath 4-1/2" of San Francisco telephone directory. This might not seem like a very useful accomplishment, so I cajoled a beachcomber friend to come with me down to the shore where there is a plentiful supply of driftwood of all shapes and sizes. We found that a 3/8" lag bolt was detected through 4" of old-growth Douglas fir, but an 8d nail was not. Without exhaustive tests, I'd say that you are pretty safe in assuming that metal intrusions buried 3" down or less will trigger this particular device.

The Lumber Wizard™ costs $99.95 but some retailers offer discounts. To find an outlet near you, check www.wizarddetectors.com or call (888) 346-3826.

—*Simon Watts*

with a center punch is a simple and permanent way to accomplish this.

You are sure to have bolt holes, iron stains, and other evidence of the timber's previous life. My inclination is to build such "imperfections" into the piece and make no attempt to conceal them. Holes left by fastenings can be treated in several ways, the simplest being to ignore them. You can also fill them with artful patches made in the same, or a contrasting wood. An alternative is to fill small nail holes with sealing wax. The red "legal" variety looks especially good with Douglas fir, and the green goes well with redwood.

It may happen that this desk will outlive its usefulness and the wood again be put to another use. With no glued joints and no hidden fastenings, that would be easy—my gift to the woodworkers of Century Twenty-One.

Simon Watts is a former furnituremaker turned professional scrounge.