

Two Tools

Small saw, marking gauge

by Jim Richey

If there is a class of tools missing from modern workshops it is those simple hand tools designed around a specific function. As a result, many of us find ourselves making a delicate little cut on a small piece of wood with a giant power saw, or designing our work around our equipment.

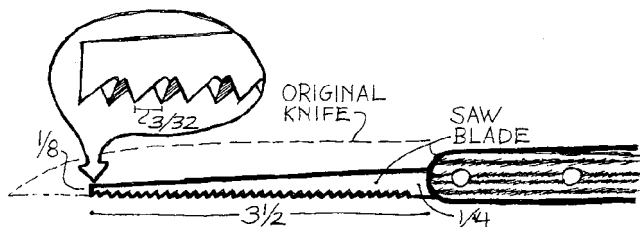
The planemaker's saw and a small marking gauge are members of the missing class—simple hand tools whose function has dictated their design. They are related in another way: The saw is used to make the gauge.

The planemaker's saw was originally used to cut the wedge dados in wooden planes. It is also quite effective for sawing through mortises or wedge slots, trimming protruding tenons or pegs without scratching the wood, and sawing curves in pierced work. In tight places it has no equal.



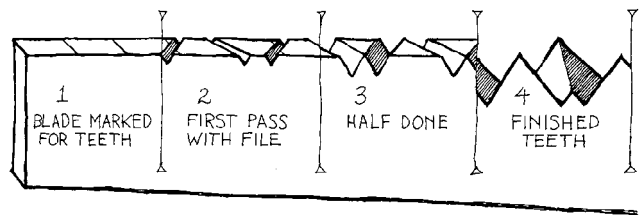
This planemaker's saw was made by cutting teeth into the back of an old kitchen knife. If you choose to go this route, pick a long, slim carbon-steel knife of the type readily available for a couple of dollars. Avoid the harder stainless-steel knives. Knives that taper in thickness from handle to tip are unsuitable. If you want to go through the annealing and heat-treating steps (*Fine Woodworking*, Fall '76), any scrap of tool steel about 1/16 in. thick will do.

Let your plans for the saw and the thickness of the blade dictate its length, width and taper. I needed a blade that could start its cut in a 1/4-in. hole, hence the slim design.

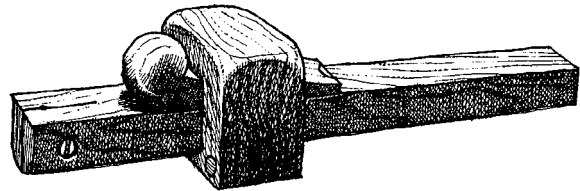


Slowly and carefully, grind the blade to shape, dipping frequently to avoid overheating. File the sides of the blade so that the front is a shade thicker than the back. Not much taper is needed, just enough to prevent binding.

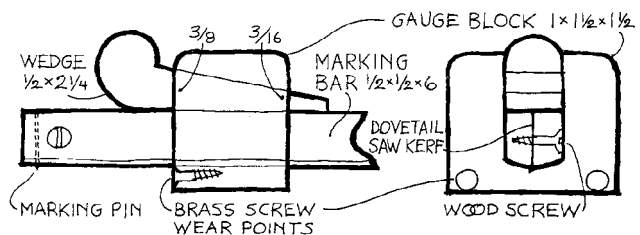
Now file the business edge of the blade perfectly straight and lay out the teeth. I spaced the gullets 3/32 in. apart. To cut in the teeth, hold the triangular file level at an angle (50° to 60°) toward the handle of the saw. File every other tooth four or five strokes and turn the blade around. Holding the file at the same angle to the handle, file the remaining teeth four or five strokes. Repeat until the teeth take shape.



By tilting the file slightly you can give the teeth more or less rake. Old-timers claim that more rake is better for soft woods, less for hard woods. Exact angles are less important than consistency. The filing process sounds difficult but it takes only about 10 minutes.

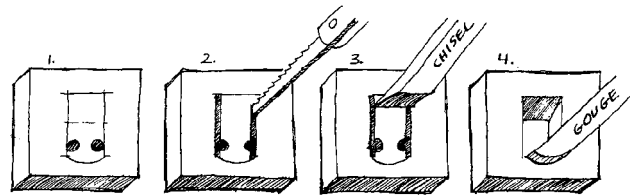


Although I have a beautiful old (but clumsy) marking gauge, I needed a small gauge designed specifically for mortise and dovetail work on thin wood. Designing the gauge around these functions resulted in the following dimensions.



As to variations, most would prefer a wider block with more lip for general use. The wedge could be moved to the back or side. The marking pin could be installed at an angle. Design your gauge around its intended uses.

The bar was made first so that its profile could be transferred to the gauge block. The bottom rounding of the bar is quite helpful in using the gauge and should be included. I drilled two 1/4-in. holes through the block and used the planemaker's saw to cut the tapered mortise, as shown. When



the mortise was trimmed so that the bar would fit smoothly, the wedge was rough-cut and trimmed to fit. I used a taper of 3/16 in. through 1 in. This is rather steep, but seems to hold well. Less taper would hold tighter.

The marking pin is a small brad held in a dovetail saw kerf with a screw. If the gauge is to be worked only one direction, the pin should have a knife-like point slightly angled so that the lip is pulled into the work. Those who mark both directions would prefer a pointed pin.

Wear points or a wear strip should be installed if the gauge is expected to have lots of use. I used two brass screws partially countersunk and filed flush.