Tool handles

Walter Hall makes new handles for old tools

PHOTOGRAPHS BY WALTER HALL

One of my favourite hobbies when I am not woodturning is restoring old tools. Few things give greater satisfaction than taking a rusty, battered and abused tool and restoring to as good as or better than new. Although I do tend to acquire tools to restore I am not a tool collector and believe that, with a few exceptions, tools should be in the hands of users and not sitting in display cabinets. That said, care must be taken not to devalue historically important tools by over-zealous restoration. Often all that is required is cleaning and sharpening and, wherever possible, I prefer to retain original handles and finishes to maintain the character and the indications of the tool's history.

Sometimes tools have been so badly abused that parts must be replaced and that was the case with the tools re-handled for this article. Typical of what you might find at auction or in a car boot sale, these three good-quality tools from respected makers were in a sorry state of repair. Rusty and blunt or badly ground blades and bruised and split handles had left them almost unusable, but a little work and some new handles and they will see many additional years of useful life.

The metalwork repairs are outside the scope of this article but, in addition to making new handles, the tools were de-rusted, re-ground and sharpened where necessary and the metal parts of the Marples screwdriver which had, unusually, been chemically blackened were treated to restore the original appearance.

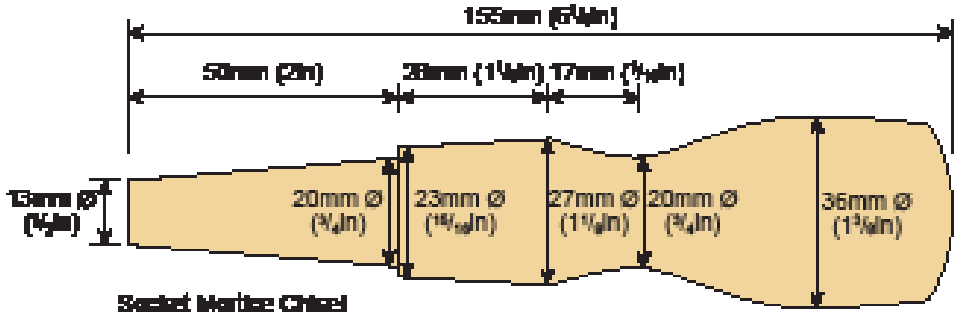
TOOLS AND MATERIALS

- Personal and respiratory protective equipment
- 20mm spindle roughing gouge
- Beading and parting tool
- 10mm spindle gouge
- 20mm skew chisel
- Jacobs or keyless tailstock chuck
- Drill bits
- Chuck
- Drive spur
- Revolving tailstock centre
- Abrasives down to 320 grit

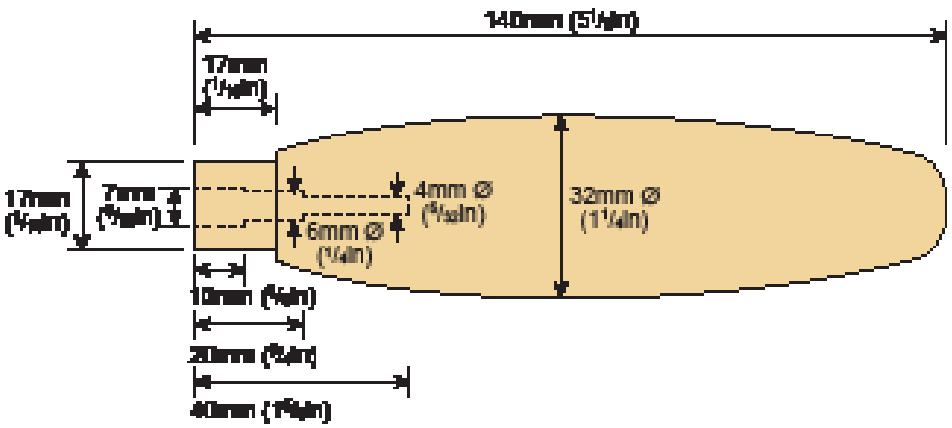
MATERIALS

The timbers I used are listed below. The sizes vary to suit the handle being replaced.

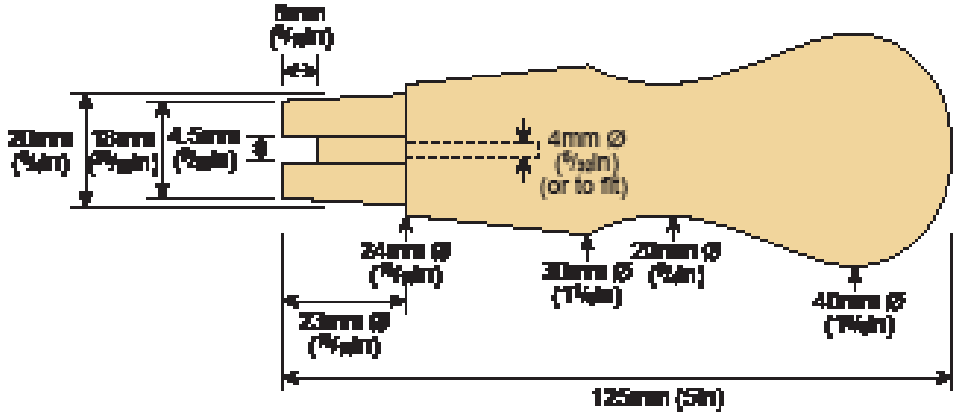
- Hornbeam (*Carpinus betulus*) spindle blank
- Bubinga (*Guibourtia demeusei*) spindle blank
- Boxwood (*Buxus sempervirens*) spindle blank



Socket Mortise Chisel



Finner Chisel



Screwdriver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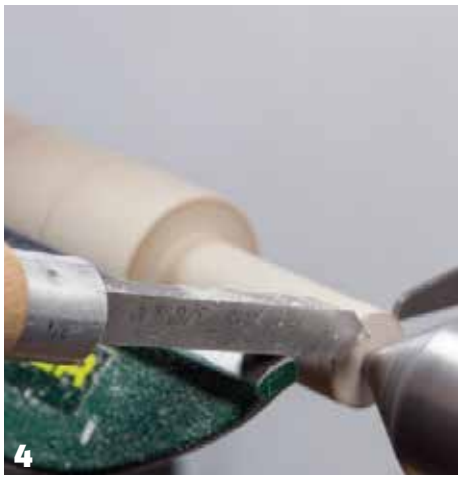
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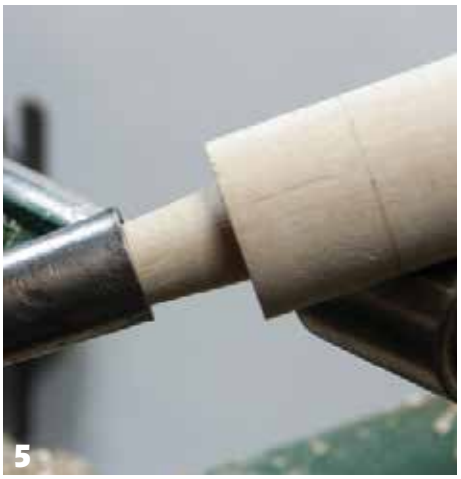
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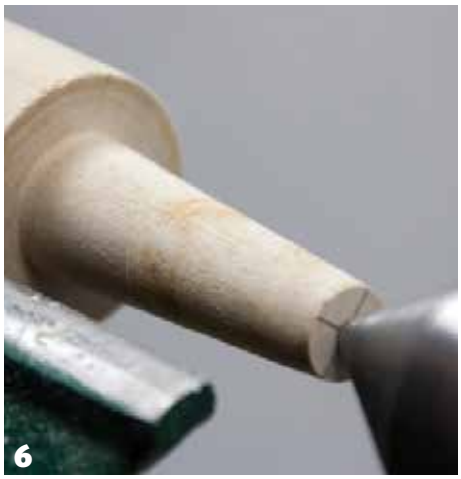
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Socket chisel handle

1 The first job is to remove the old handles. In most cases this can be achieved by holding the blade or shaft firmly in a vice fitted with soft jaws and driving the handle off using a wooden drift and a dead-blow mallet. Occasionally this may not be possible, in which case it may be necessary to split off the old handle with a chisel.

2 The handle fitted to the socketed mortise chisel did not appear to be original and was badly fitted to the socket. Without an original to work from, I chose to make a handle similar in design to modern Stanley and Lie-Nielsen tools. Begin by turning a hornbeam blank to a cylinder and marking out the key positions for the shape of the handle.

3 Mark the minimum diameter of the socket section on the end of the blank and turn roughly down to size and shape using a spindle rouging gouge or whatever suitable tool you are most comfortable with. Turn initially to the largest diameter and take care not to turn too small.

4 Using a beading and parting tool, refine the shape of the section. Callipers set to the maximum and minimum diameters will help to get the taper correct and facilitate the fitting which follows. A smooth, even taper is what is required at this stage.

5 Remove the work from the lathe and test fit the taper in the socket. Do not expect it to fit first time. The inside of the socket will not be a regular shape and careful adjustment will be needed to get a good fit. Twist the handle in the socket to mark the high points.

6 Return the work to the lathe and look carefully at the marks from test fitting. Some of the excess wood can be removed by turning but the socket may be uneven, and it may be necessary to shape some parts of the taper by hand using a sharp knife or chisel. Repeat steps 5 and 6 until a good fit is achieved. The socket should stop just short of the shoulder.

7 Form the shape of the handle body using a spindle gouge or skew chisel. The shape should be comfortable to grip with a nicely rounded end to resist splitting when struck with a mallet.

8 Once you are happy with the shape and before parting off, sand through the grits to about 320 and then burnish the handle with shavings. The handle can be left unfinished or protected with the finish of your choice. I used melamine lacquer which protects against dirt but gives a natural feel to the handle.

Firmer chisel handle

9 The Robert Sorby firmer chisel handle was original so I was able to use it to measure the dimensions for the new handle. Begin by drilling a hole for the tang with the blank firmly held in a scroll chuck. Measure from the original and, if necessary, drill in various sized steps so that the tang will fit well without splitting the handle.

10 Mount the blank between centres and turn to a cylinder, matching the maximum diameter of the original handle. I used bubinga, which makes an attractive and robust handle, but the traditional woods for chisel handles are beech, ash and box, so there is no need to use exotic timbers.

11 Turn a short section at the drilled end of the blank down to size to fit the ferrule. Use callipers to obtain a good fit and remove the work from the lathe to test. The ferrule should be a push fit without compressing the wood.

12 I prefer to use original ferrules where possible, but this one was too badly damaged so an Ashley Iles replacement was used. Use the ferrule to mark the length needed to fit and extend the reduced diameter section to fit.

13 Using a skew chisel or spindle roughing gouge, form the shape of the handle body. I like to try to match the original shape as far as possible but there are many classic chisel handle designs that you could choose from.

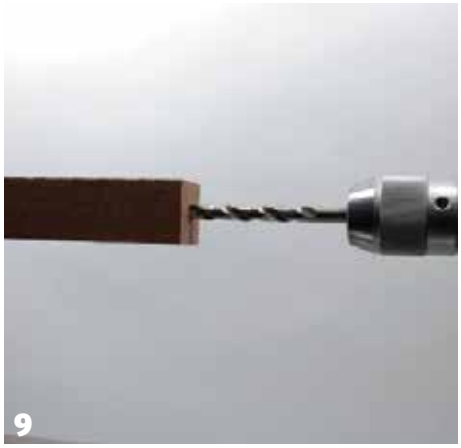
14 Sand the handle through the grits to 320 or 400. I use Abranet as it is flexible and long lasting, but any good-quality abrasive will be suitable. Burnishing with shavings as for the socketed mortise chisel handle will give a finish that feels good when handled.

15 Before final parting off a finish of your choice can be applied. Part off by turning down to a small nub and cutting through with a fine saw. This avoids any tear-out on the end of the handle. After parting off, sand the end of the handle by hand and apply finish.

Screwdriver handle

16 The screwdriver handle is a little more difficult as a slot is required for the tang to prevent it from turning and the bore for the tang must be carefully stepped to fit. Begin by mounting the boxwood blank in a scroll chuck and centre it using the tailstock.

Some tool handles have a hexagonal or octagonal form to prevent them rolling off the bench. This can be replicated by planing the blank to shape before turning the round sections to shape. Similarly, some tools have a slightly oval form for the same reason. This can be achieved with rasps or coarse abrasives after the initial turning is completed.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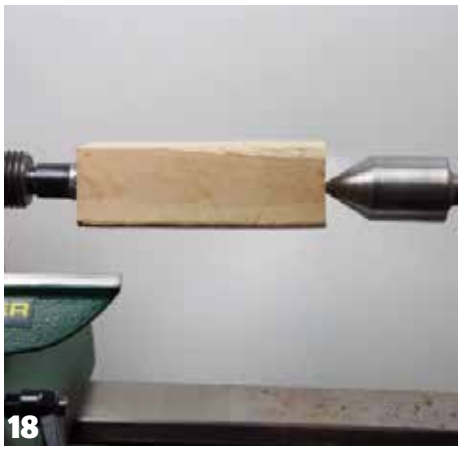
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17 Carefully measure the tang of the tool and drill a series of stepped holes to fit. Test the tang in the hole at each stage until a good fit is achieved.

18 Now mount the drilled blank between centres and turn to a cylinder to match the maximum diameter of the original handle. If you don't have an original handle to work from, then turn to a size that will give a comfortable grip suitable for the size of the tool.

19 Mark out the high and low points of the handle shape from the original or from a similar sized tool if you don't have the original to work from. As this would be part of a set of Marples screwdrivers I was careful to match the original as closely as possible.


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20 Measure the internal diameter at the top of the ferrule and, measuring with callipers, turn the drilled end of the blank to the maximum size of the ferrule using a beading and parting tool.

21 Carefully refine the shape, frequently checking the fit against the component until a good fit is achieved. Take time to get this right – the fit of the ferrule is essential to the effectiveness and longevity of the tool.

22 Cut a slot in the end of the blank to fit the end of the blade. You could do this with a hand saw, holding the blank in a bench vice or, as I have done, make up a jig or sled to prevent the work from turning and cut the slot on the bandsaw.


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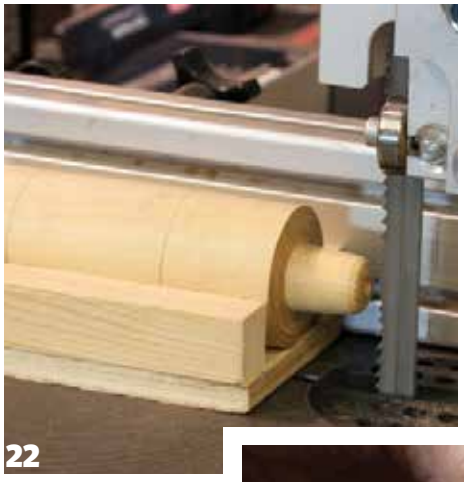
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23 Return the work to the lathe. Note the use of a revolving cup centre in the tailstock to prevent damaging the finished slot. Using a spindle gouge and skew chisel, form the shape of the handle body using the marked lines as an initial guide.

24 The old handle can be used as a visual template to check the shape. Here you can see that I have achieved a shape close to the original and replicated the grooves that were a feature of the original design. Sand, burnish and finish as for the other handles. ●

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