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TOOLS FOR WOODWORKING

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A GUIDE TO SHARPENING CHISELS AND PLANE IRONS

I've owned my collection of hand tools for over seventeen years now, and I wouldn't trade them for anything. The work my chisels and planes have done for me over the years, together with the work I've done on them, has made them more valuable to me than money can suggest. They make me want to do work that's worthy of them, and they give me a moment of pride and pleasure every time I pick them up. That's about as much fun as woodworking gets, and I sincerely wish you the same rewards from your own hand tools.

The fact that your tools are new means they're nowhere near ready for use. This may not match your expectations, but it's true of nearly every hand tool (and most power tools) that you might ever acquire. It's not that the tools weren't made well; they almost certainly were. But the job of the person in the foundry where your planes were made, for instance, is to make tools that look just like planes, and to be sure there are no fatal flaws that would keep them from working. That foundry worker doesn't use the planes (he'd surely get in trouble if his supervisor caught him making shavings on the job!), and he probably isn't a woodworker anyway. So he has no business trying to make planes perfectly ready to use. It's not the retailer's job to make tools perfect; their job is to choose good tools, inform you responsibly, offer competitive prices and good customer service, and so on. In the life history of your planes, you are the first person they've ever met who actually needs them to work properly—so you're the right person to put them into shape for doing so. The work to be done is both simple and brief, and it will begin building a connection between you and your tools even before you put them to work.

Blades must be sharpened; corrosion-preventive coatings must be removed. Handles can be shaped, refinished or replaced. Castings may be polished and waxed, rough edges smoothed, sharp corners eased. Only the first two chores, sharpening and cleaning, must be done, while the rest are entirely a matter of choice. "Perfecting the Steel Plane", another handout from Highland Hardware, offers several suggestions for improving both the tools and your understanding of them.

Cleaning & Care

Chisels, as well as new planes and the irons and chipbreakers with them, arrive coated with oil or lacquer which prevents corrosion quite effectively, but it also keeps the tools from sliding easily on wood surfaces. Lace a Scotch-Brite pad or a bit of steel wool with lacquer thinner and scrub down the chisel blades, the soles and sides of the planes, and the front and back of the plane iron and chipbreaker. Don't let solvent drip onto your plane bodies where it might damage the enamel finish. Now apply a thin coat of wax and buff all the freshly cleaned surfaces; this will inhibit corrosion and reduce friction very well. Look up Renaissance Wax on the Rust Control page in our catalog for a few tips on waxing your tools.

Sharpening

Please don't try to use your new tools before you sharpen them. They won't please you at all, and you might even break a narrow chisel while trying to force it through a piece of wood. Why don't they come sharp? Well, sharp edges would probably get damaged in handling on the way to you, and besides, why pay extra (as you'd surely have to) for something you're going to have to re-do within a few minutes anyway?

Before you tackle sharpening, it's worth considering what you're trying to accomplish. "Sharp" means simply "suited to cutting"—you can look it up. There is no arbitrary standard of perfection you must reach or be considered a failure, and there's no "right" method you must use or stand accused of doing it wrong. Sharpness is defined by results. If your chisels and plane irons cut wood easily and make you happy, they're sharp, and whatever you did to get them there was a right way to do it.

In his outstanding book, *The Nature and Art of Workmanship*, David Pye offers a wonderful definition of "skill": it's best understood, he says, as the exercise of judgment, dexterity and care. To learn to sharpen skillfully, you don't have learn age-old secrets or mysterious techniques of the masters. You need to know enough about sharpening to make sound judgments about what to do; you need to practice the physical business of moving tools back and forth along sharpening stones; and you need to care about the work you're doing. Knowledge isn't hard to find. You'll get some here, and you can learn much more in a sharpening class here at the store or in Leonard Lee's excellent book, *The Complete Guide to Sharpening* [catalog #200831]. Dexterity is easy to come by: tools always get dull, so you'll never lack for opportunity to practice putting a tool on a stone. And as for care, well, do you? If you want to sharpen well, and if you're willing to pay attention, learn from your mistakes and successes alike and allow yourself a pat on the back when you produce good results, then you're already well on the way.

Judgment

The easiest way to understand sharpening is to compare it to sanding wood. Both processes use abrasives to shape and smooth surfaces toward a desired condition; both start with whatever grit seems appropriate in a given situation, and then proceed through various finer grits till you're satisfied. For a cutting edge, you want the two surfaces which meet to form the edge to be very smooth. Think like a microscope about what a cutting edge looks like at high magnification. Coarse grinding scratches on the bevel and back of the tool look like sharp mountains and deep valleys. The mountain peaks may be thin and suited to cutting (sharp), but they're weak and ragged; the valleys between them score your work with every stroke. As you polish the surfaces that form an edge smoother and smoother, the valleys get shallower and shallower. As the edge gets closer to straight it gets thinner and thinner, and the whole thing becomes increasingly suited to cutting wood. In a nutshell, the object of sharpening is to make two surfaces meet to form an edge, and to make those surfaces so smooth that the very thin edge they create can penetrate through wood easily and cleanly. Sounds simple, doesn't it?

Did you ever sand a piece of wood all the way to a fine finish, then apply a stain or finish coat and suddenly notice a few deep sanding scratches left over from early in the sanding process? You didn't leave those scratches there deliberately; you just didn't see them as you sanded to finer and finer grits. The problem wasn't technique, it was lack of information. If you'd brushed or blown the piece clean several times during the job and looked at it under a bright light coming at a low angle, you'd have seen those scratches and eliminated them early on, saving yourself a

lot of grief. Likewise, looking closely at what's going on while you sharpen is often all it takes to figure out what needs to be done. Though an experienced sharpener might seem to be exercising nearly magical skills, he or she is usually doing something just as simple as sanding, getting results because just looking closely at the tool shows exactly what to do. Set up a good light source where you sharpen, and if close focus isn't as easy on your eyes as it used to be, get a good magnifier or a slide loupe (available at camera stores) to help see your tools clearly. And after all that, remember to look at them! It's easy to get into the rhythm of sharpening and forget to check what you're doing, so you'll have to work hard to make a habit of stopping *frequently* to look at what's happening to the tool. It's worth repeating: stop and look!

You've probably sanded plenty of wood, and by now you hardly think consciously about choosing a sandpaper grit, feeling and looking at the wood as you work, deciding when to switch to a finer grit, and so on. Sharpening works just the same way. When you look closely at a tool that needs sharpening, you can see if there are nicks in the edge, or if there's a line of light along the edge indicating where it's rounded over and dull. If the edge needs a lot of work, start with coarse grit so you can get the job done efficiently. If the edge is just lightly dulled, start with finer grit so you don't actually make it worse with coarse-grit scratches. Work until you can't see any white lines or spots in the edge, and you can't see any scratches in the bevel deeper than those of the grit you're using. Then move on to a finer grit. Whatever grit you start with, do *all* the hard work with that grit. Get the tool all the way to straight, square, 25°, sharp (albeit rough) — whatever it needs. Finish the heavy work on the grit best suited to doing it. Each grit thereafter should have nothing more to do than to polish out the tiny scratches left by the grit before it.

Dexterity

We recommend Japanese waterstones as the best value for sharpening most hand tools for woodworking. They're extremely efficient, they're less expensive than any other stones, and they cover a far wider range of grits than any other sharpening system. We provide a free user's guide with every waterstone purchase. Other tools you'll need for sharpening include a small try square and an apron suitable for getting muddy. If you have a honing guide, feel free to use it, but if you don't own one yet, try your hand at sharpening before you rush out and order a guide. It takes just about as much dexterity to use a honing guide well as to do without one, and with a little practice you certainly can sharpen much faster freehand.

One of the best ways to teach yourself to sharpen is to start with a new chisel, 1/2" to 1" wide. Its bevel is broad enough to offer good feedback for angle control, but small enough to show results quickly—and there's nothing wrong with a little early gratification. These instructions are written for right-handed work; if you're left-handed, do the mirror image of everything described here just as you always must.

Hold your right arm out in front of you horizontally, totally relaxed, palm down, fingers slightly curled at rest. There's no reason for sharpening to feel any less natural than that. Now put the chisel in your relaxed right hand with the bevel facing down and the blade pointing to the left, the handle filling your loose fist. Notice that the blade points slightly forward, not absolutely square to your arm. This relaxed, natural grip is a good way to hold both chisels and plane irons for straight, flat, easily controlled sharpening.

Set your sharpening stone on your workbench or any other working surface at a comfortable height, its length pointing away from you. Put the chisel bevel on the stone, and rest a couple fingertips from your left hand on the back of the chisel just above the cutting edge. (*Don't* let your

fingers hang off the tool and rub the stone. It might feel cool and smooth, but it will grind you to the quick.) Press gently, and rock the chisel handle up and down to feel the flat factory-ground bevel land with a distinct thump on the flat surface of the stone. Hold it at that angle for a moment, and just feel how your hands are positioned. That's what it feels like to hold a chisel at 25° on a sharpening stone, which is what you're trying to train yourself to do. As you sharpen, the fingers of your left hand ride the back of the chisel, gently pressing the bevel flat on the stone to help you feel that 25° angle and working to apply pressure evenly so the chisel will stay square. Your right hand moves the tool back and forth along the full length of the stone, gradually moving from one side to the other and back again in order to wear the surface evenly.

Give the chisel five or ten strokes and stop. Wipe the edge (carefully) and have a look at what you've accomplished. You'll see quite clearly where the stone has abraded the bevel, and that will tell you exactly what to do next. If the work is distributed evenly across the bevel from front to back and from side to side, then you were holding the chisel just right; do it some more. If there's wear at the toe but not at the heel of the bevel, you held the handle a little too high. Start over, feel that 25° angle, and try again. If one side shows more wear than another, then the fingers of your left hand must have been applying pressure slightly off center. Make a slight adjustment as needed and try again. Give it another ten strokes. Stop and look. Let the chisel tell you how you're doing, then do some more. And so on.

It might seem frustrating and counterproductive to stop so often, but this is crucial if you're going to train yourself to sharpen well. If after ten strokes you see you need to change your technique slightly, at least you haven't wasted any time learning to do it wrong. If you just grind away for fifty or a hundred strokes, you might well begin to imprint a faulty style that can take much longer to unlearn. Just as with many other repetitive tasks, such as typing or tying your shoes, you're training your muscles, your nerves, your eyes and your whole body to recognize and return to specific positions and motions, in this case holding and moving tools at about 25°, straight and square. It's a pretty simple activity, and it won't be long before you can pick up almost any tool and sharpen it confidently to a crisp, functional shape with an edge sharper than a razor blade. And that will be genuine dexterity at work.

Care

Care is an attitude toward your work that is where all the rewards come from. It's curiosity, commitment, pride, patience, willingness to learn, and the urge toward quality. It's putting the best parts of yourself into your work. If you didn't care about using hand tools well you would not have read this far, so I salute you for caring about what you do. Working with classic hand tools can be a richly rewarding way to spend time in the shop, and I hope they'll make your woodworking better, more productive and more fun for many years to come. Enjoy!

Zach Etheridge
Highland Hardware