



Key tools

Ray Key tells how he designed – and how to use – the 10 Henry Taylor tools which bear his name

Woodturners have been designing, making and modifying tools for centuries. But only recently have manufacturers made them under the designer's name.

Having witnessed how hobby turners want to buy the tools they have seen pro's using at seminars, demonstrations, in videos and books, manufacturers are now making them.

Most amateurs don't have the confidence to grind a tool into a radically different shape, but if I feel a tool's shape inhibits my design, I modify it on the grinder. Dale Nish saw some of these modified tools when he was funding and directing my videos on box making, for Craft Supplies USA,

The 1994 range of Ray Key tools made by Henry Taylor Tools consists of (left to right): 19mm, (3/4in) round side scraper, 19mm, (3/4in) end/side scraper, 13mm (1/2in) skew chisel scraper, 13mm (1/2in) modified spindle gouge, and 9.5mm (3/8in) modified spindle gouge.

his son, Darrell's business. "We're going to be inundated with requests for those tools of yours," he said.

I laughed and told him there was no market for what were simply modified standard tools anyone could make.

"They could, but they won't," he replied. "When you return home send those you use most to Henry Taylor Tools. Get them to make some prototypes for costing."

I did so, and the rest, as they say is history. Five 'Key' tools came onto the market in 1994, with five more

the next year. They are as follows:

The 'Key' HS 105 10mm (3/8in) and 106 13mm (1/2in) spindle gouges

These two spindle gouges have three uses – end grain hollowing, cylinder planing cuts and final shaping of the outside of bowls.

They came into being almost by accident, more than 20 years ago. In end grain I wanted to hollow I would often drill a hole with a saw tooth bit, to remove mass. I felt I should be able to do this more quickly with a gouge.

The bevel at the fingernail-shaped

end is 60-65°, compared with the normal 30° for spindle work. There's a long side grind on the right hand side of the tool, with little undercut – about 5° is the aim.

Set up the toolrest to allow the gouge's point to hit the exact centre of the end grain to be hollowed. Present the tool on its edge with the flute towards you, horizontal and parallel to the bed.

Tilt the gouge face away from you about 10-15° from the vertical. Push the gouge towards the headstock. Provided everything is correctly set up, you will make a hole without force, as with a shell auger.

Scooping cuts

At the right depth, withdraw the tool. Open the hole up by making pivoting scooping cuts with the gouge flute tilted away from you at 45° from vertical. The short, stubby bevel lets you rub and support the cutting edge for 95% of this process.

While ring and hook tools are used in this way, most are not as strong as a gouge on the very hard woods I usually use. My gouges remove mass quickly.

They are also better than a skew chisel on difficult hardwoods when truing long-grained cylinders between centres. This is especially true when dealing with hardwoods which have a short, wavy, rippled grain, or where like ebony, the fibres do not interlock

well. The skew is still king, however, on softer, easily-worked woods, when used correctly.

You should plane with my gouge with your toolrest high, as with a skew. Present the heel of the gouge's long side grind with the bevel rubbing and pull the tool along the cylinder with a slicing action. A finer quality finish will be achieved if the gouge is sharp and used properly.

User friendly

It's a user-friendly tool, the pulling cut being easier to control than the skew's more aggressive pushing cut.

My spindle gouges are also used for refining bowls after ordinary bowl gouges have made the initial shape. I use them to finish the outside of 95% of my bowls. Notes that bowls are cross-grain mounted, not end grain.

As with all tools, there's a knack to using a spindle gouge like this. The handle is held in the right hand and angled down. The bevel heel near the tip of the gouge is brought into contact near the bowl's base. No more than the first 6-9mm (¼-¾in) of the tip side heel should ever be in contact with the bowl as the cutting proceeds.

You pull the gouge from the base of the bowl to the top using a slicing action. Aim for a fine ribbon of shavings with the bevel supporting the cutting tip throughout. This type of cut is the equivalent in headstock work to a skew in normal spindle

work. The size of gouge you use is dictated by the size of the work.

'Key' HS 103 19mm (¾in) Round Side Cutting Scraper

At first glance, this tool is similar to several standard tools you can buy. But instead of the normal domed or rounded end, it has a straight-across grind, blending into a radiused corner.

This makes it easier to remove the pimple or nipple often found in the bases of soft-curved hollows in boxes, goblets, egg cups etc.

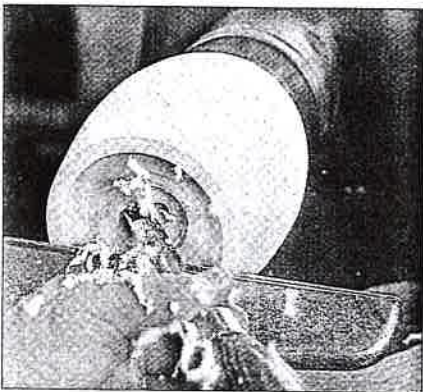
It is used with the toolrest set above centre to allow the scraper to cut at centre height, tilted 10-15° below the horizontal. The side cutting edge is used to remove gouge ripples in the side of hollows.

'Key' HS 104 19mm (¾in) Square End/Side Cutting Scraper

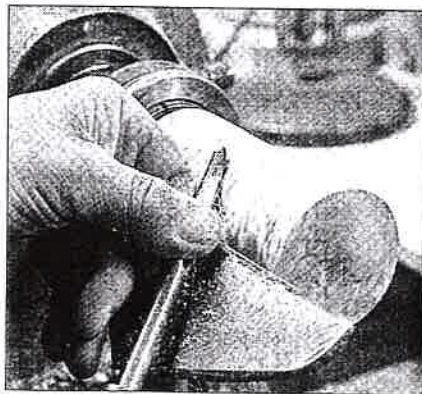
The end of this tool has a very slight crown and is about 5° out of square. These modifications make it easy to true up ripples in the base of flat-bottomed boxes, and the side grind allows for easy truing of ripples in side walls. Use in the way described above.

'Key' HS 102 13mm (½in) Skew Chisel

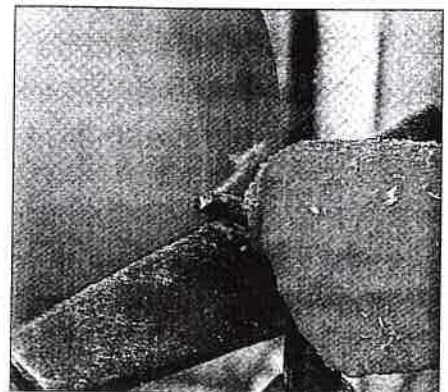
My skew is never used as a normal skew, because of its very long angle and slight crown. It's best described as a 'detail scraper.' Toby Kaye once ➤



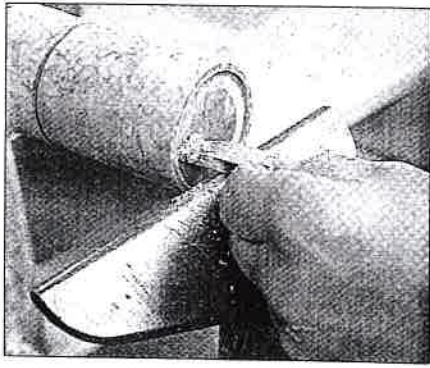
Hollowing end grain with the 13mm (½in) modified spindle gouge. Scooping cuts are made from a central hole out towards the rim and the short stubby bevel rubs to support the cutting edge.



Planing the outside of a masur birch box with the 9.5mm (⅜in) modified spindle gouge. The toolrest is set high and the ground-back side of the gouge is pulled along for a peeling cut.



Final refining cut on the outside of a salad bowl with a 13mm (½in) modified spindle gouge. A short length of the tip cuts as the tool is pulled towards the top of the bowl.



Removing gouge ripples from the top of an end-grain box with a 13mm ($\frac{1}{2}$ in) skew chisel scraper as the edge tilts upwards, against normal scraping practice.

➤ took me to task for describing the way I used it for shear scraping. He had a point. But the method I use is not conventional scraping. 'Shraping' is a word one man used to explain it.

I use the tool mostly flat on the toolrest for cutting the undercut for dovetail chucks, for incising lines on faceplate work and for its original purpose – truing end grain gouge ripples on box lids.

Tilted upwards

The tool is tilted upwards, not downward as is normal with a scraper. The handle is held well down, then a slicing traverse action from the centre outwards is used.

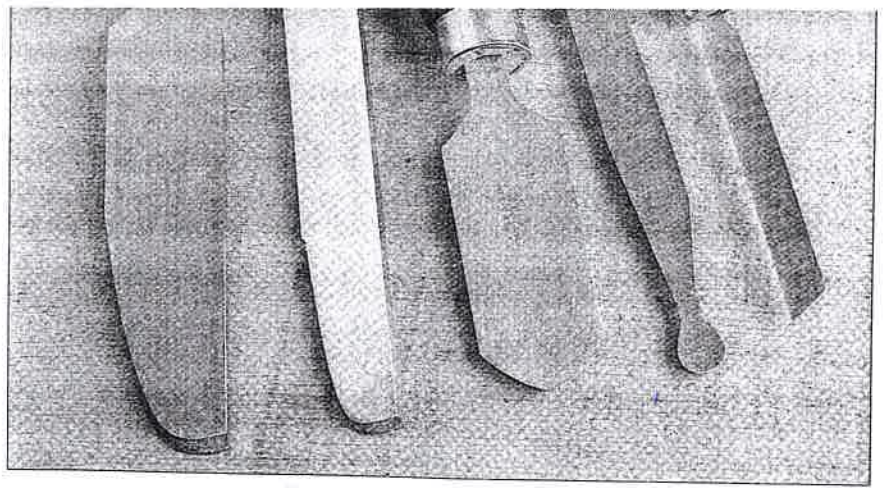
This nearly eliminates forward thrust with the tool, very important on the thin top of a box lid held by a friction-fit spigot.

The next five tools came on to the market in 1995, after Dale Nish had chided me, "What other tools have you modified?"

'Key' French Curve Scrapers HS 108 38mm wide x 10mm thick ($1\frac{1}{2}$ x $\frac{1}{2}$ in), and HS109 25 x 6mm (1in x $\frac{1}{4}$ in)

Which of these two scrapers you use depends on the size of your work. They are used for removing any ripples and undulations from your bowl gouge on the the inside of bowls, dishes and platters.

The fluid, continuous form of the curved cutting edge makes the blending of curves easy. It almost eliminates outward side pressure



The Ray Key range was extended in 1995 with the addition of these tools: 38mm ($1\frac{1}{2}$ in) and 25mm (1in) french curve scrapers, 38mm ($1\frac{1}{2}$ in) shear scraper, 19mm ($\frac{3}{4}$ in) round cutaway scraper, and 2.4mm ($\frac{1}{8}$ in) parting tool.

inside a bowl, which can cause flexing and shatter thin bowls. You set the rest above centre height and tilt the scraper down 10 to 15° from vertical, to cut at centre height. Cut from the top of the bowl towards the base.

The scraper's slightly flattened end makes for an easy blend of curve to flat surface found in platters.

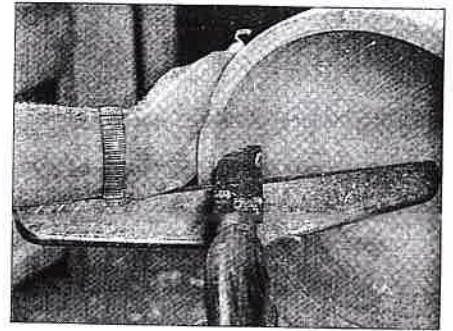
'Key' HS 110 19mm ($\frac{3}{4}$ in) Round Cutaway Scraper

This tool is used inside work with a small opening and allows for easy manipulation under a shoulder. It minimises the chance of fouling the tool on the far side of the opening.

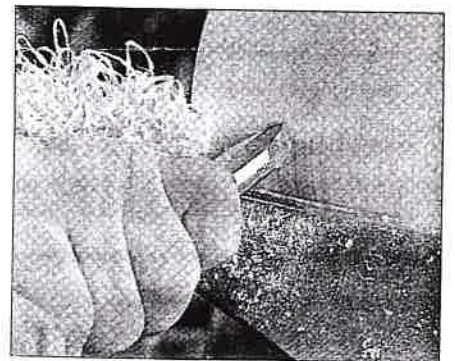
I used to make these tools out of round, side-cutting scrapers past use. I would grind a big chunk out of the right-hand side of the blade. Now they are made ground and ready for use.

'Key' HS 107 Parting Tool 2.4mm wide x 13mm thick ($\frac{1}{8}$ x $\frac{1}{2}$ in)

I've always liked narrow parting tools, but most bind or are not strong enough. Mine does not suffer from these faults. It's a bit like a fluted parting tool, without the flute, so there is nothing to score your toolrest. The tool is 2.4mm ($\frac{1}{8}$ in) at its widest, tapering to 1.6mm ($\frac{1}{16}$ in), which eliminates binding as you cut in deep. A pivoting action is used with the widest edge down on the rest.



Removing gouge ripples from inside a salad bowl with a 38mm ($1\frac{1}{2}$ in) french curve scraper, sweeping from rim to base.



Truing the base of a platter with a 38mm ($1\frac{1}{2}$ in) shear scraper. The tool is tilted on a corner to give the shear angle.

'Key' HS 111 Shear Scraper 38mm wide x 8mm thick ($1\frac{1}{2}$ x $\frac{1}{4}$ in)

This tool should really be renamed the 'Nishkey', since Dale Nish helped me design it. Most will enjoy working with this tool, as its heavy, stubby section damps down vibration.

The curved diamond end makes for left and right use, the soft, rounded under edges for smooth operation as its tilted through 35-45° from vertical to shear cut. It is excellent on bowls and flat work. 📐