

*Scratch stocks—old, new and shopmade—Whether old like the Stanley* #66 (*right*), *new like the Lie-Nielsen* #66 reproduction (left) or shopmade (top), these scratch stocks are a simple way to reproduce moldings or create new designs accurately and economically.

# Simple Tools Can Reproduce Most Moldings

Scratch stocks are quick and easy to use and make

by Robert S. Judd

S cratch stocks function beautifully, quickly and economically to duplicate handworked wood trim. By simply grinding or filing a cutter to the appropriate profile, you can reproduce almost any shape molding up to about 1 in. wide. Scratch stocks, or beading tools as they are sometimes called, are readily available new (Lie-Nielsen Toolworks, Inc., Route 1, Warren, Maine 04864; 800-327-2520 or Veritas Tools Inc., 12 East River St., Ogdensburg, N.Y. 13669; 800-667-2986), used (antique tool dealers, garage sales or flea markets) or shopmade (see the photo above). I make mine from a 6-in.-long, L-shaped piece of stock. The cutter fits into a sawkerf, and it is clamped in place with a few screws, as shown in the photo above. The cutters for all of these tools are easily shaped from old scrapers and sawblades or new blanks from Lie-Nielsen or Veritas.

In my repair and restoration business, I often need to duplicate broken or missing moldings. Usually, only a foot or two of the molding is needed: hardly worth the effort of setting up the router and definitely not worth having a cutter ground to match one of the myriad of molding shapes. Besides, no power tool can match the irregularities of the handworked wood found in older pieces.

# Scratch stocks and beaders

First made by users as a simple holder for a scraper blade, scratch stocks included a fence arrangement to work a measured distance from an edge. The beading tool was essentially an improved, factory-made scratch stock and included a range of cutters in different sizes and several blanks, custom-filed to fit the user's needs. Adjustable fences for both straight and curved edges were often included. A scratch stock or beader can produce a carbon copy of the original molding by using a cutter that's simply filed to shape.



Filing a cutter to shape—Almost any profile, up to 1 in. wide, can be filed into blade blanks made from old cabinet scrapers, sawblades or new blank stock (above).

**Beading is simple with a scratch stock**—Just hold the fence against the stock and make repeated passes (right), about <sup>1</sup>/16 in. per pass, until the appropriate depth has been reached.



Matching a molding to a cutter (below) is crucial to reproducing old moldings. File the cutter to the negative image of the molding. Check the cutter frequently while filing to make sure it is an accurate match.



## Shaping the cutter

To make a basic beaded molding, take a sample piece of beading, a file and a blade blank and set to work filing a negative pattern of the molding, as shown in the top left photo. As you file the pattern into the blade, keep testing its fit (see the bottom right photo). Check the fit frequently because it is fairly easy to file past the desired shape. It's a good idea to leave a ¼-in.-wide metal strip at either edge of the cutter. Narrower strips tend to bend and lose their effectiveness. Old cabinet scrapers or sawblade sections make good cutters for shopmade scratch stocks. But for my 100-year-old Stanley #66 hand beader, the blanks that Lie-Nielsen makes for his gem-like bronze replicas of the #66 work well. The steel of the new blanks is not hardened, so the blanks are easy to file to shape. After filing them to shape, hone just the cutter's faces in a whetstone to provide a clean cutting edge. I've never found it necessary to harden a cutter once it's filed to shape.

### Making moldings

When producing short moldings, I've found it easier to work the edge of my board, as shown in the bottom left photo. For making small beads or moldings, I cut two lengths at once by working both corners of the same board edge. Begin the scraping process by firmly gripping the handles, and push or pull the tool across the board's edge, keeping the handles at 90° to the work. Take small scrapings initially, only <sup>1</sup>/<sub>16</sub> in. or so at a time. Because stock removal is done by scraping, a small cut gives much more control and does less damage if you slip. As the cutter starts to bottom out, you can continuously adjust the blade so more is exposed. In a surprisingly short time, the molding will start to appear on the edge. If the cutter starts to chatter or jump, you are probably trying

to remove too much material, or the grain might be changing; use a little less pressure, or try changing the direction of cut.

One of the handy features of the #66 or the Lie-Nielsen reproduction is the adjustable fence. When cutting two lengths of molding on a board edge, the fence can be set to cut the opposite corner without moving the blade. This lets you produce a surprising amount of molding in a relatively short time. I make several extra moldings, so I can pick the best match to the original.

I like to start the staining and coloring process at this stage because the strips are far easier to handle while they are still attached to a board. Often, I will even do the preliminary finishing and filling at this point for the same reason. It's then a simple matter to trim the finished molding off on the tablesaw. I set the saw fence to leave a little extra material, which I later trim off with a utility knife.

When repairing antique pieces, mark your name and date on the back of the new molding for historical reference. After all, with a matching stain and finish, the repair should be almost invisible.

### Other applications

In addition to producing molding patterns, this highly functional family of tools is also effective for routing and inlay work. Because you create the cutters to fit the situation at hand, you are no longer limited to standard router bits.

When using these tools to rout cross-grain, however, it's a good idea to lay out the material to be removed by lightly cutting in the lines with a sharp craft knife. The scored lines help prevent tearout, which could ruin your project.

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