handwork

The only hand tools I really need

FROM MILLING AND LAYOUT TO FITTING JOINTS AND SMOOTHING, THIS TIDY KIT DOES IT ALL

BY GARRETT HACK

I am fortunate to teach woodworking classes around the United States, in Canada, and in faraway places such as Japan and Germany. I learned early on that I need my own tools with me when I teach, ones that I know well and that are dependable, perfectly tuned, and sharp. Through the years, I've worked to minimize the number of tools in my kit. It has to be complete enough to build a whole project, yet light enough to carry through airports and on buses and trains. Although I am still fine-tuning my kit—replacing a tool with a lighter version, for example—it's proven to be lean and capable of a wide range of work. When it comes to hand tools, this kit contains all I need.

Garrett Hack is a contributing editor.

LOW-ANGLE JACK PLANE AND EXTRA BLADE

Good for everything from jointing stock to smoothing and shooting. The extra blade is cambered for smoothing.

PLANES AND SCRAPERS

Choosing planes to include in the kit was tough, because they should be few in number but able to perform a wide variety of work. A jack plane and two block planes can handle just about any planing task outside of joinery, and a shoulder plane gets the job done there. One spokeshave is all you really need for curves. Keep some card scrapers on hand, too.

CARD SCRAPERS AND BURNISHER

Card scrapers level surfaces and clean up squeeze-out. The burnisher is necessary for setting up the scrapers.

SHOULDER PLANE

The right tool for fitting joints.

A PAIR OF BLOCK PLANES

The large one is set for fine shavings, and used for chamfers, flushing inlay, and other delicate work. The small one is great for coarse work like roughing out an edge profile.

SPOKESHAVE

Indispensable for shaping and refining curves.

One bench plane is all you need. *A low-angle jack plane, along with an extra blade cambered for smoothing, can do everything from jointing to smoothing. And because it lacks a frog, it weighs less than a standard jack plane.*

Flat-soled spokeshave for curves. *Hack prefers one with an adjustable mouth and a cambered blade. No other tool handles both convex and concave curves as well.*

Don't forget the block plane. *In fact, have two: a small one like a violin maker's plane for coarse work and convex curves (shown), and an adjustable-mouth block plane for fine work.*

Photos, except where noted: Matt Kenney

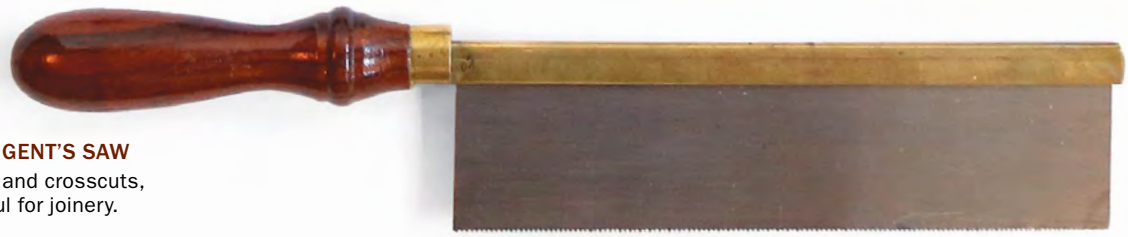
CHISELS AND SAWS

It's possible to get by with just three or four chisels, but it's better to have more, so you'll always have the one that allows you to work most efficiently. In place of a very wide one, you can use the blade from your low-angle jack plane. Throw in a pair of small saws, and you're ready to cut and fit most furniture joints.

BENCH CHISELS
These workhorses handle most of the chisel work.

LONG-BLADE SOCKET CHISELS
The length of these chisels makes them good for paring.

SHOPMADE DETAIL CHISELS
Perfect for inlay.



FINE-TOOTH GENT'S SAW
Filed for rips and crosscuts, and wonderful for joinery.

JAPANESE FLUSH-CUTTING SAW
Light and precise, it's ideal for delicate crosscuts and the occasional small dovetail.

One saw for joinery. *Choose a saw that cuts a fine kerf and has a hybrid file on the teeth, so it's efficient on rips and crosscuts.*

A second saw for detail work. *A delicate flush-cutting saw can be used as intended, but also for crosscuts on moldings and inlay, small joinery, and other jobs that require precision.*

Chisels are for more than chopping and paring. *They also can be used to rough out a chamfer (shown) or curve.*

FILES
A collection of flat and round files to create new profiles.

SCRATCH STOCK BODY
Made in the shop, with a thumbscrew to hold the blade in place.

CUTTERS
There are at least 10 blades, and each one has at least two profiles cut into it. There are some blanks in the box, too.

SCRATCH STOCK

I couldn't make furniture without my magic box of scratch cutters. Everything I need to make, sharpen, and use them fits into a nifty little box. Equipped with an assortment of profile cutters, a scratch stock allows you to create furniture that is genuinely custom.

STORAGE BOX
Keeps the body and blades safe, as well as other small, delicate tools.

Make your own cutters. *A small set of files, like this round one, is all it takes to make custom scratch-stock cutters.*

Then make custom moldings. *Handmade furniture should be custom from beginning to end, and a scratch stock allows you to turn out one-of-a-kind moldings.*

SHARPENING

Hand tools are useless if they're not sharp, so no kit is complete without the means to sharpen them. It doesn't take much to hone an edge. When traveling, I get by with half a diamond plate and one waterstone. Around the shop, I use a grinder to maintain the bevel.

WATERSTONE
An 8,000-grit stone is an excellent way to polish and hone a hollow-ground bevel.

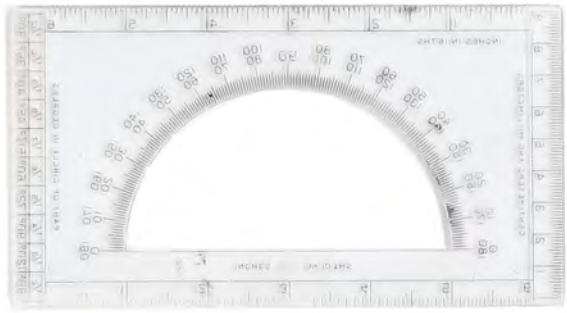
SLIP STONES
Sharpen scratch stock cutters with these: One fine, one medium, and oil for lubrication.

DIAMOND PASTE
Rubbed into a strip of leather or a flat hardwood block, it's a 12,000-grit strop.

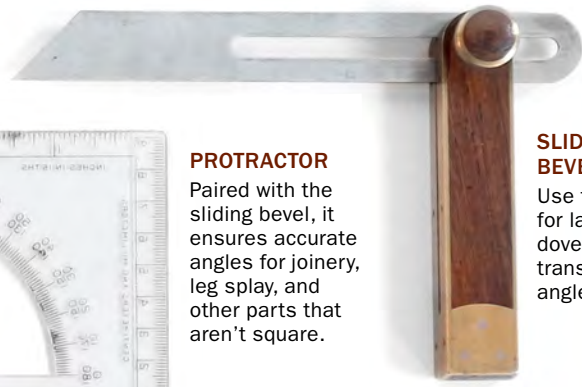
DIAMOND PLATE
Use this to reestablish the cutting edge.

Photo, center left: Tom McKenna

SMALL COMBO SQUARE
Great for layout, checking joints for square, and setting up machinery.

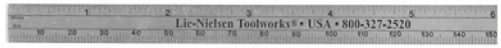


PROTRACTOR
Paired with the sliding bevel, it ensures accurate angles for joinery, leg splay, and other parts that aren't square.



SLIDING BEVEL
Use this tool for laying out dovetails and transferring angles.

TAPE MEASURE
For those times when a 6-in. rule just isn't long enough.



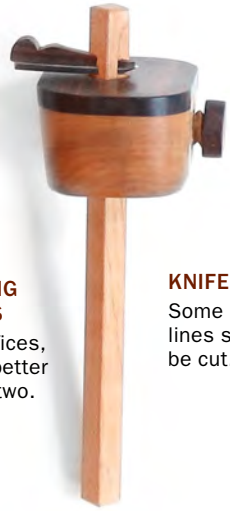
6-IN. RULE
Great for measuring in tight spots, and for laying out joinery.

CALIPER RULE
Determines the thickness of parts and the size of joinery components.

MEASURING AND LAYOUT

Accurate joinery is impossible without good layout tools. Although many of these tools are small, they are more than up to the job. They're sized perfectly for joinery, and a tape measure extends your reach beyond the length of the rule.

MARKING GAUGES
One suffices, but it's better to have two.

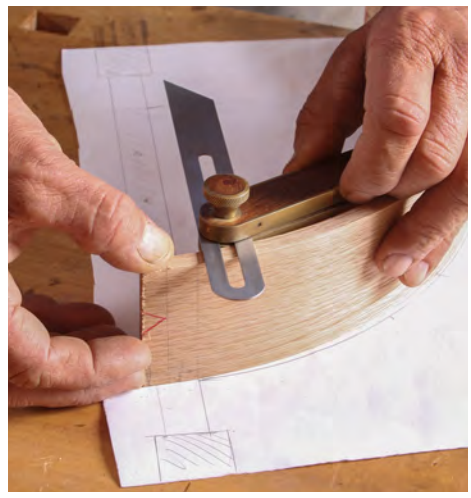


KNIFE
Some layout lines should be cut.

PENCILS AND ERASER
Essential for layout. Colored pencils are used to identify and orient parts.

You need marking gauges. *It's the right tool for laying out dovetails and tenon shoulders. You can lay out tenon cheeks with one, but you must change the setting. Two gauges makes it easier.*

One tool, many jobs. *A combination square can be used for layout, checking joints for accuracy, setting up machinery, transferring measurements, and a host of other jobs.*



Accurate angles. *Use a bevel gauge to lay out an angled shoulder, transfer an angle from one part to another, and to lay out tails and pins.*

Photos, bottom center and right: Tom McKenna