

LATHE SCRAPERS

When it was time to turn the holiday gift boxes for this issue (see page 50), scrapers were the natural tool for the job. The reasons for this are simple. First, scrapers are among the easiest lathe tools to use. And second, they're versatile enough to handle almost every aspect of a small turning project — from roughing out a blank to turning it to shape to getting a glass-smooth finish.

Scraper Anatomy — A scraper is an incredibly simple tool — just a thick steel blade with a short bevel on the end. Scrapers are available in a variety of profiles, but we used just two for our turned boxes: round-nose and square-end scrapers (page 49).

Regardless of the profile, what makes a scraper cut is a burr (or hook) that's formed when you grind the beveled end. The burr is quite short, so it limits the depth of cut you can make. This makes a scraper safe and predictable to use. (The box on page 49 shows how to grind a scraper to get a sharp burr.)

Tool Rest Height — But just having a sharp burr doesn't necessarily mean that the scraper is going to cut well. The scraper has to be positioned correctly to get the burr to cut. That depends in part on the height of the tool rest.

When turning the *outside* of a bowl (or spindle), the idea is to position the tool rest so the cutting burr is slightly *below* the centerline of the workpiece (*Outside Cut*, page 49). In this position, the scraper won't "catch" because there's no material directly below the burr.

If you're scraping the *inside* of a bowl, adjust the height of the tool rest so the burr cuts slightly *above* the centerline (*Inside Cut*). Here

Simple Tools, Super Results

again, notice how the clearance beneath the burr prevents the scraper from digging in.

Using the Scraper — Once the tool rest height is established, turn on the lathe, and set the scraper on the tool rest. Position your hands with your thumb above the scraper and your index finger in the recess below the tool rest, as shown in the *Photo* at left. This position lets you better control the movement of the scraper.

Start with the handle of the scraper low, and ease the beveled end into the spinning workpiece (the burr isn't cutting at this point). Then slowly raise the handle until the burr starts to cut.

Two Scrapers — Now that you know how to get the burr to cut, let's revisit the two basic types of scrapers: round-nose and square-end.

Essentially, a round-nose scraper is used to rough out or shape a workpiece. When roughing out stock, simply slide the round-nose scraper straight across the tool rest at 90° to the workpiece. The rounded burr of the scraper does a fine job of rough material removal.

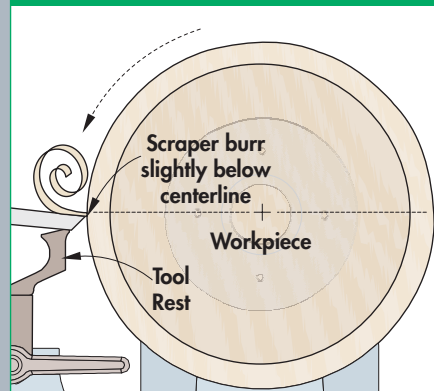
To form a curved profile, swing the handle of the scraper in an arc (*Round-Nose Scraper, far right*).

The square-end scraper is used primarily for smoothing and flattening a workpiece. To flatten rough stock, just cut in at 90° to the workpiece, pull the scraper back, and then cut in again.

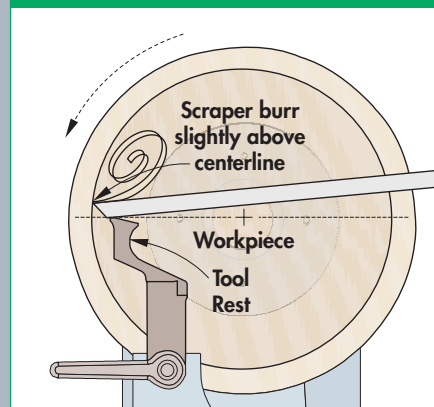
For smoothing a turned project, skew the scraper at a slight angle, and slide it along the workpiece. Of course, if you're smoothing a part of the piece that's round, there's no need to skew the scraper. Just follow the contour of the stock to smooth it (*Square-End Scraper, far right*).

TOOL REST HEIGHT

Outside Cut

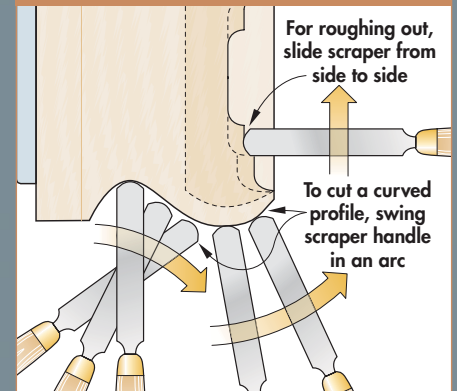


Inside Cut

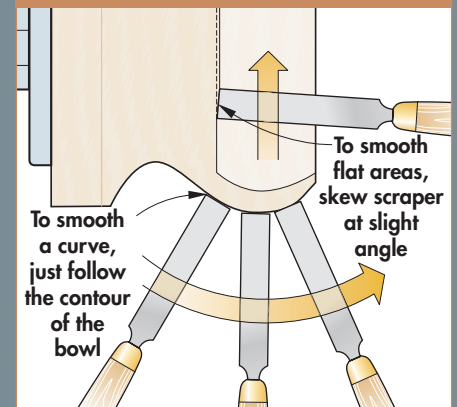


2 TYPES OF SCRAPERS

Round-Nose Scraper



Square-End Scraper



SHARPEN OFTEN FOR GREAT RESULTS

A scraper is the easiest of all lathe tools to sharpen. All you need is a grinder and a large tool rest. Start by tilting the tool rest to match the bevel angle of the scraper.

Now set the scraper flat on the rest and smoothly swing the handle to the side as you grind the bevel. (For square-end scrapers, move the tool straight across the rest.)

When you feel an even burr all the way across the top edge, you're ready to turn.

