the versatility of grip so necessary to a proper job. The simple oval handles on Marples or Sorby tools are great, even though the smaller sizes may need a flat spot planed on one side of the handle to keep them from rolling off a not-so-level tabletop.

A very important detail is the finishing of the surfaces of the tool. It is imperative that the back of the chisel be ground flat, not belt sanded! This is easy to check if you're buying off the rack: just grab a steel ruler and hold it against the surface. You don't want to see light between the two. If you're catalog-buying and they send you a dud, send it back. It's the only way that manufacturers and distributors will ever get the picture.

As mentioned earlier, paring chisels have beveled side edges, and the care with which this is done is an indication of the overall concern the manufacturer has for the product. The maneuverability that side beveling gives you is apparent when working into an acute angle, such as next to a dovetail, as shown in the top photos on the facing page. You can re-grind this bevel almost to a knife-edge. To carry this idea a little further, I modified a ¼-in. bench chisel (shown in the large photo, p. 42) and made, in effect, a two-edged skew. Thus, I get a slicing cut (on either side), even when I push the blade in a straight line.

Now, I'm sure that you've already muttered something about my remarks that paring chisels are not for hammering on. I know, I know. . . I hammer on them, too, occasionally. But only with a wooden mallet, and then only lightly. Besides, paring is, by definition, done just with the hands. Blasting away with a mallet on a heavy mortising chisel doesn't permit the intimacy that develops between your hands and a paring chisel during a long day of cutting joints. Like a tiny stone in your shoe, a sharp edge or protruding piece of hardware can become a real irritant to your hand in a short time—which is another reason for choosing smooth handles (i.e. no butt hoops).

Manufacturers usually leave sharp corners where the body of the blade tapers back to form the shank. I grind these trailing corners off the blade to avoid opening up a finger if my sweaty palm slips, and I file any proudness off the edge of the ferrule, which ideally should be flush with the wood of the handle. This wants to be as comfy as an old loafer.

Now, before you can really understand the proper use of a paring chisel, you have to appreciate a key concept.

Ask yourself what would happen if you stuck a coil spring on the handle and held *it* while trying to take a shaving off an important piece of work. Why, as soon as you got near the end of the cut, the spring would unload, the chisel would jump and make a mess of everything in its way. You would have no control. Unfortunately, this can happen any time you go to work. The muscles and tendons in your hands and arms will act just like the spring unless you develop proper paring technique. There are

Bahco's ergonomic chisel

by Sandor Nagyszalanczy

I always thought that chisels were all about the same: a little fancier handle here, a little harder tool steel there. But my nonchalance was put to the test recently when I tried a chisel created by design methods usually reserved for jet cockpits and auto interiors. Made by one of the world's leading tool manufacturers, Bahco of Sweden, the Ergo line of hand tools is inspired by modern methods of ergonomics, or "human factors engineering." Bahco's aim was a chisel that would reduce hand and wrist fatigue while minimizing the risk of injury, common in hand-labor-intensive work.

Sleek as a Swedish Saab, the Ergo chisel is as much a product of science as it is art.

Conny Jansson, director of R&D at Bahco, and a team of consultants began by videotaping woodworkers on the job and analyzing their individual physical movements. They also used computerized measuring devices attached to both people and mannequin-type figures to study worker functions and measure stress.

The collected data provided design criteria for the improvements incorporated in the Ergo chisel: a longer, textured handle large enough to accommodate two hands; a gently rounded, knob-like end to reduce palm pressure and protect the fingers when struck by a mallet; a smooth blade-to-handle transition to allow a closer grip for delicate work; and a shorter, stiff blade—angled in relation to the handle—for a higher angle of relief when working in close on flat surfaces.

I was impressed by the scientific treatment, but wondered if all the high-tech was worth it. To find out if the Bahco performed like a European sports car, I gave it a road test around the shop. The overall heft and feel of the chisel was gratifying. There was no feeling of cheapness, and the oval shape of the molded polypropylene handle gave a good sense of blade position relative to grasp. Since I have large hands, I appreciated its generous size, although I could only use the palm of my other hand on the chisel's butt end. I used it with a mallet and the handle felt very positive when struck; evidently, it won't mushroom over time. The socket-style attachment and angle of the blade gave the tool a feel similar to Japanese chisels I've worked with. At a claimed Rockwell hardness of 58 to 60, the blade sharpened and honed well and held an edge even after being pounded into dense rosewood.

I didn't much like the surface of the Ergo's handle. Despite the groove-textured surface, the black plastic was just a little too slick for my taste. Also, an indented area on the chisel's handle where Bahco molds in its trademark was uncomfortable to grasp, nearly negating, for the sake of product identity, all the effort that went into making the tool's hand fit revolutionary.

So, is ergonomics a gimmick or a giant step in the evolution of hand tools? Although I usually choose a tool for the way it performs, I'd be drawn to Ergo's high-tech modern appearance, even if I knew nothing about all the computer-aided effort that went into its design. Bahco has created a high-quality tool that's got more going for it than a trendy design, but I can't say I'm ready to throw out all my antiquated chisels just yet; I still prefer the feel of a wood handle over plastic. If you're comfortable with the tool, you may not be with the price—$15 for the 1-in model. But all that intelligent Swedish design—whether it's for hand tools or Saabs—doesn't come cheap. □

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