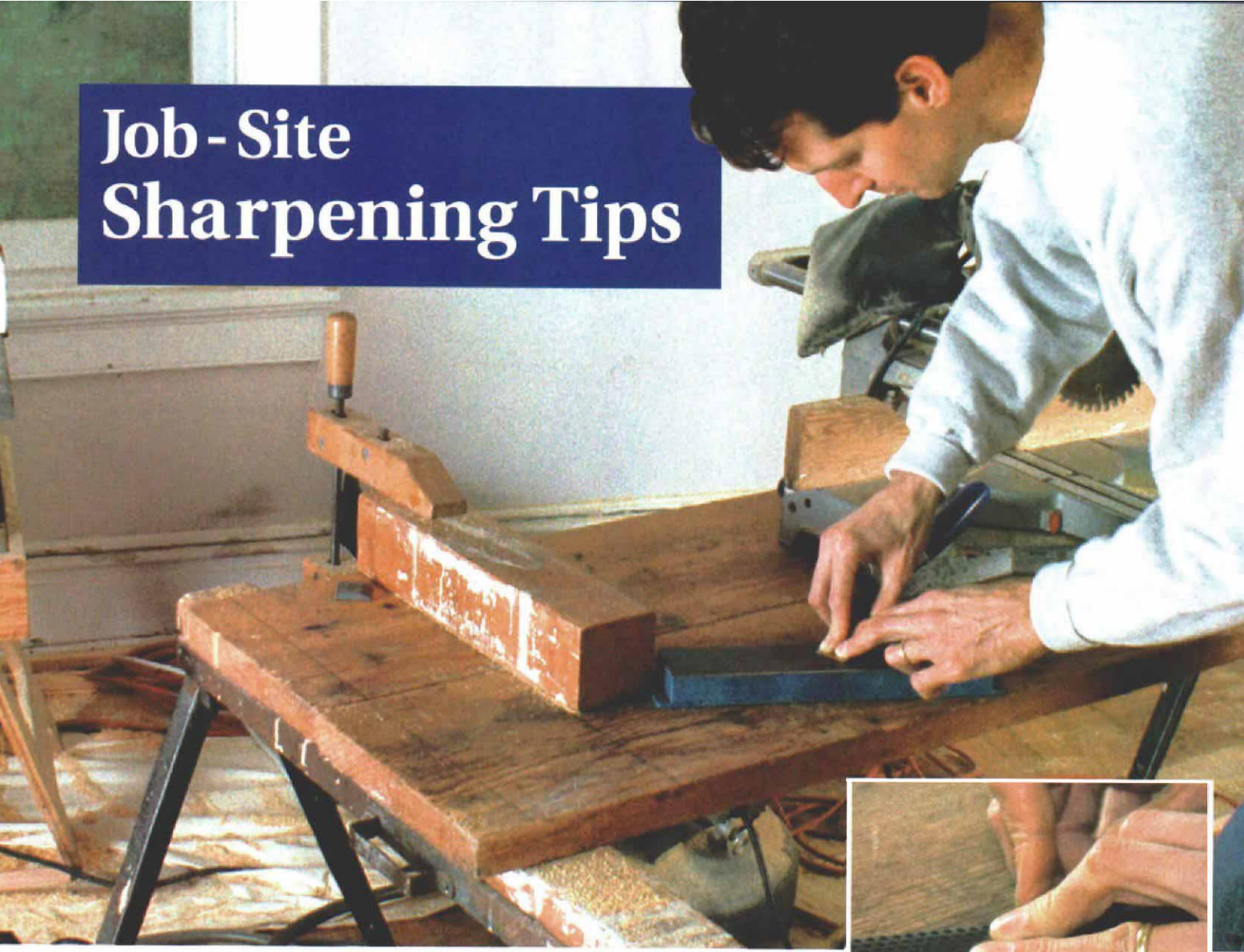
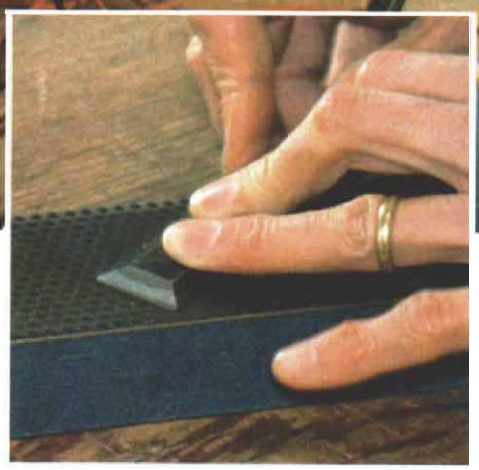
Job-Site Sharpening Tips





Honing guide not necessary. A few passes (front and back) over a coarse diamond stone easily resharpen a chisel on the job site. A hollow-ground bevel (inset photo) is the key to fast freehand sharpening.

The right tools and a few easily made jigs will give you an edge on your chisels, your planes and your competition

BY CHRIS GREEN

Fifteen years ago, I walked out of college with a music degree only to discover that there weren't a lot ofjobs for trombone players. I got my first exposure to the trades as a gofer doing old-house work. It was probably the worst job I ever had. Eager to learn finish carpentry, I apprenticed with a guitar maker and spent a couple ofyears sharpening and making tools. As glad as I finally was to get out on my own, that apprenticeship taught me that tool sharpening goes hand in hand with fine craftsmanship. Without sharp tools, I can't do my job accurately or efficiently.

Bring 'em to work sharp

Job-site sharpening is basically sharpening in a pinch. Fine sharpening needs to be done in the shop. I keep a grinder and a couple of oilstones set up in my shop and use them to put precise edges on fine cutting tools such as chisels and plane irons. Colleagues of mine who can't find the time or the patience to do it themselves send their tools out when they need sharpening.

I minimize the time I spend sharpening on the job site by backing up popular tools such as block-plane irons and my 1-in. chisel with spares. I've also set aside an older block plane and a few chisels for rough work such as heavily painted or nail-embedded wood. Despite my best intentions, though, whether due to accident, oversight or just heavy us-

age, tools often lose their edge and need to be touched up on the job.

Sharpening on the job site can be both accurate and efficient if you follow these rules:

- Hone cutting tools on flat surfaces.
- Maintain a constant sharpening angle.
- Use hollow-ground chisels and plane irons.

Hollow-ground blades tune up faster

Hollow grinding simply means using a grinding wheel to form a concave bevel on a chisel or plane angle (sidebar p. 87). A hollow-ground blade is much easier to hone because only the outermost edges of the blade ride on the stone.

Although I use oilstones in the shop, I use a coarse (325 grit) diamond stone (DMT Inc.; 800-666-4368) for job-site tune-ups. A diamond stone is expensive—this one cost $120—but it's perfect for job-site work because it cuts quickly, uses water as the cutting agent and, unlike natural stones, never loses its flat surface. I wouldn't want my appendix removed with a tool I'd sharpened on this stone, but it's fine for paint-grade carpentry. Unless I'm working with hardwoods, I don't need to resharpen a tool in the shop until the hollow has been honed away.

A hollow grind also makes it easy to sharpen the blade without using a honing guide. I simply rest the beveled edge on the stone so that the two edges contact the stone equally (top photo, facing page). To make sure that the blade doesn't rock while I'm sharpening it, I apply firm pressure with my index fingers low on the blade, almost touching the stone. After five or six short passes, I flip the blade over and make two or three passes on the flat side (inset photo, facing page). I check for sharpness by holding the edge of the chisel up to a light source. If I see light reflected off the edge, it's not sharp. It may take a series of passes on both sides before the blade is sharp enough to get back to work, but the process never takes more than ten minutes.

Simple jigs and a file revitalize scraper blades

Most of my work takes place in old houses, and that means I use a lot of scrapers: rough paint scrapers as well as fine cabinet scrapers. These tools take a lot of abuse and lose their edge quickly, but they're easily resharpened with a mill file. The hard part, of course, is getting the cutting angle just right. After tiring of the trial-and-error process I used to use, I came up with some simple jigs that let me get the angle right every time.

One of the most useful tools in my arsenal is a combination scraper and pry bar that I



A 4x4 guides flat scraper. Running the tail end of a combination scraper/pry bar along a block of wood allows the author to maintain a consistent sharpening angle. Pencil lines on the bench top ensure correct placement of the block and the file.



Angled block guides the file. A chunk of scrap maple, cut to the same width as the paint scraper and mitered to match the cutting angle of the blade, keeps the file aligned precisely with the blade.

Square stock guides cabinet scraper. On the job site, the author quickly restores a usable edge on a scraper by running it across the top of the file with a square wooden block as a fence.





Easier than running to the hardware store every time you hit a nail. This jig (top photo) that clamps to any flat work surface ensures that a sharp, perfectly aligned spade bit is never more than a few file strokes away (photo to right).





Don't throw away those old sweat socks. Most sharp tools enjoy a dedicated slot in the toolbox. Those without a place to call home are sheathed with simple cardboard sleeves or wrapped up in old socks.

use for removing and cleaning up painted moldings (Red Devil Scrape 'N Pry Bar; 800-423-3845). When the scraper end starts to dull, I revive it by running the edge back and forth across the file using a block of wood under the tail end of the scraper to ensure the correct sharpening angle (top photo, p. 85). The block I use also serves as the work support for my miter saw (photo p. 84). I have two lines drawn on my job-site worktable, one for the position of the block, the other for the file. The lines let me put the block and file in the same position every time.

I also have a ready-made jig that I keep on hand for sharpening paint scrapers (center photo, p. 85). This jig is nothing more than a scrap of fir ripped to the same width as the scraper and angled to match the cutting angle of the blades. I clamp the scraper between the table and the block, and run the file across the front edge. A half-dozen passes later, the tool cuts through paint like butter.

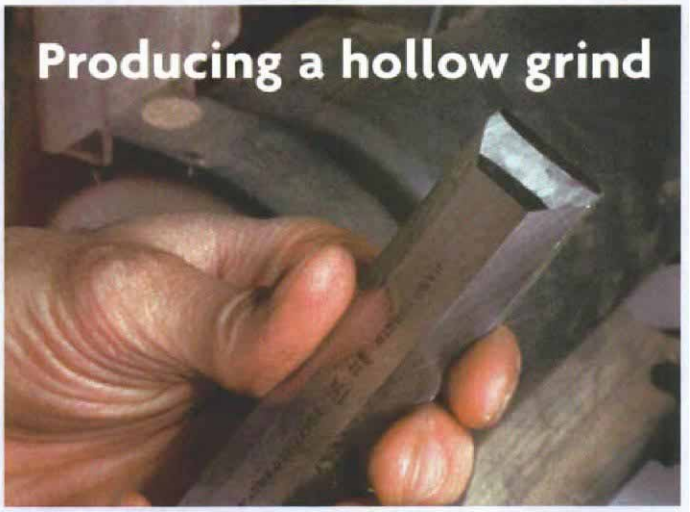
One tool I find indispensable for all types of carpentry work is a flexible cabinet scraper (Woodcraft; 800-225-1153). Among other things, a cabinet scraper can remove gluelines and clean up gouges or torn wood fiber faster—and better—than a belt sander. On the job site, I resharpen a dull cabinet scraper by holding the cutting edge of the scraper perpendicular to the file (bottom photo, p. 85). A square wooden block resting on the face of the file guides the scraper like a jointer fence. I make several passes over the file until a burr forms on both of the flat faces. If I were in my shop, I'd remove the burr on a series of finer stones and turn a slight hook with a burnisher. In the field, I don't remove the burr; this edge is not polished, but it's adequate for removing minor imperfections on surfaces to be painted.

A serious jig for spade bits

All it takes is one nail to render a brand-new spade bit useless. But the steel in these bits is soft, so a little filing will resharpen a dulled spade bit quickly. You have to get the angle right, though, and make sure both cutting edges are properly aligned. After sharpening by eye for longer than I probably should have, I built my own sharpening jig (top photo). A more elaborate version of my paint-scraper jig, this one is cut away to allow the bit to be clamped firmly against the worktable (photo bottom right). A snug-fitting wooden stop rests against the end of the shaft to ensure that the bit doesn't move while it's being sharpened. □

Former carpenter Chris Green is now an assistant editor at *Fine Homebuilding*. Photos by Tom O'Brien.

Producing a hollow grind



Ready for the job site. Honing on an oilstone has left this hollow-ground chisel razor sharp. Flat surfaces only on the outermost edges make resharpening quick and easy.

You can pay upward of $400 for a fancy water-cooled grinding setup. But I've gotten excellent results for years using an inexpensive 6-in. grinder with a 60-grit wheel and a shop-made tool rest (drawing below).

I don't use the chintzy tool rest that comes with such a grinder because high-quality sharpening demands a substantial, proper-size tool rest. I actually have two separate tool rests, both made from hard maple. One is sized to put a 25° bevel on plane irons, the other to put a 30° bevel on chisels. For easy setup, both are designed to line up with the edge of the worktable and be secured with a C-clamp. The critical variable in designing these tool rests is the angle at which the tools are ground. You can use trigonometry to establish that angle, but I've always worked out the details on a piece of paper with compass, protractor and ruler.

I usually grind several blades at a time, alternating them as they heat up. I apply even pressure with my fingers fairly close to the grinding wheel. As the steel begins to heat up, my fingers let me know when to remove it from the wheel: My fingers will burn before the steel loses its temper. I keep a cup of ice water nearby just in case the tool or my fingers need quick relief.

If the tool I'm sharpening is out of square, I strike a reference line across the backside using the corner of a file and a trisquare. Otherwise I trust my eye to make sure the edge of the chisel or plane iron stays perpendicular to the plane of the grinding wheel.

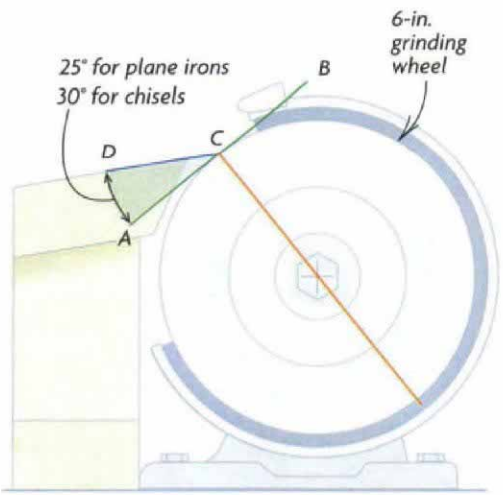
I grind with a smooth, steady motion, back and forth across the wheel, slowing down in the center and speeding up as I get closer to the ends. This rhythmic motion makes for consistent steel removal. I'm finished grinding once the dull edge is gone and I can feel a thin wire burr along the backside of the tool.

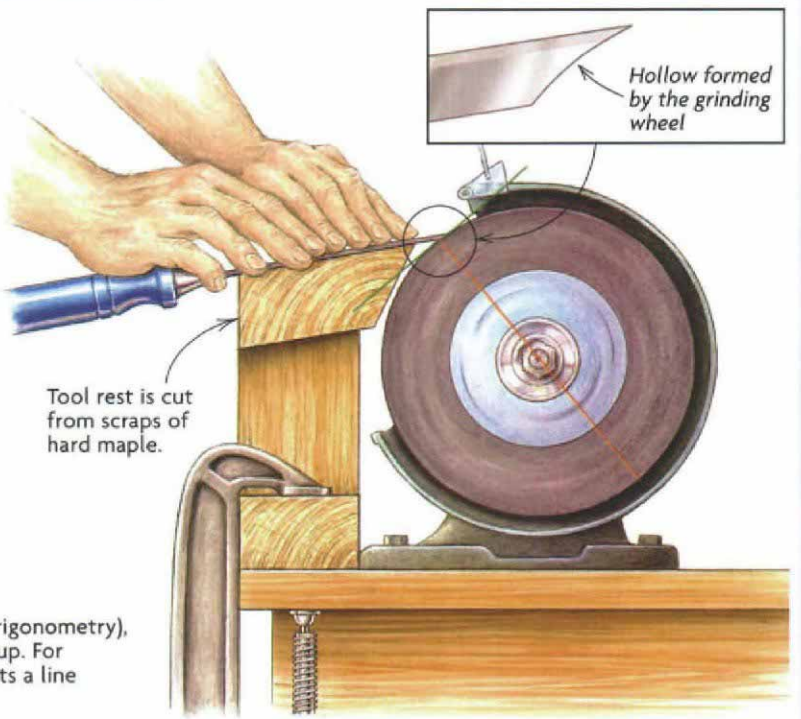
I use two oilstones to finish sharpening. Diamond stones and water stones would do the job just as effectively; I prefer oilstones for shop work because they're less expensive than diamond stones and because they don't wear as fast as water stones.

I start with a fine-grit India bench stone (Woodcraft; 800-225-1153). Thanks to the hollow-ground bevel, three or four light, short strokes quickly remove the burr. Then I turn over the tool and ease the flat side across the stone a couple of times. After repeating the procedure using a hard black (extra fine) Arkansas bench stone, the blade is ready to split hairs (photo left).

—C. G.

Designing a custom tool rest





To determine the proper grinding angle (without using trigonometry), the author draws a full-scale elevation of his grinder setup. For sharpening chisels, the top of the tool rest (DC) intersects a line drawn tangent to the circle (AB) at the desired angle.

Drawings: Don Mannes