

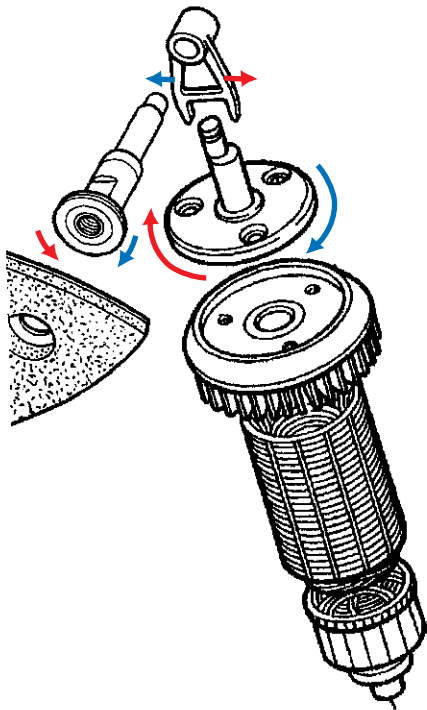
# A Problem-Solving Sander

By Michael Standish

Four years after I bought my Fein sander, the manufacturer is still advertising that its 636 triangular sander “eliminates hand sanding.” This is not precisely true, but it comes awfully close. Fact is, this machine can sand all the way into a corner (such as a drawer bottom) without disfiguring adjacent surfaces (like the drawer sides). It can do this because the sanding head oscillates extremely rapidly (20,000 strokes per minute) through a very narrow range of movement (only 2°).

## Oscillating Action

Unlike tools with a fundamentally rotary action, such as random-orbit sanders and disc grinders, the Fein’s sand-



As the Fein 636 motor turns, an off-center drive shaft alternately hits the forked pivot, which in turn moves the mandrel rapidly back and forth. At 20,000 rpm, this produces an aggressive vibration that won’t cause the abrasive to overcut.

ing action eliminates radial momentum, which typically drives the abrasive material into unintended surfaces.

Instead of spinning a disc, the Fein has an offset pin which alternately displaces the fingers of a forked pivoting arm (see illustration). At 20,000 rpm, this forked arm literally vibrates back and forth, converting the rotation of the pin to the linear (back and forth) motion of a lever. In turn, this lever action causes the mandrel, which holds the sanding pad, to rapidly pivot back and forth.

In practice, this design makes the Fein 636 sander a good choice for a lot more than finishing drawer parts. Around Boston, for example, we are currently in a wet-weather phase that results in a lot of calls for epoxy repair work. Here, the Fein is superior for sanding the intersections of sills, thresholds, and exterior casings. You wouldn’t particularly want to level a tabletop or bevel a door edge with one, but it’s surprisingly aggressive and makes very quick work of cleaning up even hard material like epoxy nubs and ridges. The tool can actually be a little too good: It’s not that difficult (especially with stiffer coarse-grit papers) to sand beyond an inside corner, producing a slight undercut.

## Not Just a Sander

For those occasions requiring intentional cuts, Fein offers a liberal assortment of accessory saw blades. These include circular (in 2½-in. and 3⅛-in. diameters), segmented (semicircles whose point allows stopped cuts in tighter spots), and cupped circular (for flush cutting). All these blades are thin (less than 1/32 in.), and the fine teeth have no set, so they require some care in use. Burying them in a deep cut can easily burn the stock or the blade. When cutting, the blades need to come up for

air regularly (just like the bit in a drill press) to avoid removing the steel’s temper, which can lead to a fractured cutter. Used properly, however, these blades allow the Fein 636 to make amazingly clean and precise scoring or cleanup cuts. And over the years, a few of these have gotten me out of many an unsavory change-order jam (for example: “If we could just cut this baseboard back a quarter inch without tearing up the tile floor to remove it, we’d be all set”). Also available are metal-cutting blades, diamond blades (excellent for, say, removing only one tile from a tub surround), polishing pads, and various scraper blades. This array of options provides a high degree of flexibility, allowing emergency improvisations that can make you the Charlie Parker of your job site.

Tools this good don’t come cheap: The lowest discount price I could find for the Fein 636 is about \$175. This is no laughing matter, but the tool performs as advertised, and it’s made to last. Fein manufactures what seems to me to be a line of small factory equipment — tools meant for years of all-day use. The triangular sander surpasses its



Replace the sanding pad with a very thin kerf blade (less than 1/32 inch), and you get a precise cutter for on-site surgery through wood, drywall, or (with a diamond blade) grout and mortar.

# Tool Bits

## Table Saw Guard

The challenge has long been for the tool industry to design a table saw guard that works well without getting in the way. Maybe the Brett-Guard is the answer. It features a fixed adjustable clear barrier suspended over the blade from either a cantilever or tabletop mount. The guard does not float; instead, it must be positioned vertically and horizontally before making a cut. The anti-kickback device can be retracted and locked away from the work to avoid marring, and the entire saw guard rotates out of the way when blades are changed or adjusted. Brett-Guards are available for 10- to 16-inch saws at prices ranging from \$278 to \$560 depending on blade size and mounting options.

Contact: HTC Products, Inc., 332 E. Lincoln, Royal Oak, MI 48067-2700; 800/624-2027.



## Screw-On Forstner Bits

This affordable, space-saving set of Forstner bit heads uses an interchangeable  $\frac{3}{8}$ -inch shaft that accepts screw-on heads measuring  $\frac{3}{4}$ ,  $\frac{7}{8}$ , 1,  $1\frac{1}{4}$ , and  $1\frac{3}{8}$  inches. Fully assembled, each head can drill up to  $2\frac{1}{2}$  inches deep. The Wolcraft Interchangeable #7650 Forstner Bit Set retails for around \$40.

Contact: Wolcraft, Inc., P.O. Box 687, Itasca, IL 60143; 630/773-4777; www.wolcraft.com.



## Coping with a Jigsaw

A coped joint is a good interior trim detail which traditionally has only been possible with the use of a hand coping saw. Now, a special attachment called the Collins Coping Foot makes it possible to make coping cuts with a jigsaw. The \$29, stainless steel add-on is available in two profiles: Profile A fits virtually all jigsaws; the more versatile Profile B exposes more blade, but only fits jigsaws that don't have fixed tables.

Contact: Collins Tool Company, P.O. Box 417, Plain City, OH 43064; 888/838-8988.



## Ladder Pockets

Storage pockets, popular for use with empty drywall buckets, have climbed to the top of stepladders. The Ladder Saddle (\$30) has more than 20 pockets, loops, and grommets that keep tools and supplies close to hand and reduce the number of trips you need to make up and down a ladder.

Contact: CATJA Corporation, 27255 Bagley Rd., Olmstead Twp. OH 44138; 440/235-5162.



## Concrete Saw

Adopted from the stone cutting industry, the Harris Accu-Glide Saw makes perfectly straight cuts in green and cured concrete. It features a modified Milwaukee worm-drive mounted to 6-foot-long tracks that sit on neoprene pads. A quick-connect handle allows the saw to be operated from a standing position. The saw can be used for either dry or wet cuts and accommodates up to  $8\frac{1}{4}$ -inch diamond blades. Obvious applications include scoring concrete and cutting expansion joints. By riding on tracking rails, the Harris Accu-Glide can cut stamped or textured concrete. The contractor price is \$3,295.

Contact: StarDiamond Tools, P.O. Box 18066, Tsawwassen Postal Outlet, Delta, British Columbia, Canada V4L 2M4; 800/282-6470; www.stardiamondtools.com



## 35-mm Hinge Jig

Installing 35mm European-style hinges can be tricky, unless you're using the Jig-It line of templates. Item #10260 (\$30) includes an alignment plate that attaches to the door and interlocks with a shrouded bit for automatic centering. Drill depth is set with a stop collar.

Contact: Woodworker's Store, 4365 Willow Drive, Medina, MN 55340; 800/279-4441; www.woodworkerstore.com



closest imitator by a factor of about  $1\frac{1}{2}$  in terms of amperage draw (a likely index of power), operating speed, and weight (a reflection of the meatiness of its components). Overall, it has proved extremely versatile and capable, and seems well worth the price tag for any serious professional.

Since I bought my 636, Fein has issued a more current model. The new 636 II, now aptly dubbed the MultiMaster, is reportedly 20% more powerful. A rigid-blade scraper and  $3\frac{1}{8}$ -in. full-circle saw blade come as standard equipment, and the tool now has variable-speed control (12,000-21,000

strokes per minute), which should make it easier to modulate its performance to reduce burned cuts or under-cut sanding effects. The tool's price remains the same.

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