Issue 29 August 2017

Woodworking CRAFTS

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TECHNIQUES

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SHAKER DROP-LEAF TABLE • SHEPHERD'S HUT • GREEN WOOD SHRINKPOTS

Panel Saws

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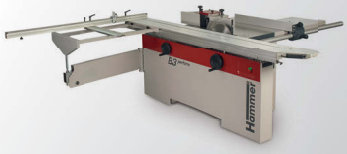
Planer-thicknessers/Planers/Thickn

A3 41

A3 31

A3 41 A

Saw Spindle Moulder



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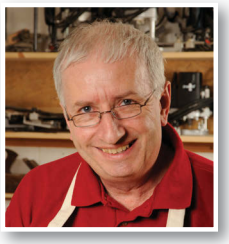

Welcome

to the August issue of *Woodworking Crafts*

Hello everyone and welcome to the August issue of *Woodworking Crafts*.

My, how the year has shot by yet again. Here we are already in August and the traditional summer holiday season. It is also the time when we editors need to take a break like everyone else and recharge our batteries. Before we do that we have to work harder to get everything ready so we can safely vacate the editor's chair for once in a long while. It is a chance to experience and do other things which hopefully will have a spin-off effect, because almost anything and everything can start a new train of thought and provide inspiration which, in turn, helps to refresh the magazine and keep it interesting.

However, as you can imagine, for me a holiday or even days out aren't a complete break, as I'm always seeing things with a woodworkers eye, I don't go looking – I just find.

Anyway, this month we have the usual variety of articles, and there's a bit of a green working/outdoors theme going on which, indeed, is close to my heart. I've gone from my previous professional career designing and making fitted furniture to making 'shrinkpots' and splitting wood in the heat of the sun. I yearn for the simpler life as I think, in fact, most of us do. When I'm sitting on a stool whacking hell out of partly split logs, making them even smaller using a froe and a homemade club, I'm not worrying about the state of the world or my bank account.

'Frankly they go hang, 'cause nuthin's gonna keep me from splittin' that darn pesky wood, if it's the last thing I evuh doo.'

Well, you kind of get the picture, I'm out the back of my log cabin deep in the forest, with an endless view of pine trees and mountain tops, an eagle soaring overhead set against a clear blue sky and a well strummed banjo resting by my side.

'Anthony, wake up, wake up! You said you would mow the lawn, water the garden and vacuum the car out.' Okay, okay, back to reality then…

Anthony Bailey, Editor
Email: anthonyb@thegmcgroup.com

In the August issue... 26

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Japanese-style coffee table

INSPIRATION

Tables come in all shapes and sizes. They don't have to conform to some of the ergonomic constraints of chairs, for example. The designs can allow freedom of expression

Above: Marilyn side table by Katie Walker

Left: Glass-topped table

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

Above: Occasional table in birch ply

Below left: Three-legged circular table in Maple

Below right: Console table by Alexander Brady

Making a Shaker drop-leaf table

The Shakers loved their drop-leaf tables. They were often stained light red or reddish dark brown and had an oiled or varnished finish. Here **Anthony Bailey** revisits Barry Jackson's take on a classic example

A beautifully understated piece of design in American bird's-eye maple

A rare example of a Shaker table in the American Museum, Bath, has delicately taper-turned legs, slightly splayed to give more stability. Woodworker Barry Jackson created his own version, and I have reproduced his take on the piece in bird's-eye maple, sealing with oil before wax polishing. Using such spectacular wood was an act of self-indulgence – harmony and economy are the main ingredients of Shaker furniture.

Preparation

Whether using cherry or maple, stable, well-seasoned timber must be selected, especially for the top. Boards of sufficient width ought to be available for the leaves, but the centre board could prove to be more difficult. If so, two narrower boards will have to be butt jointed and dowelled, allowing an additional 2mm on the thickness for finish planing to 19mm after gluing (see **photo 1**).

Measurements shown in the cutting list are finished sizes. Adding an extra 10mm on both ends of each leg will ease routing the mortises and allow for waste when cutting the angled tops and feet to finished length.

On a piece of strong paper or a suitable board, make a full-size drawing of one frame end assembly, including the full length of legs (see **photo 1**). This will prove invaluable when setting the correct angle of 2.5° on the sliding bevel and also for checking finished accuracy. Again with accuracy in mind, brad-pointed bits are recommended for drilling the dowel and pivot holes (see **photo 2**).

Legs

All mortise and tenon dimensions are shown. Check that the wood for each leg is perfectly square in section – I glued together two blanks to make my legs – then mark out the length, allowing 10mm waste on each end (see **photo 3**).

Mark the mortises on one leg then transfer the measurement with a try square to the others (see **photo 4**).

Hold each leg firmly in a vice and rout the blind mortises as shown or use a chisel mortiser if you own one (see **photo 5**).

When the full depth of 20mm has been reached, clean out the ends with a chisel, remembering to angle the mortises which accommodate the frame end tenons.

Mark the centre on both ends of each leg ready for turning between centres. The long, straight taper is turned first, followed by cutting the rounded chamfer. This must be done very carefully, taking care not to splinter the corners of the squared section (see **photos 6-7**).

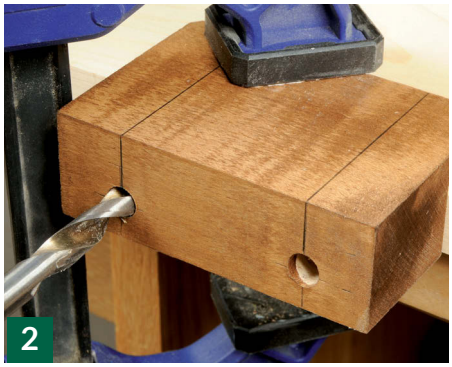
Finally, sand down through the grades to a fine, smooth finish before removing from the lathe.

Frame sides and ends

You can use a router or a bandsaw to cut the tenons. Particular attention ➤

1

Drawing out the frame end assembly is important for accuracy



2

Using a dowel jig to joint the two centre top boards together

3

Two sets of leg blanks glued up from 28mm sawn stock, two per blank

4

Transferring the mortise markings across two leg blanks

5

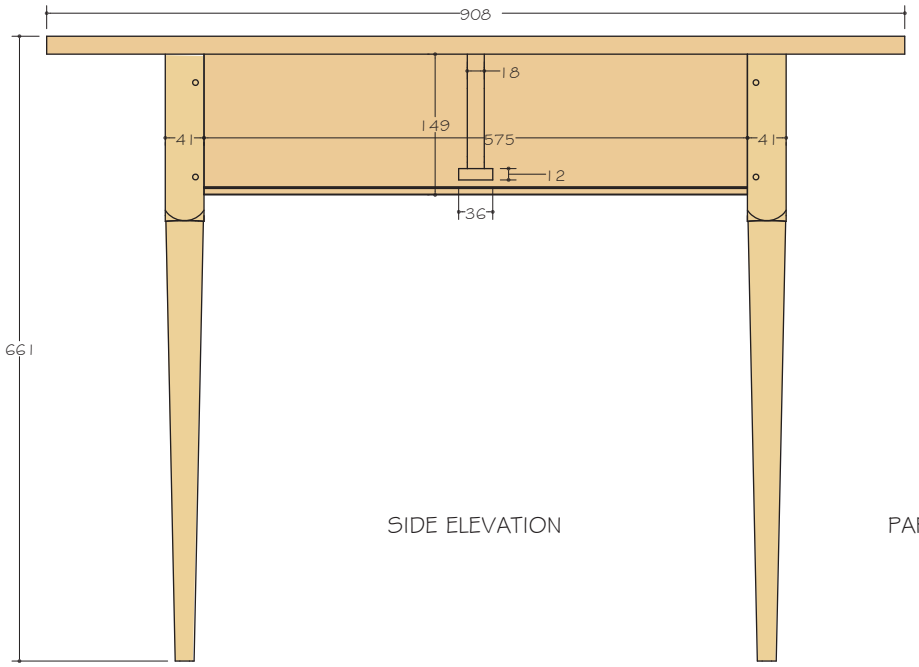
Using a chisel mortiser to cut the long thin frame mortises – note the width is greater than the chisel used

6

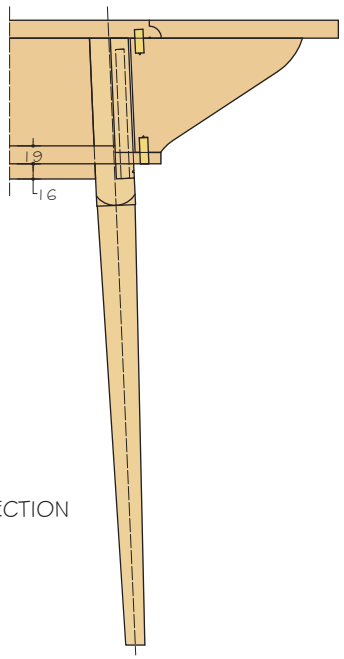
Shaping the leg down to start the taper using a spindle gouge

7

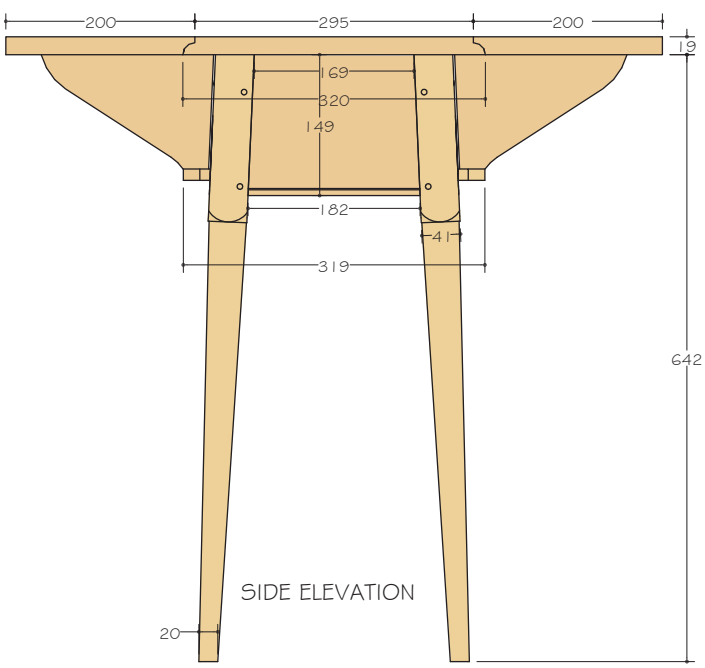
Planing the taper with a skew chisel – extra care must be taken near the leg's shoulder



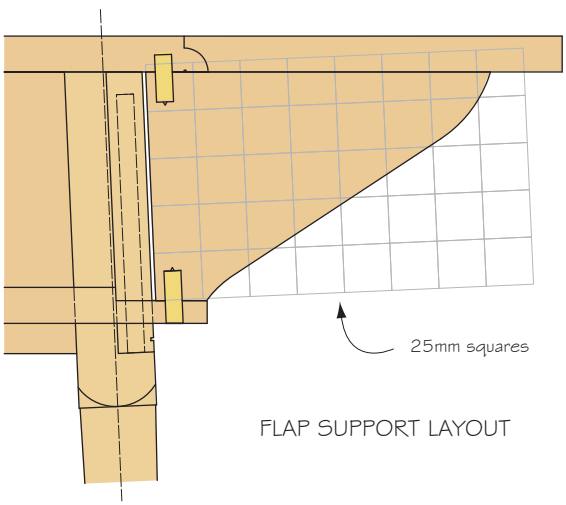
SIDE ELEVATION



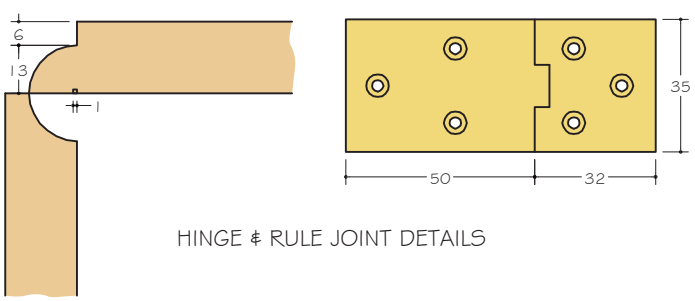
PART SECTION



SIDE ELEVATION



FLAP SUPPORT LAYOUT



HINGE & RULE JOINT DETAILS

Cutting List - Carcass & Plinth

TOP	1	@	477 x 430 x 20
UPSTAND	1	@	430 x 96 x 20
SIDES	2	@	615 x 450 x 20
BOTTOM	1	@	440 x 408 x 20
TOP FRAME STILES	2	@	410 x 50 x 20
TOP FRAME RAILS	2	@	420 x 50 x 20
FRONT TRIM	2	@	615 x 42 x 20
DRAWER SPACERS	4	@	513 x 45 x 22
PLINTH			
SIDES	2	@	457 x 102 x 20
CORNERS	2	@	102 x 33 x 33
FRONT SECTIONS	2	@	102 x 60 x 20
CORNERS	2	@	102 x 30 x 30
FRONT	1	@	314 x 102 x 20
BACK	1	@	533 x 410 x 6

Drawer details - see plans

8 Bandsawing a tenon – note the marking at the top where the haunch waste will be cut away

9 An end frame glued and clamped

10 Small dowels help to hold the ends together and add a decorative touch

must be paid to ensure that these faces are cut accurately to length and shape (see **photo 8**).

Clamp each frame side and end firmly to the bench during this operation, checking with the leg mortises for fit before determining the final depth of cut.

When this is done, remove the haunch waste from the top end of each tenon and dry assemble the two frame ends. These can now be checked against the full-size drawing before marking and bandsawing the leg tops level with the top side of the frame ends. Mark out and cut the legs to length, taking care to maintain the correct angle at the feet.

Dry assemble the frame, checking all is square in plan view. Before taking it apart, mark the ends of the frame sides to correspond with the tops of the leg tops. Remove the sides and plane down to the lines. Mark out and cut the 12 x 36mm wide through-mortises which accommodate the rail ends. Set the sliding bevel to the correct angle and use it as a guide when cleaning out with the chisel. A 1.5mm deep groove, cut into the frame sides and ends, provides a subtle decorative touch.

At this stage, glue and clamp the two end frame assemblies only (see **photo 9**).

Allow time to set, remove the clamps and drill the dowel holes of the glued joints 6mm diameter x 22mm deep. Glue and fit the dowels, leaving the heads just proud for cleaning up later (see **photo 10**).

Rail

Mark out the joints, checking with the full-size drawing for accuracy before cutting. Try it for fit and then, as a further check, dry assemble the rail and complete frame to make sure the distance between the rail's shoulder joints is correct. Mark the pivot hole centres and rounded ends, then drill the holes at the correct angle and shape the ends.

Finally, the upper side is cut to match the bottom face of the leaf support. The complete rail and frame assembly can now be glued and clamped (see **photo 11**).

When the glue has set, dowel the remaining joints as with the frame ends and leave it to set. Using a smoothing plane, clean up flush all the projecting dowel heads and joints, then sand clean, slightly dulling the sharp edges of the posts, feet and undersides of the frame.

Top

Those who have not made a drop-leaf table before must not be discouraged by the apparent sophistication of the rule joints. With the correct matching bits – in this case a Bosch 12.7mm cove

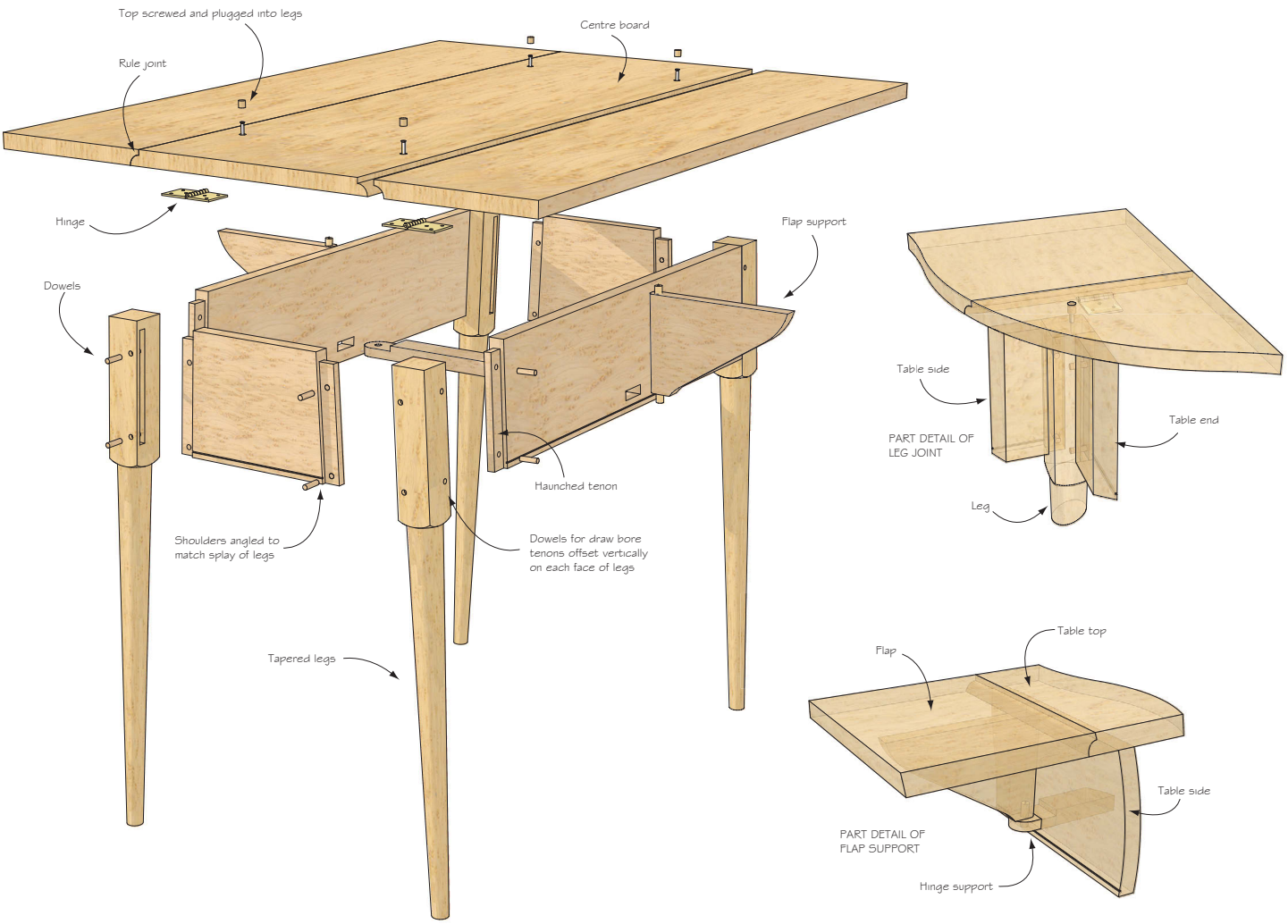
11 The rail fitted in place showing how the leaf supports locate in it

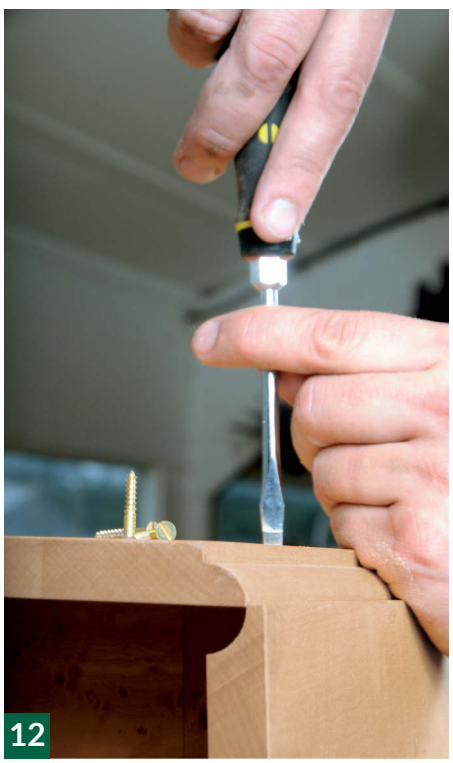
bit and rounding over bit – these can be cut very easily by router.

Arrange the prepared boards to give the most pleasing grain effect, then mark an identification line diagonally across the top faces to keep the correct order and alignment.

To make absolutely sure the edges to be jointed match perfectly, I have skimmed them up using a router and straight edge guide. The guide can be cut from 6mm ply, 150mm wide by 930mm long, then hand-planed dead straight the full length of one edge.

Clamp the guide and board to a bench, with the guide overhanging at each end of the board. This will enable the router base to maintain a straight path at the start and end of each cut. Repeat this when cutting the joints, but with the straight edge guide positioned to just allow the cutter guide bearing ➤





12

Screwing the top on using slot-head countersunk screws

to make contact with the board edge.

Lay the jointed boards upside down on a flat bench and mark out the hinge locations so that they just clear the leg posts. Fit the hinges with the pivot pin centre positioned as shown.

Note that when the leaf is down, its leading edge is just above that of the top. Straighten off the ends with a smoothing plane then remove the leaves before marking out the centres of the six screws which secure the top to the frame.

I suspect the Shakers used dowels only, but I shall continue with the following alternative, leaving the option open to you.

Drill the 8mm diameter plug holes 8mm deep, then straight through with a 4.5mm diameter bit to give ample clearance for a 32mm long No.8 countersunk-head steel screw. Lay the top on the frame and hold securely in the correct position using two boards, one under the frame and one on the top, both overhanging to enable cramping. Bradawl through the pre-drilled holes and drive the screws in lightly (see **photo 12**).

Remove clamps and boards then place upside down and leave on the bench. From 9mm diameter dowel, cut the 9mm long plugs and keep for later.

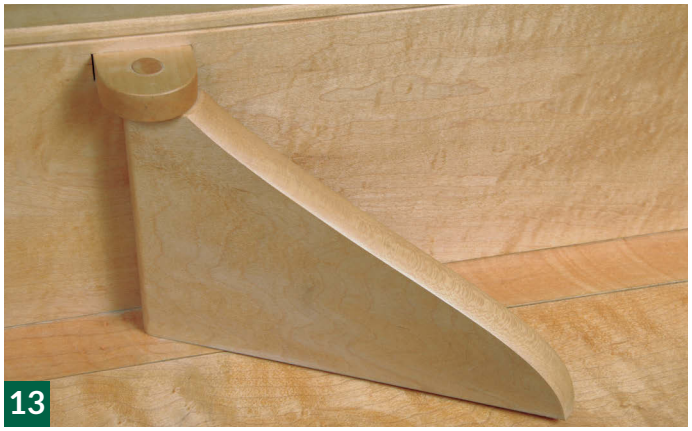
Leaf supports

Mark out and cut the supports, with the direction of grain running lengthwise.

Plane the tops and bottoms carefully to the lines before marking the dowel hole centres. These 18mm deep holes must be drilled very accurately, ideally using a pillar drill with the support held securely in a vice.

Finish shaping then check for fit between the rail and the top as shown. If all is well, cut the upper and bottom pivot dowels, 26mm and 28mm long respectively. Sand a slight chamfer on the ends then glue them in (see **photo 13**).

Re-fit the leaves, just lightly tightening one screw in each hinge flap. Mark out the leaf-support



13

The leaf support is carefully shaped to hold the leaf level with the tabletop when extended

14

The cutout in the underside of the leaf to accommodate the support lower knuckle when the leaf is lowered

15

The outer leaves in the raised position expand the table top greatly

This end view shows just how neat and compact this delightful table can be when the flaps are down

16

dowel centres and the position of the 5mm-deep recesses which accommodate the rail's projecting ends (see **photo 14**).

Remove the leaves and top,chisel out the round-bottomed recesses and drill the two 10mm-deep dowel holes at the correct angle.

Assembly

Apply a thin coat of wax polish to the leaf support pivot dowels and their respective holes. Fit the supports into the rail ends and lower the top board into position. Screw down firmly then glue and tap home the plugs, leaving the heads slightly proud.

Before reassembling the leaves, the finish will have to be applied to the rule joints because some parts will be inaccessible afterwards.

When the leaves have been fitted, allow sufficient time for the glued plugs to set, then sand down the complete top flat and smooth. Slightly rub down the outer edges and lower the leaves and remove all dust, especially from between the rule joints.

Finishing

As mentioned earlier, the Shakers were partial to staining their pieces before finishing with varnish or thinned, boiled linseed oil. Preferring not to use stain, I have used a proprietary brand of already thinned wood-reviving oil.

This was rubbed in well and left to dry before wax polishing (see **photos 15-16**). ■

A woodworking glossary

The letter B

BARK The protective outer covering of a tree trunk and branches, also shrubs and other woody plants. It is the tissues overlaying the vascular cambium and is not a technical term. The outermost layer is referred to as the rhytidome and covers the inner periderm layers. Bark is a useful product and, depending on the tree source, can produce cloth, canoes, rope, spices and flavourings, tannin, resin, latex, medicines and poisons, hallucinogenic chemicals, cork and wall coverings, including exterior sidings and garden mulch.

Horse chestnut bark

BEAD Generally taken to mean a half-round moulding which is used to decorate furniture or turnings, although the term 'bead edge' is sometimes used colloquially to refer to a rounded over edge. Multiple beads formed together are called reeding. Bead variants are the staff bead, which has a small step on one edge, and the parting bead, which is a strip of wood moulded on one edge used to separate vertical sashes in a window.

BENCH DOGS Devices that fit into holes in the bench top to hold workpieces firmly while planing, sanding etc. They are removable and are made in a number of different designs. Sometimes they can work in concert with a retractable peg fitted in some larger vices, making clamping quick and easy.

BEVEL Any angle other than 90° (perpendicular) when applied to workpieces or finished work. Various tools can be used to mark and cut bevels. A sliding bevel or combination square are examples of two marking aids. A compound mitre saw, table saw, planer thicknesser, handsaw etc. can all cut bevels. Accuracy is often the issue as bevelled edges often have to meet, a hexagonal planter, for example.

BIRD'S-EYE MAPLE Maple comes in several different decorative grain variants, one of the most sought-after being bird's-eye figured maple, either as veneer or in solid wood form.

BISCUIT

a) A baked flour-based product which is hard, flat and unleavened. Generally eaten during one of many daily workshop tea breaks. Popular types include Rich Tea, which can be dunked in tea, Chocolate Digestive and Hob Nobs.

b) A thin, hard jointing consumable used in conjunction with a biscuit jointer for easy carcass assemble. First devised in Switzerland in the mid-1950s, it is now a popular, cheap and accurate construction device. Although there are many variants the basic type comes in three sizes to suit carcass thicknesses 0, 10, 20, all in compressed 4mm beech with a grid pattern on the faces and cut on the diagonal grain for strength. They are used with water-based adhesives, swelling tight in the joints for security.

No.20 biscuits and slot

Bench dogs

Corner bridle joint

Brace and bit

BLADE The main body of any edge tool, thus a circular saw has a blade with teeth brazed on to it, a handsaw has a blade with teeth cut into it and a chisel has a blade with a sharp bevelled edge ground at the tip.

BLOCK PLANE A small plane held with one hand, it has a flat sole and vertical sides, rather like larger hand planes. It differs in that it has a plane iron with the bevel facing upwards and no cap iron, just the equivalent of a lever cap to hold it in place. The blade is set at a low angle making it suitable for trimming end grain, although it is good for other tasks, such as chamfering edges. There are simple and more complex models available.

BOARD A rather broad term for any wood that is flat and wide. It covers both sawn solid timber that may be planed as well. It also covers, plywood, chipboard and MDF (Medium Density Fibreboard). The fact that it is used as such a broad definition can lead to confusion, so cutting lists and instructions need to be quite specific to avoid mistakes in ordering materials, therefore the term 'sheet material' for manufactured board is to be preferred.

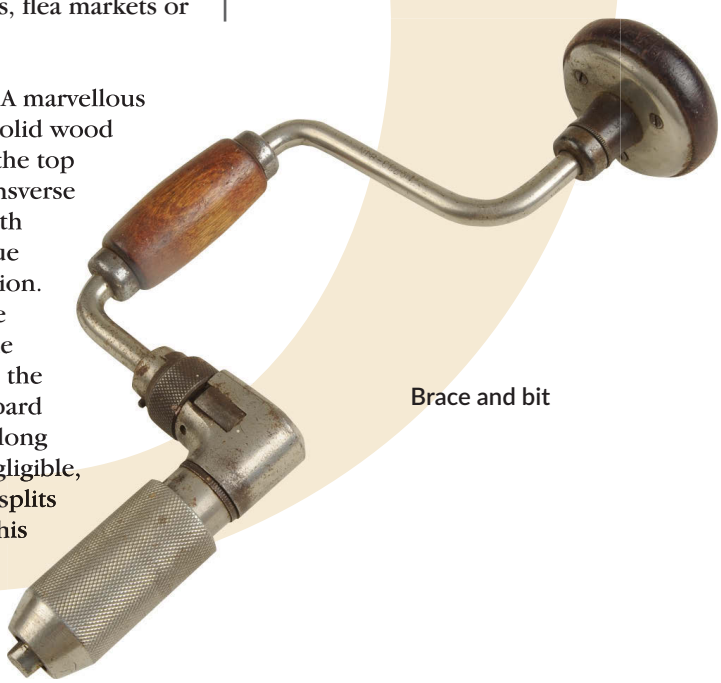
BOOKMATCH This refers to successive veneer slices where every other one has been flipped to give a mirrored effect – sometimes called 'mirror match'. It gives a striking visual effect to be used on better quality work. It is only possible where veneer has been sliced from a log repeatedly like a ham slicer. Standard construction veneer is peeled from the log and thus will not give the same effect.

BRACE AND BIT An accepted term for an old-fashioned drilling tool which has a cranked body, allowing effort to be applied to the turning motion. A bit which can be an auger bit or spoon bit etc. is inserted in the chuck and used to drill into the wood. Generally not used today although examples can still be found at boot sales, flea markets or in grandpa's shed…

BREADBOARD END A marvellous way to keep a wide, solid wood top flat. The ends of the top are jointed to the transverse end pieces usually with a fixed or loose tongue and groove construction. A common fault is the main body of the table top will shrink across the grain but the breadboard ends won't do so, as long grain shrinkage is negligible, but this can result in splits occurring. To avoid this problem glue should not be used, instead dowel pegs driven through with elongated slots in the tongue allow natural movement but retain joint strength.

BRIDLE JOINT Effectively a mortise and tenon where the tenon is the full width of the joint. It can be either a corner bridle or a through bridle in the middle of a lengthwise component. It can also be angled, such as framing under a staircase. Care in marking out the components will ensure a good, accurate fit when the joint is cut. The width of the tenon part is generally one-third or slightly wider to help maintain material strength.

BUTT JOINT A rather maligned, simple joint where flat wood faces meet without any cut-in joint. It needs to be supplemented with glue, screws, nails or pocket hole screws. To be done properly the meeting faces, which are usually long grain to end grain, need to be very precisely cut so they meet as tightly as possible for an accurate result and to help adhesion if glue is used, since end grain does not bond particularly well. ■



Brace and bit

Side table *from pallet wood*

Paul Purnell turns a humble pallet into a worthwhile stylish table

This is not a project of fine joinery. If you like to see delightful dovetails and precision joints, I would suggest you skip the next few pages, as I do not want to be responsible for inducing anaphylactic shock.

Assembling the frame

1 Assemble timber for the basic frame: two front legs, 508mm long by 90mm wide and 30mm thick; two back legs, 660 x 90 x 40mm (If you do not have timber this thick, glue two pieces of board together); front top rail, 965 x 90 x 15mm; rear top rail, 965 x 75 x 15mm; two leg braces, 420 x 90 x 15mm; two top-surface braces 315 x 90 x 15mm.

2 If you value your blades, remove all nails before cutting. A magnet tied to the end of a thin piece of cord is effective.

3 Cut out a 50 x 38mm section from one end of the two side rails as shown in the photograph.

4 Remove a corresponding section from each end of the front rail to accommodate the two sides. Check joints are 90°.

Things you will need:

- Table saw or jigsaw
- Reciprocal saw or other pallet disassembling tools
- Belt sander
- Assorted screws
- Wood glue
- Varnish
- Pallet wood, ideally with different shades

History of the wooden pallet

The forerunner of the ubiquitous wooden pallet started life as a skid in the late 19th century. It evolved with the introduction of the forklift truck in the early 20th century. Design and use developed significantly during the 1940s. In World War II, the use of the pallet and forklift was a key component of military logistics.

Some other facts

- The UK makes approximately 60 million new pallets every year.
- The lifespan of a timber pallet is between five and seven years.
- The cheapest pallets are made of softwood and considered a disposable item to be scrapped, recycled or reused after its initial journey. These pallets are liftable from two sides only and usually made from pine.
- Hardwood pallets are liftable from all four sides.
- The IPPC HT stamp on a pallet shows the lumber has been heat-treated to kill any insects living in the wood.
- Pallets from Europe should be marked with EUR or EPAL.
- Pooled pallets are rented from one company that takes care of delivering and retrieving them. Red and brown pallets are manufactured in Europe or the US and blue pallets in Australia.

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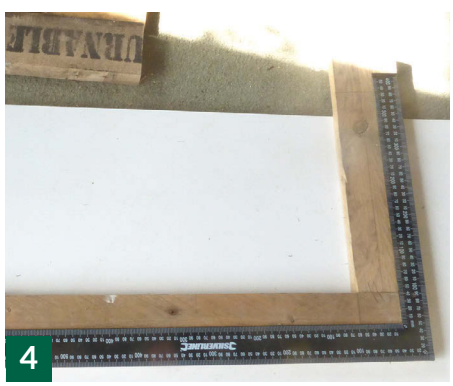
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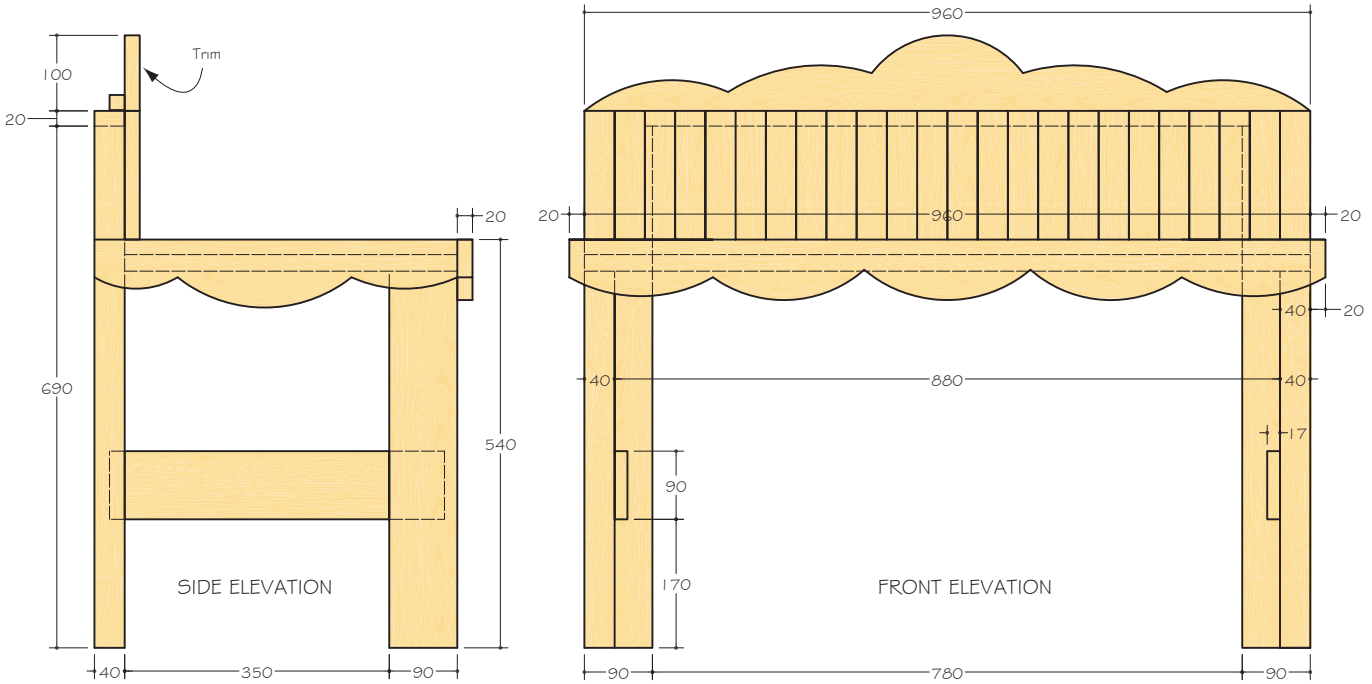
5

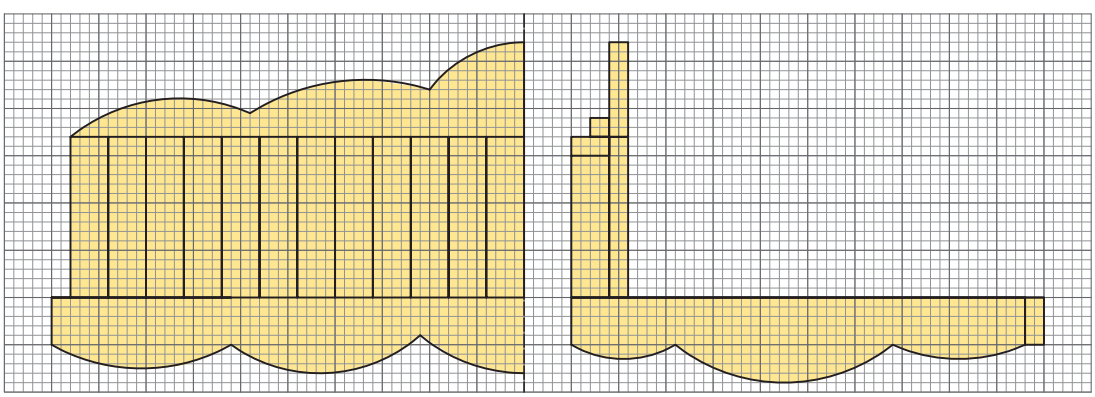

6

5 Mark a line across both back legs at the point where the front legs reach. This will be around 510mm. Above this line, use the table saw or a chisel to cut a 17mm wide and 17mm deep dado in the back legs. This will receive the ends of the side panels. From the inside edges of the back leg dado, remove a 17 x 17mm section that will accommodate the back rail.

6 Assemble the framework. Start by securing the front legs to the front and two side rails with glue and 60mm screws. Drill pilot holes before screwing. The front legs are fitted with their edges facing forward and the rear legs with their sides facing forward. **Note:** All joints for this project are glued in addition to being screwed. ➤



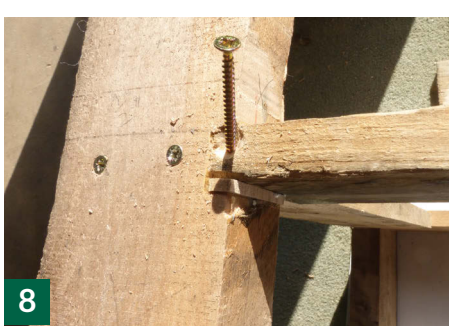
TEMPLATE



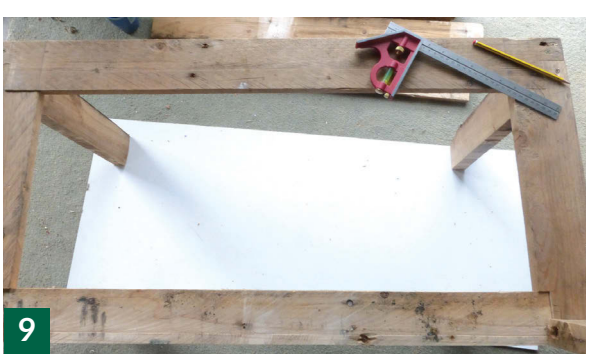
Each small square is equal to 10mm

7 To enable the back rail when fitted to fit up against the side rails, remove a section of 50 x 15mm from the back ends of the sides. Dry fit pieces to check all measurements before cutting.

8 Fit the back rail by drilling at an angle through to the back legs. Secure with 60mm screws.



9 Top frame fitted to legs.



10 Cut two 420mm side leg braces. These fit inside the back legs across to the inside side face of the front legs as shown in the photograph. Drill pilot holes through the rear of the back legs and secure brace with 60mm screws. Attach to the front legs with 50mm screws.

11 Fit a rail, 960 long x 45mm wide, across the top of the back legs.

12 Secure a 785 x 45mm batten between the inside edges of the back legs and on top of the back rail. Ensure this is in the same plane as the rail fitted at 11 above. This completes the basic framework.

Making the decorative surface

13 For the decorative surface I used 40mm strips arranged in a pattern as shown in the final photographs. You can change the width of the strips and the pattern to one of your choosing. On the table saw, I ripped several 40mm strips including some with a purple colour.

14 First, you need to fit a support across the centre of the upper framework. If you change the layout, you may need to place additional supports. Cut two pieces 320 x 90mm. Secure in place with two pieces 190 x 90mm as shown in the photograph (bottom view).

15 Start with two 455mm purple-coloured strips that fit between the back rail and the front of the table at 90 degrees. Screw all of the decorative strips from underneath; the least amount of screw heads showing, the better.

16 Next, place a plain strip at 45° on each side as shown.

17 Continue to build up the pattern on the top surface with diagonal strips.

18 Due to the unevenness and warping of pallet wood, I joined four strips at a time, which I clamped in place until the glue was dry. Only then did I secure with screws and continue laying the next four strips. ➤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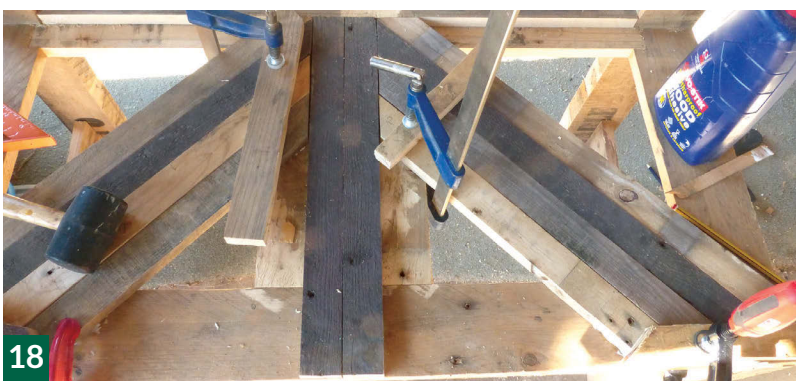
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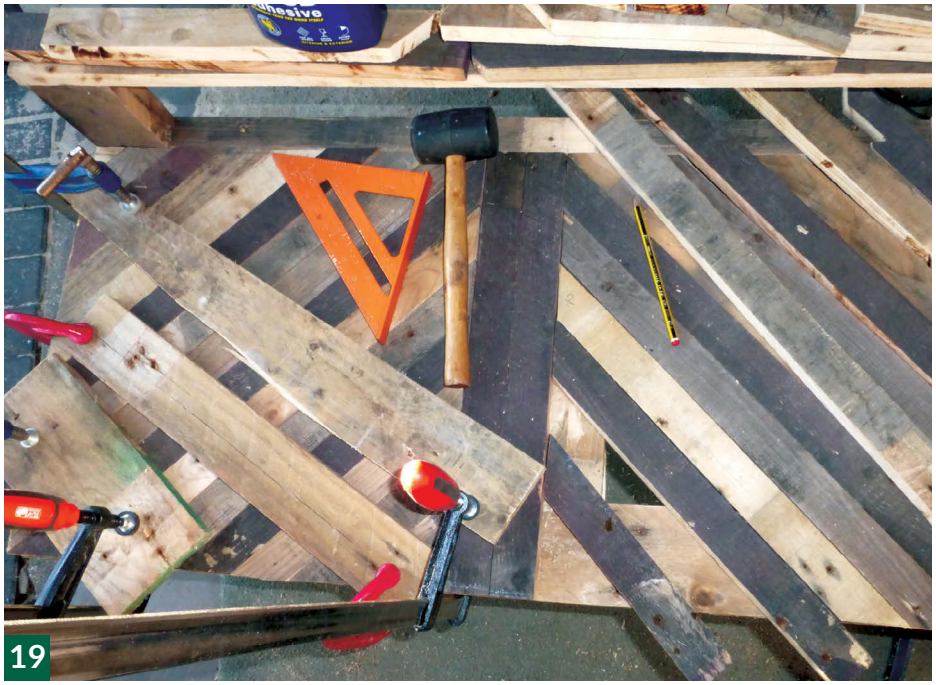
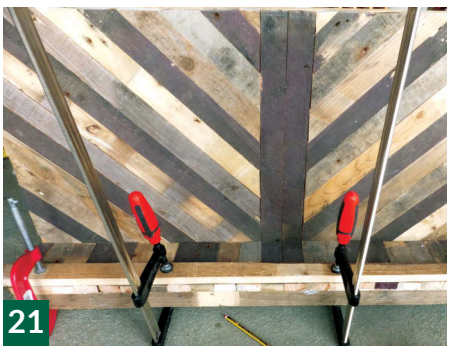
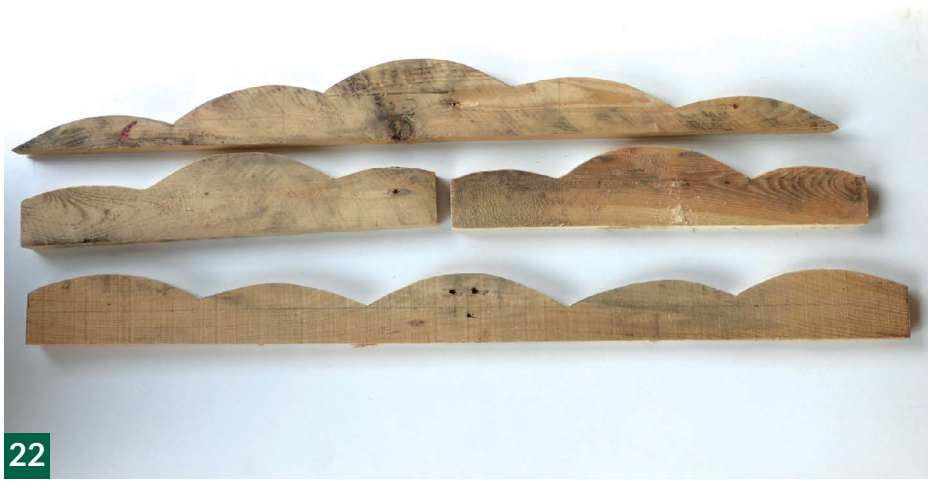




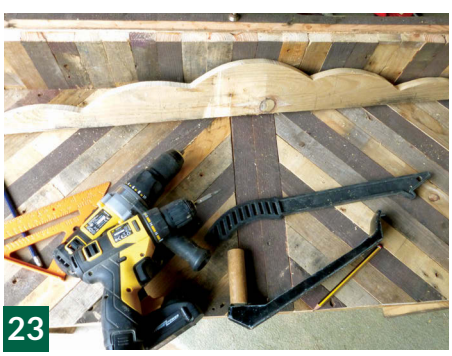
19 Upper surface almost finished. Trim any overhanging decorative pieces back level with the frame.

20 For the pattern on the back upright section, use the table saw to cut 24 strips, 130mm long. Start laying the pattern with two central purple strips and build up the pattern as shown. Glue to the rear rails, clamp in place then screw to reinforce.

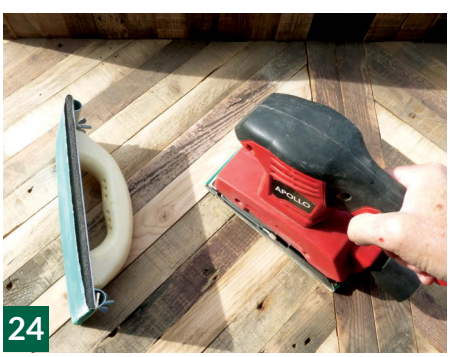
21 The back section completed.



22 Use a bandsaw or jigsaw to cut trim for the front, two sides and a piece for the top of the rear vertical section.



23 To secure the rear trim, cut a batten 870 x 15mm and attach to the top rail. Fix the trim with glue and screws through the rear of the batten. Secure the front and side trims with screws through the front into the legs.



24 Put aside about three months of your time for sanding! A belt sander or similar is essential if you are to keep your sanity. Ensure you have removed all nail heads prior to sanding.

25 Sanding finished, leaving an interesting tonal variation.

26 Clean the table with white spirit and apply a couple of coats of varnish. ■

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Mahogany display case restoration

This old soldier definitely needed a bit of TLC, so **Louise Biggs** stepped up

This display case had been through the wars a bit, but had in fact been displaying three sets of WWII medals belonging to family members. My client had obtained a representative set of medals for his grandfather for the WWI and required the medals to be remounted so they were all together and the display case restored.

Assessment

- There was extensive damage to the hinge areas both on the case and the lid.
- The lid frame was loose and the joints open.
- There was damage to the back corners of the case.
- The old putty was loose and crumbling and in some places missing.
- The various old linings needed to be removed and the thick backboard replaced.

Damage to the hinge areas

The old putty was loose and crumbling

PHOTOGRAPHS BY LOUISE BIGGS

Tool List

- Hammer
- Screwdriver
- Chisels – various sizes
- Dovetail and Gent's Saw
- Block plane
- Planer/thicknesser
- Animal/hide glue and glue pot
- Strap clamp with corner blocks

Stages of restoration


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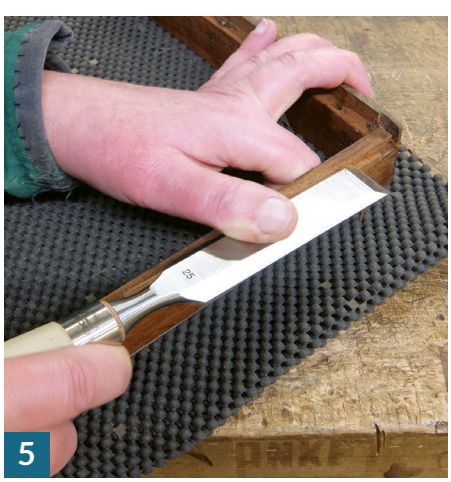
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1 The first stage was to remove the display board with the medals from the case and photograph them as a visual aid for keeping the medal groups and orders correct. They were removed from the existing display board and bagged up separately with name cards. The heavy back board, material linings and any remaining adhesive residues were removed.

2 The fittings were removed as was the remaining putty, carefully so the original glass could be reused. The broken joints were cleaned up and the frame glued with animal/hide glue and clamped with a strap and corner blocks.

3 Each corner had two veneer keys to strengthen the mitre joint. These were recut using a fine Gent's saw and the new veneer keys glued and inserted. When dry they were levelled off with the frame using a chisel.

4 The broken corners on the case first had a long joint marked out and a gauge line cut into the wood using a utility knife. A longer joint is easier to disguise visually when it comes to colouring and polishing the repairs. It also creates a greater glue surface, essential as these repairs also had to take into account the rebate for the back panel.

5 A smooth tapered joint line was achieved by paring with the chisel. Pieces of old mahogany were then cut and shaped to fit.

6 With the corners built up the rebate was trimmed out as required. A new thinner backboard was cut to size to allow for a second board to be fitted within the rebate, which would have the medals mounted and fixed to it.

7 The hinge areas were assessed as to how best to repair the damage, while allowing for a strong repair one end. One end would be partially removed for placement of the new hinges. Using a long angled joint as before, care was taken due to the proximity of the damaged area to the corner joint, in this case a lapped dovetail, which would limit the angles on one side.

8 The angles for each infill joint were cut using a Gent's saw. On the case the bottom of the cut was level with the small bead on the outer edge – this would further disguise the joint. The

lid repairs unfortunately had to be cut much deeper due to the extent of the damage. Once cut the bottom of the joint was cut level using a chisel.

9 There was evidence of previous splits caused by the screws. These were glued then clamped together before the old screw holes were plugged with timber. When dry the plugs were levelled off.

10 To add a little more strength the edges of the infill joints were slightly angled to produce a dovetail effect and pared off to create a smooth joint surface.

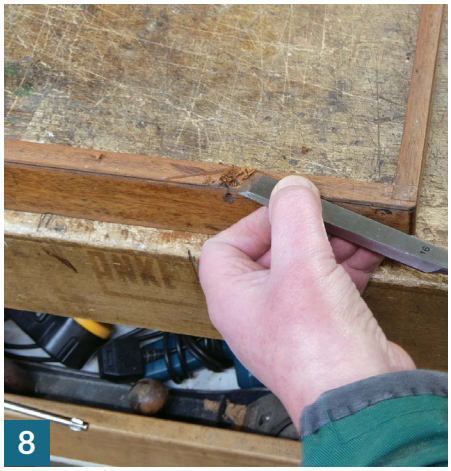
11 The pieces of infill timber, which were old mahogany, were planed to thickness and marked out to the required shapes. The angles were then cut using a dovetail saw.

12 To achieve the final tight fit to the lid and case the angles were pared to shape using a chisel as required. They were glued into place and held securely with tape.

13 Once dry the pieces were trimmed back level with the surrounding timber using a small block plane and chisels. The positions of the new hinges were marked out and a marking gauge used to score the width and thickness in each position. Using a fine saw the shoulders of the hinge recesses were cut at an angle between the two lines.

14 The waste timber was then removed by notching along the waste area before turning the chisel and paring the waste timber away until the hinge had a snug fit. The polished surface was cleaned before the repairs were stained and polished to match as described in previous articles. The glass was refitted using timber beads around the lid frame.

15 The medals and badges were laid out to gain the correct positions and spacing before being attached to the inner back board covered in fabric. The mounting methods used are completely reversible. My thanks goes to my friend Barry, an expert framer (**www.critic-framing.co.uk**), for mounting the medals for me. This and the main backboard were then screwed into the rebate and the fabric side trims fitted. ■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PHOTOGRAPHS BY LOUISE BIGGS

Rider chisels test

We let **Louise Biggs** loose on a set of Rider chisels for the display cabinet restoration. Here are her observations

A while ago Mark Baker delivered some Axminster Rider chisels to my workshop – a boxed set of six bevel edge with hornbeam handles, a butt chisel and a bevel edge with a soft-grip handle – and asked me to use them for a time. I have used them for this project and many others up to the point of writing this report on various timbers, new and old, including mahogany, oak and board materials.

I found all of the chisels to be well made, those with hornbeam handles were fitted with a leather washer. The blades were slimmer than those I have previously used, with a tapered, slimmer bevel, and this proved to be beneficial when cleaning out some narrow mortises and lock housings but was in no way detrimental to the balance of the chisels.

Although the technical side, described in Axminster's online catalogue, goes a little over my head I was pleasantly surprised that all of the chisels lived up to the description given to have 'an ultra-keen edge' and 'stay sharp longer'. I use a diamond stone and took Axminster's advice to carry out the final honing at 30°. I achieved a very fine edge quickly to all the chisels and found I didn't need to hone the chisels as frequently, they did indeed hold their edge for longer.

I have never bothered with a butt chisel in my range of tools before but, having had the chance to try this one, I think it is something that will be added quite quickly. I found it very useful for those little jobs, especially those with limited access.

The hornbeam handles were very comfortable, the butt chisel just the right length, the bevel edge set, although a little longer overall than I am used to, my grip quickly adapted.

There is nothing wrong with the soft-grip handle, I just personally didn't get on with it as well as the hornbeam ones, finding the shape a little bit bulky for the size of my hands.

If I had one minor gripe it would be the very sharp back edges, quickly dealt with using fine metal abrasives but not until after one had got my finger.

Verdict

Overall I was very impressed and consider the prices to be very reasonable and ones that, as a business, I could easily justify when saying I am very tempted to replace my existing chisels with this Rider range. ■

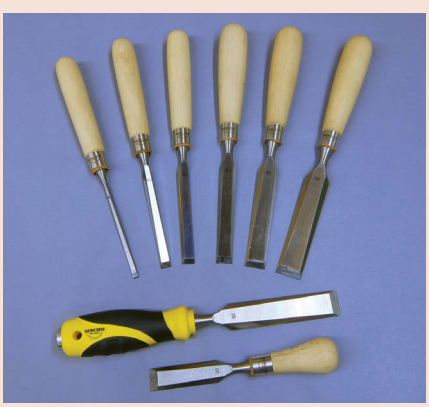
Details

Rider bevel edge chisels in 10 sizes from 3mm to 50mm wide. Prices start at £10.07

Rider butt chisels in four sizes from 6mm to 25mm wide. Prices start at £10.39

Rider bevel edge chisels, soft-grip handles in nine sizes from 6mm to 50mm. Prices start at £8.83

Visit: **www.axminster.co.uk** for more information



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Shrinkpots

The Editor has tried his hand at making little wooden pots out of tree branches, but ended up with a shrinking feeling...

Some time ago I had the chance to join a local meeting of the APTGW (Association of Polelathe Turners & Greenwood Workers) for a session of shrinkpot making. A shrinkpot is exactly as it sounds – a pot that has shrunk, made from a branch of a tree, in this case birch. The members are a friendly lot with a wide range of mixed abilities, from raw beginners to professionals, but even they might have their own skillset, such making Sussex trugs for example, but not shrinkpots. So we were all effectively novices at what is a fun but quite exacting pastime trying to make pots with green wood and just a few tools.

The pot shape

1 The great thing about working as a group is you get to help each other and have a bit of a laugh. But what you do need are some decent blank sections from something with fine grain and wet, i.e. green, so birch will do nicely.

2 The 'proper' way is using a hand-driven auger with its built-in handle. Unfortunately trying to drive it into the end grain of wet wood is a challenge as it doesn't want to 'bite' easily…

3 …then, of course, there is the new-fangled power auger mounted in an old-fashioned wheel brace, here


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PHOTOGRAPHS BY GMC/ANTHONY BAILEY

being used by Vanessa, the editor of the *Bodger's Gazette* (the APTGW periodical). It's better but the problem of trying cut the end grain remained, until I used it in my cordless drill – shock horror!

4 However, I paid the price for using modern nonsense. Placed in my Triton Superjaws with too much pressure applied – instead of using the proper wedges and leather padded block shown in the previous image – it broke.

5 There are different ways to scoop out the innards. Here a green wood roughing blade with a curved profile is being used scooping sideways – quite a lot of work to do. Note the thick wad of old curtain material on the lap, being used for essential cut protection and comfort.

6 Eventually, after a lot of graft, it looks more like this. The aim is to achieve an even but firm thin wall as you can see in the top right hand corner of the log slice. The blade cuts sideways across the grain which creates thin short grain scoop-outs in the wood.

7 Another method which is probably a bit quicker and easier for removing the bulk of the wood, is to use a standard in-cannel (internal bevel) woodworking gouge. This can be tapped in with a mallet and the core chopped out bit by bit.

8 The final cuts need to be done with a scoop tool such as this. The whole surface needs to be neatened from end to end but this pot shape is nearly done.

The pot base

9 Now for the tricky bit – fitting a base. Two pencil lines define where the base will be fitted. There needs to be just enough lip for the base to stay firmly in place.

10 A key trick is putting an 'X' mark on the base end of the shrinkpot, which also needs to be done on the base piece once it has been rough cut to shape, so it can be lined up correctly as the log won't be perfectly round.

11 The base here is made from a thin strip of sycamore, another pale wood. The pot is sat on the ➤


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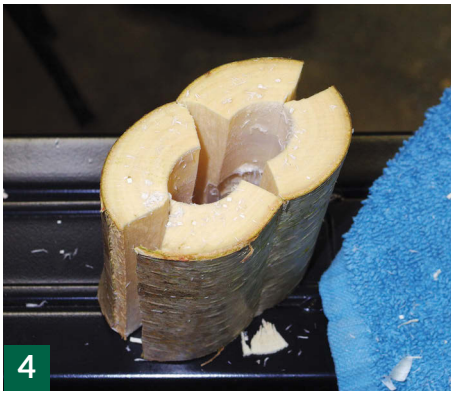
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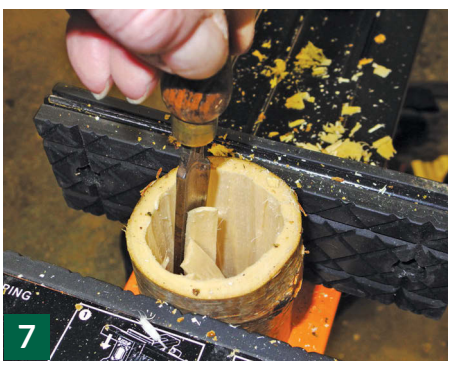
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strip and a sharp pencil used to mark around inside to get the shape, which is then cut out with a coping saw.

12 The first scoring cut made with a knife needs to be completely level all the way round, it is the lower cut and is gradually made deeper by moving the blade around the inside of the pot.

13 Here the cut is progressing, making the recess more definite without cutting right through, of course. The knife has to rest on the bottom of the pot to keep the cut as level as possible.

14 In between making the level cuts, a bevel cut is created by angling the knife downwards to meet the other cut. Each cut is progressed evenly until they meet and the waste is removed.

15 Making sure I had the base the right way up, another reason for the 'X' mark, I cut a bevel all the way round with a straight knife, I wasn't looking for perfection, I just wanted it to be right – if you see what I mean.

16 Several trial fits were needed, just shaving a fraction off wherever it was too big. Too much off and the base would fall straight through. Several people in the group had this problem and had to start again with a new base.

17 Finally it fits! A sense of relief as the base snaps into place, more or less sitting in the groove. This isn't the end of the story because the log slice minus all the middle will start to shrink. I put my two shrinkpots on the mantelpiece in a warm room at home. It took time but any slight gaps still showing eventually vanished and the bases were nice and tight.

18 I wouldn't try drinking out of them in case they leaked, but they are handy on the desk or table for all those useful bits and bobs. Best of all, we all had a go and made our own unique, individual creations.

If you fancy trying any of the green wood crafts why not join the APTGW?

For more information find them at their website: **www.bodgers.org.uk** ■


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Gap section at end for long pieces

Sweet 16

Gap section to side for large pieces

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Special router cutters

Want something a bit different but not sure where to start? We look at some of the more exotic cutters (read 'expensive'), with suggestions

So what are special cutters? Anything you wouldn't have in your standard set of cutters might be the easy answer. Expensive might be another answer, it is true that many unusual or seldom-required cutters do carry a bit of a price tag. But there you have a powerful machine underused or, more accurately, underexploited – you aren't getting the best out of it, perhaps? ➤

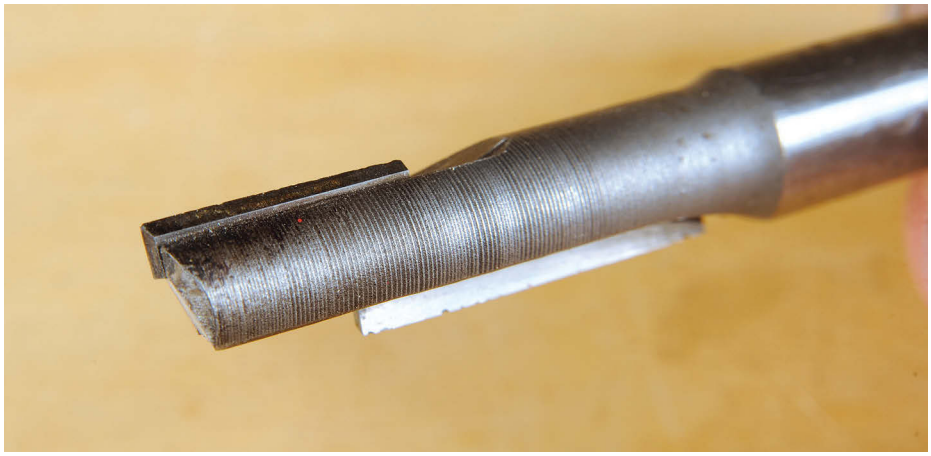
PHOTOGRAPHS BY GMC/ANTHONY BAILEY

STRAIGHT CUTTERS

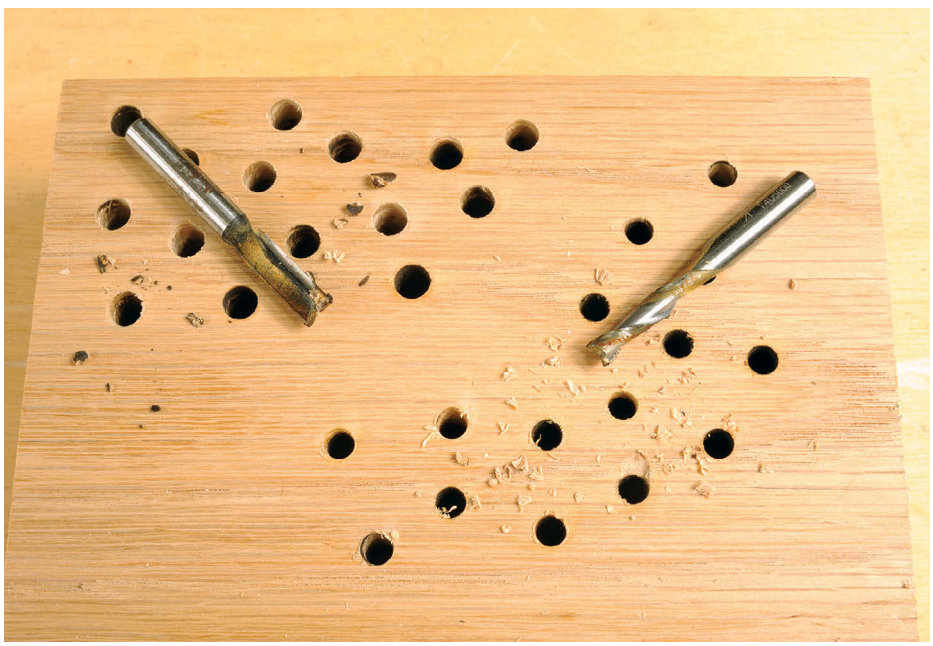
This is a very mixed bag once you stray from standard two flute straight cutters. They include types which you might think don't qualify as straight but I've lumped them together as they are straight in one aspect or another.

The pocket cutter has quite a small amount of carbide on the end and a long shank that is slightly smaller in diameter. This allows it to cut deep mortice pockets easily.

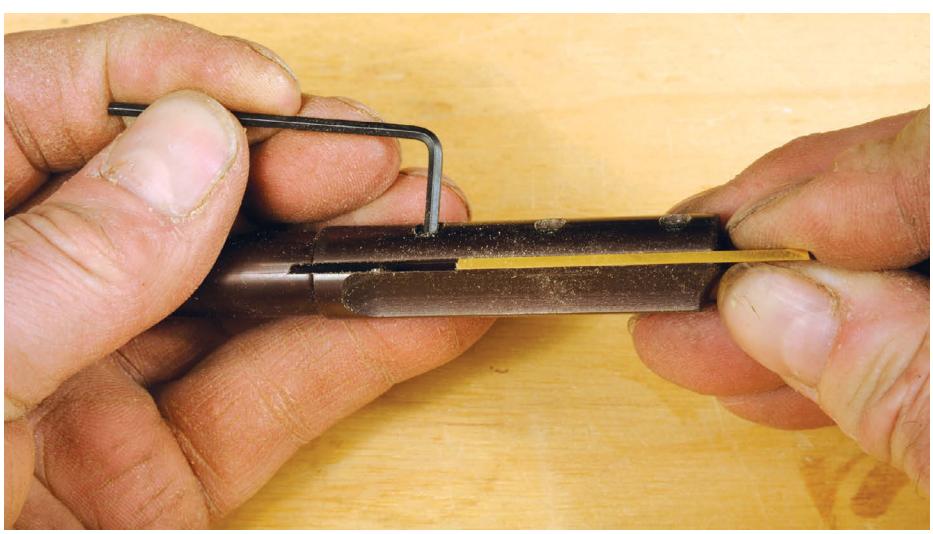
Don't be fooled – the cutter on the left isn't for wood even though it is built in the same way as the right-hand wood cutter. It is intended for boards with a lightweight honeycomb core. Used on wood it could easily snap under pressure.



The stagger cutter comes in several different sizes, mostly ½in shank. It does a similar job to a pocket cutter but the single offset blades give more 'attack' and chippings clearance.



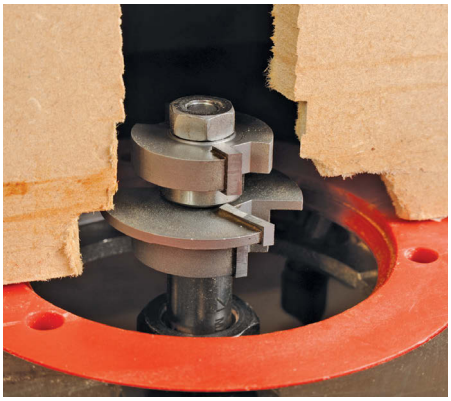
Some spiral form cutters can be used on wood mounted in freehand machines. They cut quickly and neatly without serious burning, which is the usual result with standard two flute cutters.



Lastly we have a straight cutter with reversal, disposable blades. It seems like quite an expense but relate it to all the straight cuts you have to do and it might make economic sense, especially as no one resharpens router cutters these days.

GLUE JOINT CUTTERS

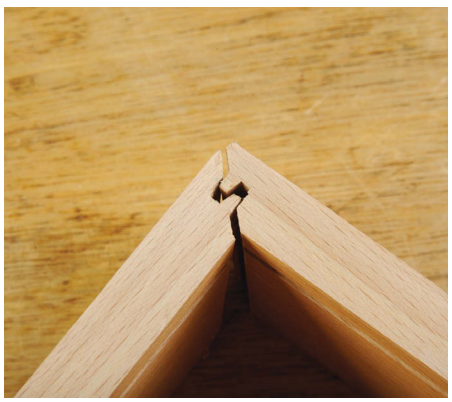
This is a rag-bag selection of joints that interlock and glue together. You could include the remaining two categories but that would be to ignore the critical differences of these other types.



This cutter produces a simple step joint, one half is machined the right way up, the other is inverted and the two joints lock together with glue. All reversing glue joints need stock to be thicknessed exactly and test cuts are essential to avoid surface steps at each joint.

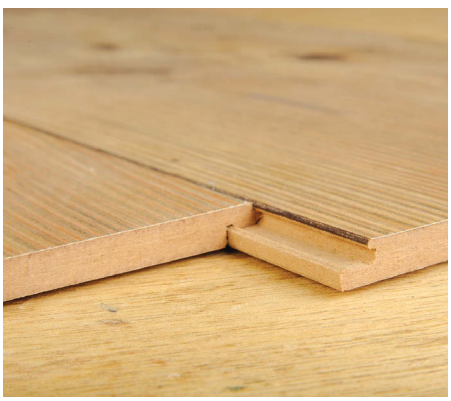
Here is a test cut showing how they will fit together. On the actual production run much depends on the boards being flat so the surfaces are not misaligned.

Two different cutters, the lock mitre on the left and a simple corner joint on the right. Both are suitable for drawer box joints but care has to be taken as one half of the joint will have very short grain fingers that can snap easily.



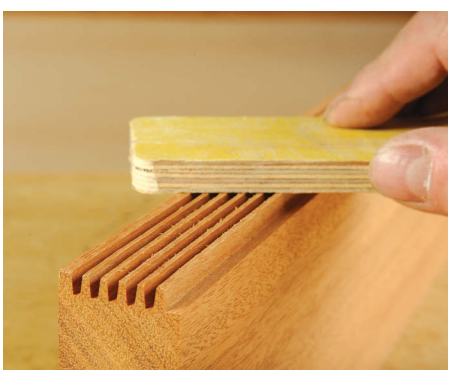
Here you can see the vulnerable short grain on the right-hand half. Once the drawer box is assembled this ceases to be a problem – it is the machining and joint dry assembly phase that can cause a breakage.

For one half of these respective joints they need a high fence and a pushblock. It is safer and gives good work support and accurate joints.



Although you won't need to make clip-together flooring as you can buy it ready made, it does show you how efficient this dry fitting joint really is.

If you want really unbreakable glue joints, such as for making kitchen worktops out of strips of hardwood, then this adjustable cutter set is ideal. It needs care in setting using up using shim washers to get precise finger spacing.



Test cuts are vital and the spacing of the fingers affects how well the glue compresses in the joint. The ends of the fingers need defluffing with abrasive so the joint will close properly.

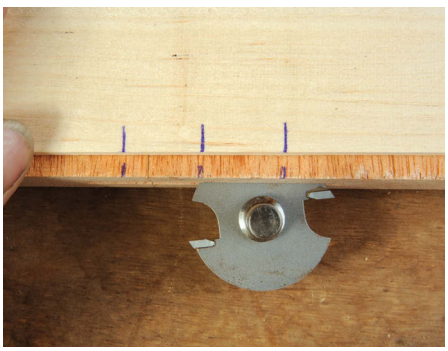
Only a light amount of glue is needed, generally brushed on the tips of the fingers. As the joint closes the glue is pushed down into bottom of the opposing finger grooves. ➤

BISCUIT CUTTERS

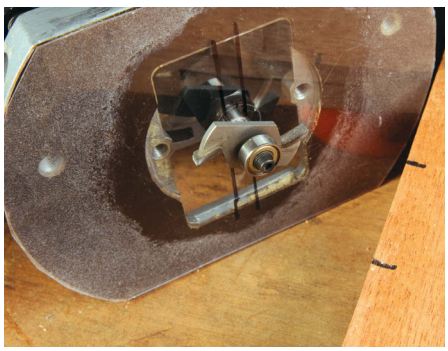
The biscuit jointing machine is a very quick, efficient means of jointing with low component cost. However, if you already have a router it is relatively cheap to add a biscuit cutter set. More importantly it can work around awkward shapes which a biscuit jointer cannot do.

An easy way to fit slide-on shelves is to use a biscuit cutter in the end of the shelves to make stopped cuts. The biscuits can be fitted in the carcass sides after slotting with a 4mm diameter straight cutter in the router running against a straight edge.

This is a typical biscuit cutter set consisting of a three-wing groover and three different diameter bearings which correspond to the three standard biscuit sizes. Note the cutter diameter is much smaller than a biscuit jointer's own cutter, therefore there is a slight 'glue pocket' at each end of the slot.

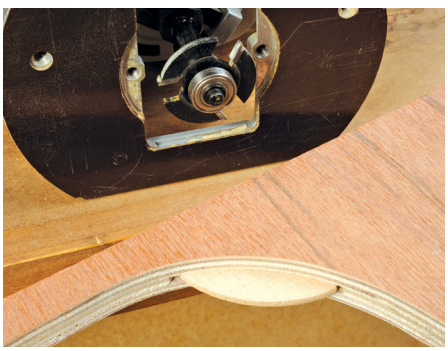


This shows the slight nuisance of biscuit slotting with the router. You need two marks at least so you know how far the slot should run. The marks indicate the bearing edge, the slot extends beyond the lines.

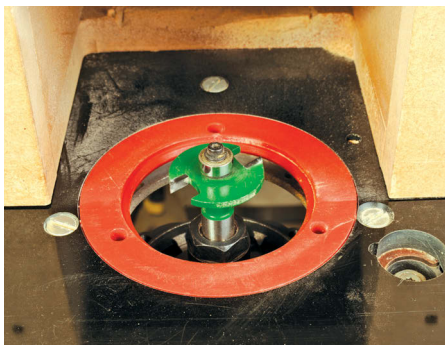


The process can be made easier by taping on a clear false base with bearing marks so you can see when they line up with the marks on the wood. Never unplunge of course, withdraw the router sideways carefully to avoid marring the slots.

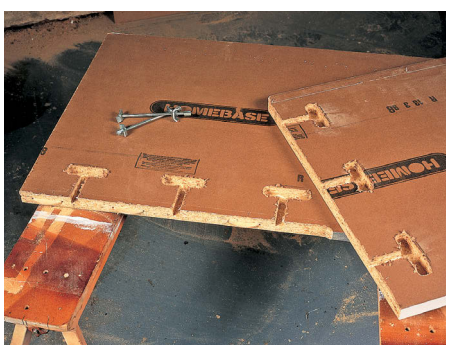
Using a right-angle jig mounted in a vice you can machine carcass corner slots as shown here. Normally they could only be done with a biscuit jointer but this jig allows the router to machine the slots.



Slotting on a curve is no problem at all. Indeed, if you were to fit the exact matching internal piece, its own slot combined with the other slots would allow the biscuit to fit perfectly. So you could fit contrasting sections of wood in this way or a panel in a frame.



Biscuit jointing on the router table is also possible. Triton has its own system and different size biscuits but this setup is easy enough to use. You need 'start stop' marks on the fence and a press-on, pull-off technique. Be careful to feed in the correct direction to avoid kickback.



Biscuit joints in kitchen worktop edges avoid the sections floating up and down, instead they will stay perfectly level for ever.

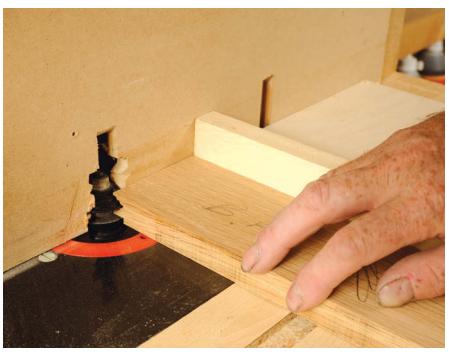
FRAME AND PANEL CUTTERS

This is a class of cutters on their own, whether it is just the frame cutters used with a flat ply or MDF panel or glass or, alternatively, using a panel raiser as well for creating decorative wooden panels to fit in the frames.

This plain grooving set can be used for joining board or making plain door frames with a flat panel in the middle. Ideal for the simple country or shaker style.

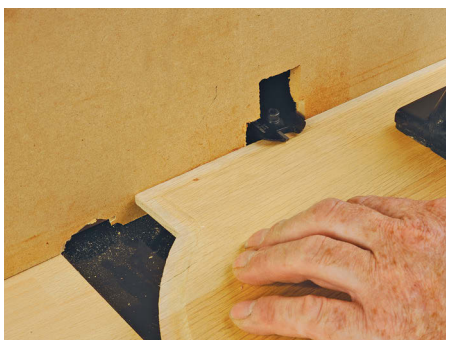
A typical two-cutter frame and panel set. The scribing or end cuts on the rails are done first using the left-hand cutter, then the stiles and rails both have the profile machined using the right-hand cutter.

Machining order is critical – the crosses indicate which way over the components are, ready for the scribing cut. Using the cutters in the last photo the best faces are underneath as the components have to be upside down.



A scribing cut is being made in a rail. This is a different cutter which has three cutter profiles on one arbor, so it can do both profile and scribe cuts by altering the height of the cutter.

A moulded frame can have a flat panel in the middle but more often will be a raised panel using a cutter like this. It is very big and expensive but gives good results and different moulding profiles are available. If a bearing is fitted it can mould arch top door panels.



Some panel raising cutters also feature a back cutter designed to ensure a clean, slightly raised rear profile and a constant tongue width so the panel fits nicely into the frame.

An alternative panel raiser is the vertical type, which is smaller and safer to use. They will fit in a small router if necessary and they come in several moulding profiles.

Two faults in one panel. First, a biscuit used to hold the panel together has been machining through so it is 'grinning' – careful placing of slots is important. Second, the vertical panel raiser didn't have a close fitting 'breakthrough' sub fence. The result is a lot of torn fibres.

Done correctly you should end up with something like this. ■

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CTS11	1500W	254mm	£149.98	£179.98
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Stanley Multi Angle	Clamped	72/60/40	£17.99	£21.59
Record TV75B	Clamped	75/50/32	£20.99	£25.19
Clarke WV7	Bolted	180/205/78	£27.99	£33.59

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CDE7B	750W	850 M3/h	114Ltrs	£159.98	£191.98

Clarke CWVE1 DUST EXTRACTOR

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CCT48	Cordless 4.8V Ni-MH	22/18	£29.98	£35.98
CESNG2	Electric	18/18	£39.98	£47.98
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- Variable speed

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- 550W 230V motor

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- Adjustable front handle improves control
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7/250	2 HP	7	24ltr	£94.99	£113.99
11/250	2.5HP	9.5	24ltr	£109.98	£131.98
8/510	2HP	7.5	50ltr	£119.98	£143.98
11/510	2.5HP	9.5	50ltr	£139.98	£167.98
16/510*	3 HP	14.5	50ltr	£209.00	£250.80
16/1010*	3 HP	14.5	100ltr	£259.98	£311.98

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- 900W
- Dust extraction port

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CDS300B

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BLACK & DECKER

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MODEL	MOTOR	DEPTH OF CUT	EXC.VAT	INC.VAT
Clarke CEP1	650W	2mm	£28.99	£34.79
Einhell TE-PL850	850W	3mm	£52.99	£63.59
B&D KW750K - GB	750W#	2mm	£57.99	£69.99

Clarke ELECTRIC POWER FILE

CPF13

- Variable belt speed
- Tilting head

*Black & Decker

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MODEL	MOTOR	BELT SIZE (mm)	EXC.VAT	INC.VAT
CPF13	400W/230V	13x457	£49.98	£59.98
KA900E*	350W/230V	13x455	£59.98	£71.98

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MODEL	MOTOR	M/MIN	EXC.VAT	INC.VAT
Clarke BS1	900W	380	£36.99	£44.39
Clarke CBS2	1200W	480	£79.98	£95.98
Makita 9911	650W	75-270	£94.99	£113.99

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CON300	230X115mm	330W	£34.99	£41.99

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PC40	3.5HP	20Amps	£269.00	£322.80
PC60	5.5HP	32Amps	£319.00	£382.80

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CCD240	24V	1	£47.99	£57.59
CON18Ni	18V	2 x Ni-Cd	£69.98	£83.98
CON18Li	18V	2 x Li-Ion	£89.98	£107.98

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- Great range of DIY and professional saws
- Ideal for bevel cutting (0-45°)

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*Includes laser guide

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CCS185B	1200W	65/44	£41.99	£50.39
CON185*	1600W	60/40	£62.99	£75.59
CCS2	1300W	60/45	£59.98	£71.98

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- Compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.

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* SS = Stainless Steel

MODEL	MOTOR	CAPACITY DRY/WET	EXC. VAT	INC. VAT
CVAC20P	1250W	16/12ltr	£49.98	£59.98
CVAC20SS*	1400W	16/12ltr	£59.98	£71.98
CVAC20PR2	1400W	16/12ltr	£64.99	£77.99
CVAC25SS*	1400W	19/17ltr	£67.99	£81.59
CVAC30SSR*	1400W	24/21ltr	£99.98	£119.98

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- Dust collection port
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CPT800	8"	120mm	£209.98	£251.98
CPT1000	10"	120mm	£289.00	£346.80

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- 1800W motor
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MODEL	BLADE DIA/BORE (mm)	MAX CUT DEPTH/ CROSS	EXC.VAT	INC.VAT
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CMS10S2	254/30	78/340	£139.98	£167.98

Clarke CONTRACTOR BOSCH CON750 JIGSAWS

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*DIY #Professional

MODEL	POWER (W)	DEPTH OF CUT (WOOD/STEEL)	EXC. VAT	INC VAT
Clarke CJS380*	420W	55/6mm	£15.99	£19.19
Clarke CON750#	750W	80/10mm	£28.99	£34.79
Bosch PST700E*	500W	70/4mm	£44.99	£53.99

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CBS190B

MODEL	MOTOR	THROAT SIZE	EXC.VAT	INC.VAT
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Top Quality Bandsaws - ideal for professional workshop use. Strong steel body with solid cast iron table

- Table tilts 45° • Adjustable blade guide
- Supplied with stand, 4TPI wood cutting blade, rip fence, mitre guide, mitre gauge and push stick • Induction motors
- Includes stand

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DRIVE-BELT TENSIONING
SOLID GROUND CAST IRON TABLE

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FLEXIBLE LED WORKLIGHT
REMOVABLE DUST TRAY
BLADE TENSIONING CONTROL

MODEL	THROAT DEPTH	MAX CUT 90°	MAX CUT 45°	EXC. VAT	INC. VAT
CBS300	305mm/12"	165mm	115mm	£399.00	£478.80
CBS350	340mm/14"	225mm	160mm	£498.00	£597.60

BISCUIT JOINTER

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MITRE SAWS TC-SM2131

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Laser Guide ‡ Sliding Compound

- Quality Range of Mitre saws and blades in stock

2 YEAR GUARANTEE

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Einhell TC-SM2131#	210/30		62/310mm	£129.98	£155.98
Einhell SM2534‡	250/30		75/340mm	£159.98	£191.98

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STANDS FROM ONLY £47.98 INC VAT

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With sanding belt *8" whetstone & 6" drystone

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CBG6RZ	PRO	150mm	£42.99	£51.59
CBG6RSC	HD	150mm	£54.99	£65.99
CBG6SB#	PRO	150mm	£54.99	£65.99
CBG8RWC	HD	150mm	£59.98	£71.98
CBG8W* (wet)	HD	150/200mm	£56.99	£68.39

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BEST SELLER

- 50mm max cut thickness
- Air-blower removes dust from cutting area
- Table tilts 0-45°

MODEL	MOTOR	SPEED RPM	EXC. VAT	INC. VAT
CSS400B	85W	1450	£82.99	£99.59
CSS16VB	90W	550-1600	£94.99	£113.99
CSS400C	90W	550-1600	£114.99	£137.99

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*DIY

MODEL	MOTOR (W)	PLUNGE (mm)	EXC.VAT	INC.VAT
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Bosch POF1400ACE	1400	0-55	£86.99	£104.39
CR2	2100	0-60	£124.99	£149.99

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NEWS & EVENTS

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Forests go west...

Gary Marshall gives his own slant to a story found on the 'Nature' website

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

Research between 1980 and 2015 reveals that, across the north east of North America, in the Appalachians and the Great Lakes zones, trees are on the move. Eighty-six types of tree were monitored by Songlin Fei, a forest ecologist at Purdue University in West Lafayette, Indiana. Forward-thinking foresters have predicted a move of native species north – and indeed conifers seem to follow this trend. What is puzzling is the steady march westwards of broadleaved trees. This cannot be explained by climate change alone.

Investigation becomes more complex because of various large-scale forest clearances up to and particularly including the 1920s. Patterns of settlement, 'tumbling down' of cleared then abandoned areas to forest, all make for altered speciation and native tree regeneration. One thought is that trees are following changing moisture patterns. While 34% of the trees studied have shifted on average 11km northwards per decade, 47% have moved 15.4% westwards – with little or no southerly or eastwards movement. Add to this fires, disease, open-cast mining and air pollution – perhaps the trees innately sense threats from the south and east. There's only so far they can move westwards in the US before they hit zones that cannot support forest.

It is certain that the US forests of today will look different even in as short a time frame as 10-30 years. To quote Songlin Fei: 'If you think of these species as members of a family, the question is, will some families break apart, or will they travel together? We might be talking about these families breaking apart.'

Are there implications here for European forests and tree species? One paper from the Institute of Chartered Foresters shows likely northern and/or upward movement of broadleaves in Europe – mainly due to climate change. In the UK, the Woodland Trust is gathering masses of information with its phenology project.

There have indeed been regional shifts of trees in Europe before – evidenced in the British Isles by remnant ancient woodland native Scots pine forests that only exist in Highland Scotland, and the strawberry tree believed native only to far south western Ireland around Killarney.

The US research is important, especially as its forests are so species rich, and we await further reports. More than ever such research shows that the world's boreal zones and their associated forests are dynamic entities that respond to change.

Europe and other continents may not necessarily react in the same way – i.e. by movement west – but with factors such as climate change, rises in sea levels, more frequent, stronger and variable winds, tree diseases and invasive introduced species likely to thrive in warmer climates, our forests are changing too.

To read the full story visit: www.nature.com

Web links for you

Facebook

Woodworking UK Tools and Sales

Facebook isn't the obvious place to buy and sell tools but this public group is open to individuals, not businesses, and it has some interesting items on offer, plus discussion about tools. Well worth a look for that handy or collectable item you weren't expecting to buy.

Pinterest

Woodworking Tools

Exactly what the Pinboard says – all about tools, some a bit weird, some unusual and some quite useful. Worth exploring for ideas.

Instagram

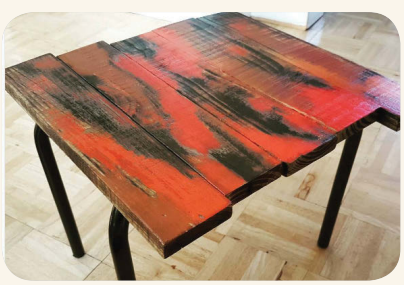
Toolschool

Some interesting woodworking 'grams from female Australian woodworker Kerryn Carter, who clearly has a big following Down Under.

Twitter

TheReviveMan

Otherwise known as Richard's Recycling, a cheery chap and some rather idiosyncratic photo tweets with interesting ways to reuse wood.



European Woodworking Show 2017

The European Woodworking Show is back from 16-17 September this year. The setting is the historic Cressing Temple Barns, near Braintree in Essex. Demonstrators and exhibitors love the EWS and take little persuading to return and demonstrate their skills or showcase their wares.

Our overseas contingent includes: Chris Schwarz – Lost Art Press; Dave Jeske – Blue Spruce Toolworks; Ron Hock – Hock Tools; Thomas Lie-Nielsen – Lie-Nielsen Toolworks; Sadatsugu Watanabe & Chris Vesper – Veritas Tools. Firm favourites will be there, including woodturners Joey Richardson and Mark Hancock, pyrographer extraordinaire Bob Neill, timber hewer Steve Woodley, woodcarvers Peter Berry, Tim Atkins and Dave Johnson, marionette maker Lenka Pavlickova, scrollsaw expert Fiona Kingdon, Japanese joint maker Brian Walsh, plus furniture makers David Charlesworth, Dylan Pym, David Barron and Treeincarnated.

Adding to the variety and diversity of the show are Willy Rackham, the International Boat Building College, Willow Sculpture by Louise Harward, blacksmith Nic Westerman, knife maker Ord Knives and Dave Wilkins stick maker. The British Woodcarvers' Association (BWA) will be hosting its extremely popular public vote competition. There will be many familiar tool suppliers, including Turners Retreat, Trend Tools & Machinery, Lie-Nielsen Toolworks, Gransfors Bruks axes, Pfeil, Auriou and Flexcut carving tools, Classic Hand Tools, Lincolnshire Woodcraft, Chestnut Products, David Barron Furniture, and a host of other retailers.

Visit: **www.ews2017.com** for more information and advance tickets

PHOTOGRAPH BY GMC/ANTHONY BAILEY

PHOTOGRAPH BY GMC/ANTHONY BAILEY

Shows

Lammas Festival, 29-30 July 2017, Western Lawns, Eastbourne, East Sussex. **www.lammasfest.org**

South Downs Show, 19-20 August 2017, Queen Elizabeth Country Park, nr Petersfield, Hants. **www.southdownsshow.co.uk**

Biddenden Tractorfest and Country Fair, 19-20 August 2017, Biddenden, Kent. **www.tractorfest.co.uk**

Charcoal and Woodyard Weekend, 26-28 August 2017, Weald and Downland Museum. **www.wealddown.co.uk/whats-on**

Stock Gaylard Oak Fair, 26-27 August 2017, Stock Gaylard Estate, Sturminster Newton, Dorset. **www.stockgaylard.com/the-oak-fair.asp**

Fangfest – Festival of the Practical Arts, 2-3 September 2017, Fangfoss, Nr York. Facebook: Fangfest Festival of Practical Arts.

Into The Trees, 9-10 September 2017, Pippingford Park, Nutley, East Sussex. **www.into-the-trees.co.uk**

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Meet the contributors...

We put all of this month's professional and reader contributors here, so you know exactly who they are and what they do

Louise Biggs

Having completed her City & Guilds, Louise trained for a further four years at the London College of Furniture. She joined a London firm working for top antique dealers and interior designers in London before starting her own business designing and making bespoke furniture and restoring furniture.
Web: www.anthemion-furniture.co.uk

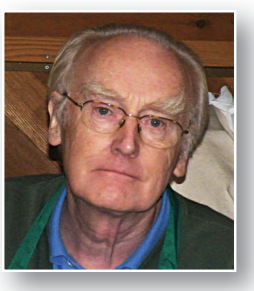
Michael T Collins

British-born Michael has been working with wood off and on for 40 years. He moved to New York in 1996 and, over the years, has made bespoke furniture, including clocks, inlay work, Adams fireplaces, book cases and reproduction furniture.
Web: www.sawdustandwoodchips.com

Bob Adsett

Bob started his woodworking career in 1967 in furniture manufacturing before moving into the construction industry. He then worked as a demonstrator and trainer for Kity Machines, which included factory-based training in Soviet-era Latvia. He then joined Axminster where he marketed CMT cutters and helped launch Lamello products.

John Vardon

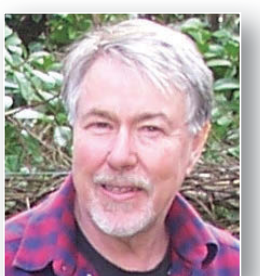


John has been carving for the past 19 years. He is an enthusiastic amateur and likes to carve mainly in relief. John is a member of the Solent Guild of Woodcarvers & Sculptors and is currently its secretary. John also demonstrates once a month, together with other carvers, at the Weald & Downland Open Air Museum near Chichester. Together with Jess Jay he runs two carving courses at the Museum.

Simon Rodway

Simon also runs LineMine, a website with articles and online courses on drawing software. A new course, SketchUp for Woodworkers, is proving really popular.
Web: www.linemine.com/courses

Gary Marshall



Gary has had a life-long interest in woodlands and the countryside. He trained in countryside management and subsequently ran a company working with the local County Councils and Unitary Authority and their Countryside and Rights of Way Teams, as well as a wide range of conservation organisations.

Your face and details could appear here in our 'rogues' gallery' if you write an article for the magazine, and you could be rewarded for your efforts too.

Editor **Anthony Bailey** Email: anthonyb@thegmcgroup.com, **Designer Jan Morgan,** Head of Woodworking Design **Oliver Prentice,** Senior Editorial Administrator **Karen Scott,** Illustrator **Simon Rodway** (www.linemine.com), **Chief Photographer Anthony Bailey,** Group Editor, Woodworking **Mark Baker,** Production Manager **Jim Bulley,** Production Controller **Amanda Allsopp** Email: repro@thegmcgroup.com, **Publisher Jonathan Grogan,** Advertising Sales Executive **Russell Higgins** Email: russellh@thegmcgroup.com, Marketing **Anne Guillot,** Subscriptions **Helen Johnson** Tel: 01273 402 873 Fax: 01273 478 606 Email: helenj@thegmcgroup.com
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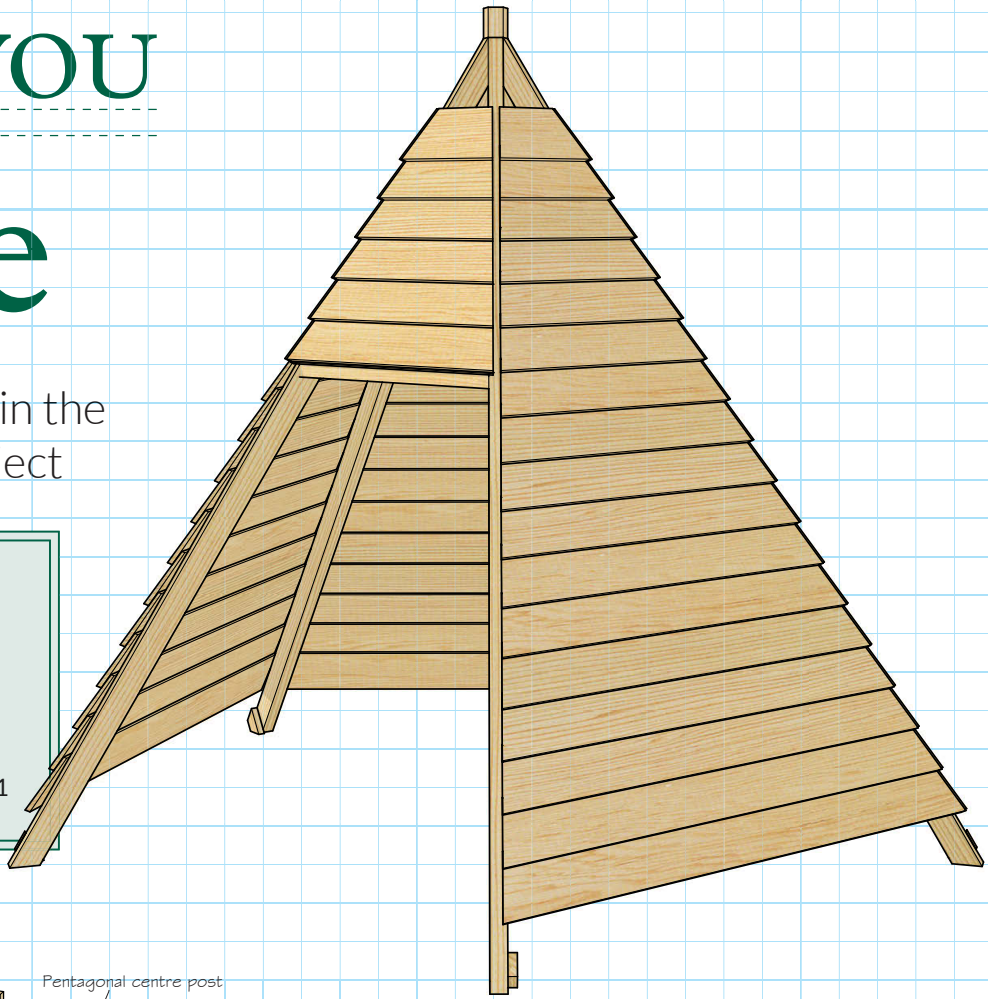
PLANS 4 YOU

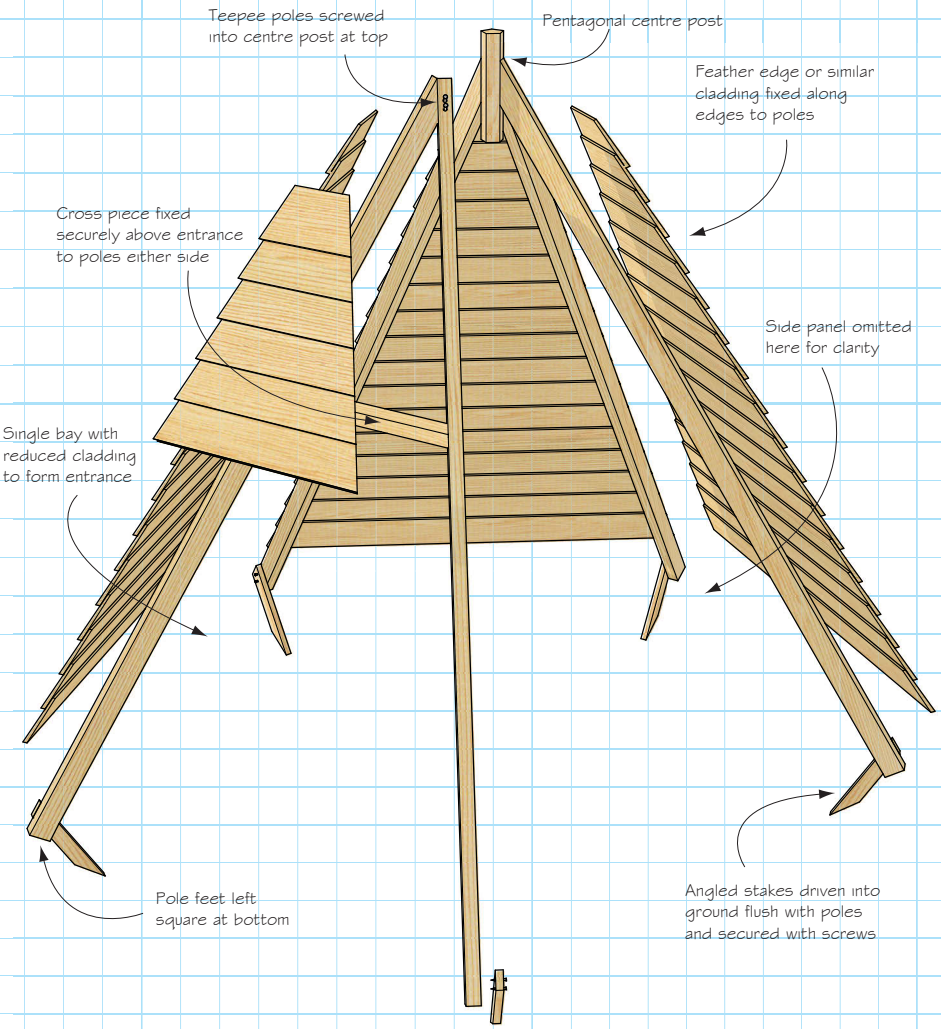
Teepee

Simon Rodway goes wild in the garden with his latest project



Cutting list

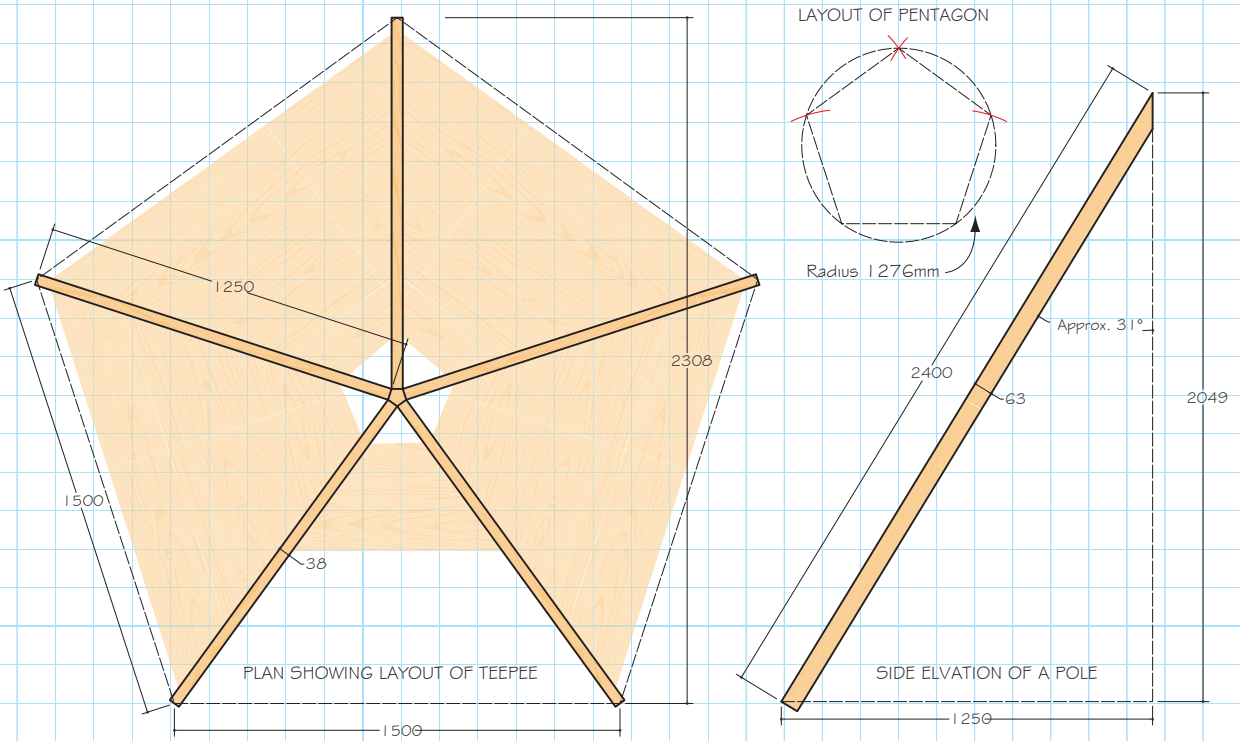
Poles	5 @ 2400 X 63 X 38
Centre post	1 @ Ex 200 X 70 X 70
Entrance lintel	1 @ 600 approx X 63 X 38
Centre post	1 @ 250 X 100 X 100
Ground stakes	5 @ 330 approx X 44 X 20
Feather edging	70 metres approx X 150 x 11

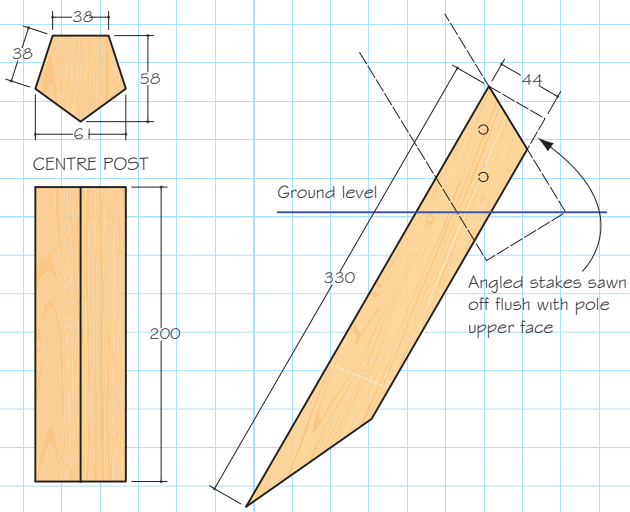


Since this is predominantly a playhouse for kids, it should be one of those projects you can really have a lot of fun with and, although I have shown it made from standard timber components, it is also something that could be put together from reclaimed wood, both for the structure and cladding, with a certain amount of irregularity really adding to the appearance.

The structure of the tepee is a really simple pentagon formed by five posts or poles (I decided to call them poles as it sounds a bit more tent-like) which meet a centre post shaped to form a good fixing for each post at the apex. If you start with the layout, you will need a circle of 1276mm radius, which is then divided up into five equal segments,1500mm from each other in a straight line. This is not precision woodworking, so a bit of leeway is okay, but fixing the poles at the top will be easier if the feet are reasonably accurately spaced. I would decide at the outset where you want the tepee entrance to go and work around the circle from there.

Next you need some poles with an angle cut on one end, and a centre





post. The timber I used for the poles is treated 63 x 38mm in 2400mm lengths, easily available from DIY stores and timber merchants, and I'm using the whole length to maximise the height and overall size of the tepee. You can leave the foot of each pole uncut, as the angle should dig into the ground to add stability to the structure. When you come to shape the centre post, as long as each pole face can make good contact at the top and a strong screw fixing from the pole to the post is possible, that should suffice, so a fairly rustic finish on the post is no bad thing here either.

Once the poles are in place and fixed to the centre post, anchoring the structure to the ground is the next step. Although this is an unusual tent, made of much heavier materials than the average canvas variety, it will still present a large area relative to weight and be capable of moving around in strong winds, so a reasonably sheltered location is the first precaution. The second comes in the form of stakes, driven into the ground flush with one side of each pole and pointing downwards and inwards. Drive the stakes to a reasonable depth, screw firmly to the side of the poles, and then saw the tops off flush with the top edge of each pole to minimise the chances of small feet tripping over them. This should give your tepee a fighting chance of staying put.

The next piece to add is the 'lintel' over the entrance, and this will give you something to finish the cladding to, plus add a bit of extra bracing on this particular bay. After this, you can start cutting the feather edge or whatever you want to use to fill in the bays of your tepee. It isn't worth trying to get a tight joint on cladding ends over the poles in my opinion. In fact, I think the tepee will look better if you leave a gap along the length of the poles. Also, a gap at ground level is sensible, allowing air to circulate freely and keeping the timber away from damp earth. Finishing the cladding well short of the top is a good idea as well, and looks more authentic.

In a traditional tepee, the poles would actually cross and be lashed together at the apex, projecting upwards, and although this isn't practical with square-edged sections, it would be easy to add additional decorative features here, as well as to the sides and around the entrance. So it's time to get creative, with plenty of ideas in books and online if you need a helping hand. ■

Shepherd's hut

We love the idea of a cosy retreat from the world, a place to relax, to chill and get away from it all and Dicky Deans is the man to make it happen. By **Anthony Bailey**

PHOTOGRAPH BY DICKY DEANS

Dicky (standing) and dad Barry having a relaxed shot for camera after a challenging day

Man of steel

A metal worker and welder by trade, Dicky's day job is building complex scenery for film, television and events. Currently, he has been building the steel for a full-sized US Army truck, set to appear in a West End stage production. Living in the East Sussex countryside with his wife Helen and young son Ewan he has no trouble getting setbuilding work thanks to a profusion of such companies in Sussex, a media hotspot where companies are busily engaged in work for major blockbuster films and TV series.

Any spare time Dicky has is taken up with his passion for building shepherds' huts. The iconic design has captured the imagination of many people with a bit of money to spare and a desire to enjoy a simpler, rural life in the comfort of a modern interpretation of a working, but largely static, vehicle – usually at the bottom of the garden or field. In a busy, modern, often high-stress world, it seems a natural human desire to get away from it all. Like any typical craftsman Dicky is driven by an urge to make and create and this seems the perfect way to use his talents. 'The thing I want to highlight is my love for building things such as the shepherds' huts, especially the woodwork because it's like therapy – away from just welding,' enthuses Dicky, as he brushes wood dust from his well-worn zip-up fleece.

Designed in steel

It might seem a bit perverse to have a project based on steel in a woodworking magazine, but the way Dicky creates his huts I can really sign up to. As he points out, as a metalworker, cutting rectangular tubular steel and welding it together is relatively lightweight, very quick to do, without complicated jointwork as it is a series of butt welds, the sections are much smaller than wood construction and

PHOTOGRAPHS BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED
BACKGROUND IMAGE COURTESY OF SHUTTERSTOCK

Clockwise from top left: Bare base steelwork after initial welding phase; Dicky and helping hand Chris are flipping the base over relatively easily thanks to the tubular steel construction; the pair of them lining up the rear axle assembly

it doesn't rot. The entire framework is then clad so the underlying steelwork structure is completely hidden.

Hut framework

This is only Dicky's second hut but he had a deliberately spare side frame from the first one, which he uses as the template for new hut sides. The process of making the sides, ends and base of the hut is straightforward. Rectangular steel tube is cut to length on the cut-off saw and the outer frames welded first and the inner sections then fitted in place and welded. Underneath, the base has a fixed axle assembly at the rear end that will be bolted on later in the process and near the front end is a turntable ring to take the front rotating axle and towing A-frame. After welding the base, it is turned right way up. The whole steel framework can now be mated together to form a skeletal box. Dicky reckons that with some help this stage can be done in three days. It is then given a coat of Etch to protect it before cladding. At this stage the whole assembly can sit on bearers on the concrete workshop floor. Keeping it at this low level makes initial construction much easier.

Battening and lining

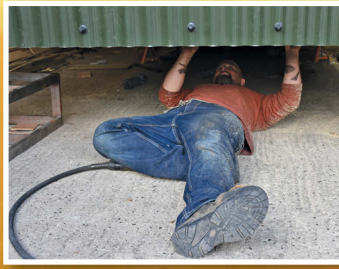
You may have noticed I haven't mentioned the roof framework – that is because it has to be wood. From now on wood becomes an essential part of the fitting out of the hut. The floor has a ply skin and the exterior of the hut is clad in OSB (oriented strand board) with a run of mastic to help keep it all solid. Dicky and his helper Chris fit all this using a compressed-air nail gun firing ring nails straight into the steel framework because it is powerful. Over the exterior of the OSB goes a covering of breathable membrane and a series of spaced battens. On to this is fixed the powder-coated corrugated steel sheet in a dark green colour.

On the inside sheets of foil-faced polyurethane board are cut and fitted into all the spaces in the steel framework, with the exception of the window and door cutouts. In this case Dicky got hold of some dark oak-finish engineered flooring which needed to go down quickly to prevent any damage to the insulation boards. The 'butt and bead' boards that cover the walls are fitted to several spaced battens that are air nailed to the steel framework. By using battening inside and out it gives a series of critical reference points where ➤

'The thing I want to highlight is my love for building things such as the shepherds' huts, especially the woodwork because it's like a therapy – away from just welding'


The multi-layer roof construction gives strength and a good level of insulation


A powerful 4 x 4 vehicle jack sits in a Dicky-made frame for safely lifting the hut to the correct height


His usual pose – Dicky underneath the hut making sure it is in good order


The cast-iron wheels

he knows the boarding or exterior sheeting can be fixed without any difficulty.

The roof

What cannot be made of steel is the curved roof bearers. Because each hut is individual and made to specific clients' needs, Dicky buys the materials just for that project – no mass production here. He got hold of a large quantity of oak which he had planed to thickness and shaped for the roof bearers. Then they were belt sanded to shape and cut and notched to sit on top of the side steel frames. On the first hut he clad the outside in pre-formed corrugated steel before doing the inside. This time he decided to line the inside first, which proved to be an easier way to work because the rock wool-type insulation just sits on the lining instead of struggling to hold it up while lining inside the roof. On top of the insulation is a covering of thin ply to hold it firmly in place and on top of that is the corrugated sheeting which is shaped specially for the hut roof.

Raise the hut

At this point the hut is lifted using a 4 x 4 jack sitting in a special steel frame Dicky has made up. Carefully the hut is lifted off the ground until there is enough height to bolt the rear axle assembly in place and the front turntable axle and towing A-frame. Once this is done the cast-iron wheels, obtained from a foundry in Norfolk, can be fitted.

Fitting out

The windows are made for the job but Dicky recycles wherever he can and the door is an old wooden door split in two and braced to create a stable door, as you would expect to see on a shepherd's hut. There is now a set of wooden steps that lead straight inside. The interior is completely lined with butt and bead boarding cut out wherever the windows go. Once the windows are installed a strip can be fitted around the edges to close any gaps. A nice detail is the traditional window latches. The bed at the end isn't what it seems. Even this is a steel framework welded to the hut framework and then clad in wood, fitted with doors for a useful storage area underneath the bed.

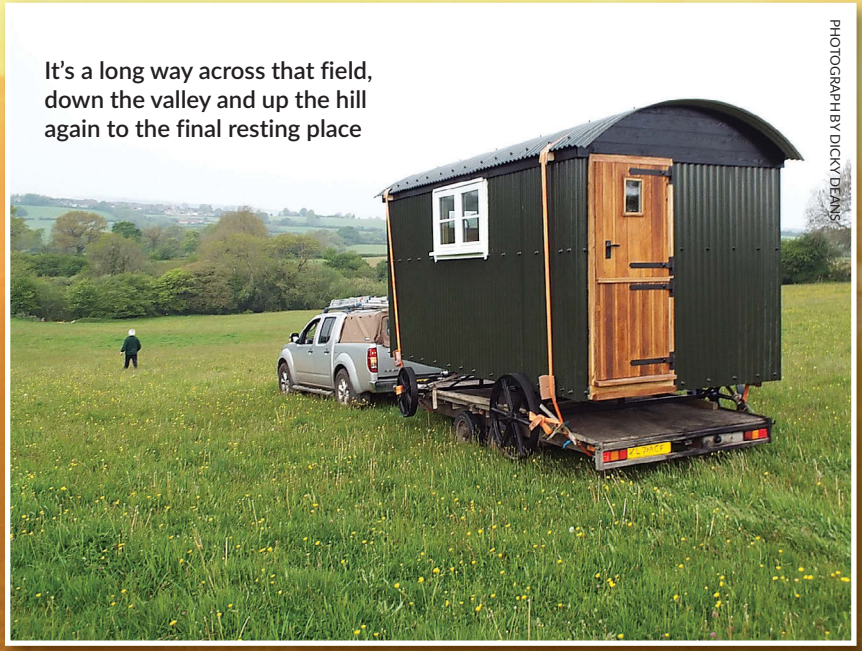
Heat and light

Once the electrics are in place, you will note how the twisted


Preparing to fit a window unit


The recycled ledged and braced door


Polyurethane insulation board matches the thickness of the tubular steel



It's a long way across that field, down the valley and up the hill again to the final resting place

PHOTOGRAPH BY DICKY DEANS

A desk and chair start to populate the empty hut. Note the lights and curly wiring in the roof

PHOTOGRAPH BY DICKY DEANS

flex for the bulbs is coiled from ceiling hangers, the result with the bare pine giving a cosy glow, although the client intends applying their choice of paintwork. For heating, the stove is a Hobbit woodstove by Salamander Stoves with a hefty 4.5kw output, more than sufficient for the space. It sits on a slab with a backboard and stovepipe exiting the roof. This is not fixed in place until after delivery to avoid damage in transit.

Delivery time

Because of set-building work commitments the hut was ready a bit later than hoped for, but it was important to get it right, no corners cut. Although Dicky has a 4 x 4 big enough to tow, there are very specific legal requirements for a tow such as this and, using an experienced haulier he knew, Dicky would get the hut to Dorset near Bridport in one piece and on time. Even so, loading such a high vehicle on to a trailer with its wheels overhanging the sides must have looked a daunting prospect. With a very early 4am start the hut finally made its stately way westwards while Dicky and his dad went on separately.

Arrival and installation

Anyone who has experienced driving through some of the lanes in Dorset will know just how narrow they really are. Getting a large shepherd's hut on a trailer to its resting place was interesting, especially as it then needed manoeuvring into a nearby orchard to turn into the adjoining field into which it would sit. That wasn't the end of the job. Dicky took the wheel and had to take several runs up a gentle rise in the uneven field before overcoming wheel spin enough to get up to the corner of the field which was to be its final resting place. It took both 4 x 4s, one to restrain the hut and the other to remove the trailer before it finally touched down on Dorset soil. It was late in the evening before Dicky and dad Barry got the hut ready for occupation. The clients were very happy with the result and looking forward to decorating and making it a home from home – the only problem might be the family fighting over who gets to use it first... ■

If the idea of a shepherd's hut appeals to you, it isn't as expensive as you might suppose. Visit Dicky Deans' website: **www.dickydeans.co.uk**

PHOTOGRAPH BY DICKY DEANS

A detail of the roof ribs with a stretcher batten in place to ensure the sides stay parallel, fitting the roof

Dicky and son Ewan take time out during the build, I believe Ewan would really like a hut of his own...

PHOTOGRAPH BY DICKY DEANS

KITTED OUT

Take a look at the tools, gadgets and gizmos that we think you will enjoy using in your workshop

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£390.32 inc vat

This is an extremely compact table saw for the hobbyist, designed for maximum mobility and the minimum amount of storage space. Built around a welded steel box section frame, it has a pair of sturdy wheels and a telescopic handle to allow the saw to be easily moved around the workshop. The saw can also be stored vertically to save storage space and has a folding steel stand which is easy to erect. The saw table is extruded aluminium and has a 645 x 140mm sliding table with 695mm of travel, which is useful for mitre cutting. The rip fence has two support rails and a clever flip-over function so that it can act either as a fence or wide board support rail. It is supplied with a 36T general purpose saw blade with a 90mm maximum depth and powered by a 1,800watt braked, brush motor. Two dust extraction ports enable connection to a vacuum extractor. The service tools and power lead are stored conveniently and all controls grouped together for ease of use.

Contact: www. axminster.co.uk or call 0800 371822
The price includes vat and may be subject to change without notice.

Record Woodcarving Set

This incredible value package from Record Power is perfectly suited to the aspiring woodcarver. It includes a refined and updated set of high quality, spring alloy, beech-handled carving chisels as well as an excellent tuitional DVD and booklet from internationally acclaimed carver and teacher Mike Davies.

Mike has developed his unique and highly successful 'Carving by Numbers' system ideal for the novice carving enthusiast. The DVD features his 'Significant Six' carving techniques that will form a solid foundation upon which the aspiring woodcarver's skills can be built. Information includes - tool talk, sharpening and maintenance, the significant six techniques, timber selection, basic flower project, practice makes perfect project, tips and tools. There is a sixteen page full colour companion booklet containing a collection of projects.

Woodcarving set RRP £89.99 inc VAT

The Record Power RPCVM15 15 oz Carver's Mallet has been specifically designed to have the ideal weight and perfect balance for use with carving chisels and is made of solid beech. It is currently available for £16.99 when bought with the carving package.

Record Power's ever-popular RPCV130 Carver's Vice only £39.99 when bought with the carving package. This sturdy vice can be clamped to a workbench and gives full 360° rotation for access at any angle.

Contact: www.recordpower.co.uk or call Record Power on 01246 571 020

Clarke Benchtop Bandsaw

This powerful new Clarke bench top model is ideal for DIY and hobby workshop use. The CBS190B can cut up to 80mm deep and 190mm wide. This machine comes with a 0-45degree tilting table, mitre gauge and quick release rip fence to provide the facility for straight, cross, rip, mitre and bevel cutting accurately in all types of wood. For the user's safety it is equipped with an extraction port to remove dust and chippings away from the working area.

Main features are a 350watt 230V motor, a table size 305L x 305Wmm Blade size 1425L x 6.35W x 0.3mm x 6TPI.

Contact: www.machinemart.co.uk

£155.98 inc vat

From £19.50

Knock-On Edging Groover

Wealden Tool Company have designed a low cost two-flute grooving cutter for producing slots in carcass board to accept standard knock-on T edge trim, widely used for example, for camper van conversions. Two versions of the cutter are available which accept either a 2mm or 3mm tongue, both with ¼in shank.

T5402 series Knock-On Edging Groover 26mm dia. x 2mm/ 28mm dia. x 2mm both £19.50/ 30mm dia. x 3mm £19.80.

Contact: www.wealdentool.com

From £395.10

FEIN Supercut

FEIN has released the new SuperCut Construction FSC500QSL oscillating multi tool. Two versions of the Fein SuperCut which includes the AFSC18QSL model, are the most powerful OMT's available and come equipped with the FEIN Starlock Max tool mounting system. This allows the user to swap accessories fast so less time is wasted on tool changing. The FSC500QSL can use Starlock, Starlock Plus and Starlock Max blades, whereas its predecessor, the FSC2.0Q was restricted to SuperCut blades unless fitted with an adaptor.

The corded and cordless FEIN SuperCut machines feature the latest innovative design which fully decouples the self-supported motor from the motor housing by using flexible dampening elements. The result has meant a vibration reduction of an amazing 70 per cent was also resulted has in noise reduction of 50 per cent. Along with the ergonomic design, the new SuperCut can be continually used by tradespeople for high load applications over sustained periods. The mains-powered FEIN SuperCut Construction FSC500QSL has a 450watt FEIN high power motor. The FSC500QSL is available now in the UK from FEIN dealers as a machine and Systainer case only option with a RRP of £395.10 inc VAT and specialist kit versions with an RRP of £494.34 inc VAT.

Contact: www.fein-uk.co.uk

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Woodland ways
Urban trees

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

A tree earmarked for destruction in the Sharrow district of Sheffield

PHOTOGRAPHS BY GARY MARSHALL UNLESS OTHERWISE STATED

This tree has caused damage, but did it deserve to die?

Gary Marshall makes a stand for the 'urban tree'

I've been following, with interest and consternation, bad news from Sheffield about many of its much-loved mature street trees. In a nutshell, a private company working for the city council was tasked with 'managing' more than 30,000 street trees – I have heard the figure 60,000 mentioned, allowing for new planting too. Felling notices were posted on many fine, old, disease-free trees and dawn felling raids were insensitively implemented amid massive public outcry.

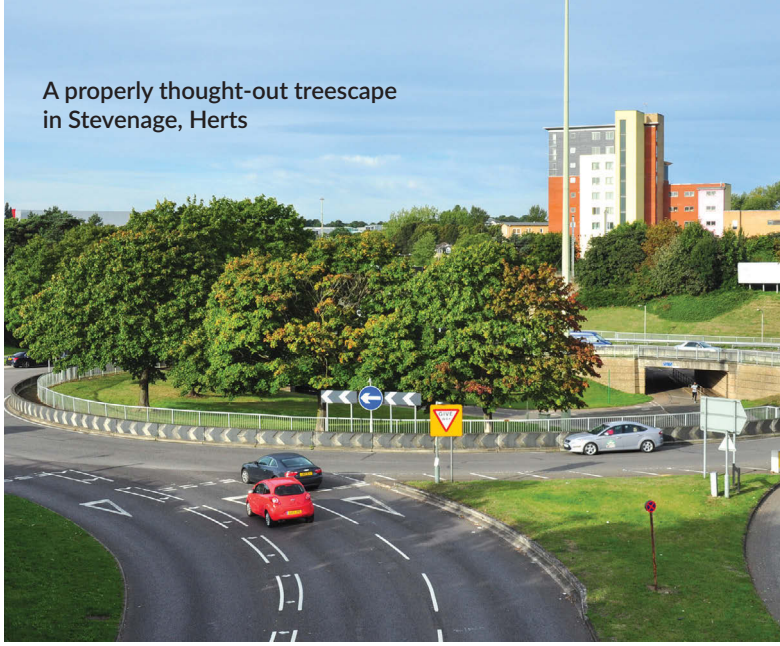
I've looked at Sheffield and Rotherham Wildlife Trust's balanced views on street trees (go to www.wildsheffield.com/what-we-do/south-yorkshire-biodiversity/planning-and-policy/sheffield-street-trees for the full background). I share the trust's concern and views. A street tree should be for life – not just convenience. Trees help mop up noxious gases, trap particulates, provide opportunities for urban wildlife, nectar and pollen for bees, beautify our townscapes and add to the public health and wellbeing of townspeople and visitors.

Not living anywhere near Sheffield, I thought I'd do a quick recce around some of my local towns and cities and my tree-based archive for some examples to illustrate a mainly positive outlook for street and public space urban trees.

First some examples of why some councils may find street trees bothersome. Tree roots can certainly lift pavements and road edges. Trunks can sprout unwanted epicormic basal growth, leaf litter can upset the tidy minded and, in wet conditions, can create slimy hazards. Car owners complain about falling sticky honeydew, seeds, catkins, petals and the like. Large branches and leaning trees threaten nervous pedestrians and residents. Add to this the possibility of roots invading poorly maintained drains and maybe even undermining property, squeezes on public spending, pressures from councils' legal and insurance 'experts' (these people are not generally arboriculturalists) and you can see why trees are seen by many an official and councillor as problems waiting to happen.

But it doesn't have to be like this. With proper care and attention, with suitable tree species appropriate to the street or public space (I've warned about poplars before) and with larger

The tree is the centre of this town



A properly thought-out treescape in Stevenage, Herts

PHOTOGRAPH COURTESY OF SHUTTERSTOCK

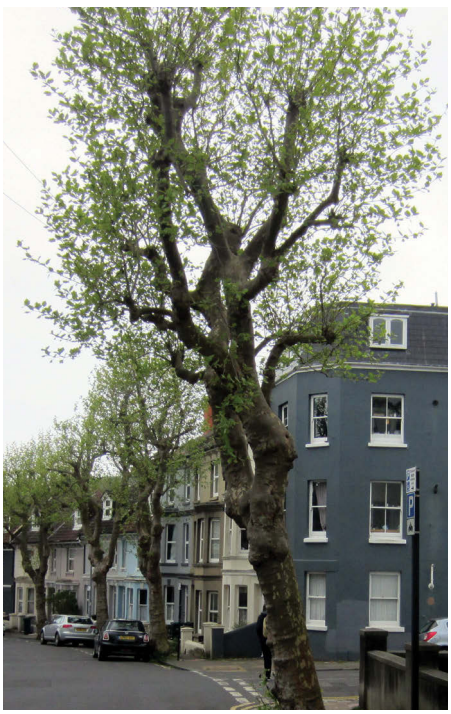
Cared for city trees improve the environment

trees being viewed as natural assets rather than liabilities, even hardened 'anti-large tree' councils can have their penny-pinching, frightened and overzealous attitudes changed. Certainly many city and town councils cherish their trees.

Take Brighton and Hove for instance. Not only does the city monitor, treat and protect its old elms against Dutch elm disease, but it plants new ones to follow on if any are lost. In streets it is planting more upright species (fastigiate) to enable simpler management in future. Nowadays, tree-friendly councils will give their new trees room to grow – rootwise and canopywise.

Another fine example of trees enhancing townscapes can be seen in Crawley new town, which is 70 years old this year, where town planners made room for hundreds of existing and new trees at the outset. Even in fast-expanding towns, planners and developers are increasingly inclined (or forced) to preserve and value the local treescape as much as their long-suffering public does.

Long live urban trees – stand up for them as they do for you. ■



Chopped but still alive because it has been pollarded

Above: Saved from the chop in Brighton
Right: some councils really care
Below: Developers forced to keep the treescape in developing towns

#@*&!%?! happens! Cutter jam

An awkward situation – a cutter jam in a router table and poor spanner access. Unfortunately, it will mean dropping the router down and out of the table to sort it out on the workbench

It doesn't happen often but if it does, it's a real pain. Here's how to deal with it

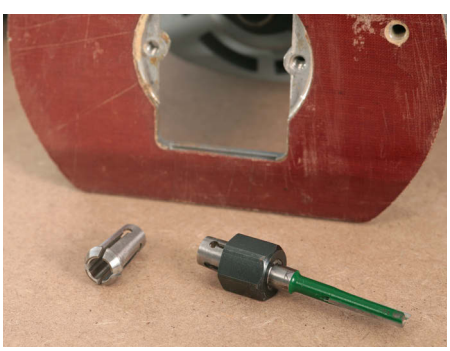
Cutter jamming in collets is not unknown – it may be the result of overtightening the collet nut, which is an easy mistake to make. The thing is to check your tightening technique, in the words of the late, great Ron Fox, routing expert: 'Two bites of the spanner.' In other words, give the spanner one turn while pressing in the spindle lock and then tighten a bit more. If you force the collet nut hard tight it will jam the collet around the cutter shank and possibly even cause some damage being too forceful.

A second point is that cutter shanks can get marked over time and the surface may be slightly rough. A very light rub over with emery paper to remove said roughness is all you can do without unintentionally reshaping the shank, so be careful doing this.

A third point is that some collets may have a tendency to jam, the relationship between the collet and the shank is a close one and the typical multi-split European collet found on many routers may be guilty as it can grip quite tightly, even though it is better than the simpler Far Eastern pattern found on cheaper machines which are less flexible.

Solution

Never hit the cutter or its shank – it won't do it any good at all and could make it really hazardous to use. Instead, with the collet part undone, tap the side of the nut with a lightweight pin hammer if you can get access under the router body. This should be enough to persuade it to loosen. Take care you don't hit the thread on the spindle. If the cutter, nut and collet will come away completely then do the same thing away from the machine (powered off and unplugged at all times). The only problem getting access is if an extraction fitting is in place, trapping the other components. ■



Here the cutter and collet assembly have come away as one item, so it is easier to deal with

A close-up of a ½in collet and the nut snapped on to another one shows us how the series of splits allow it to grip securely to the cutter shank

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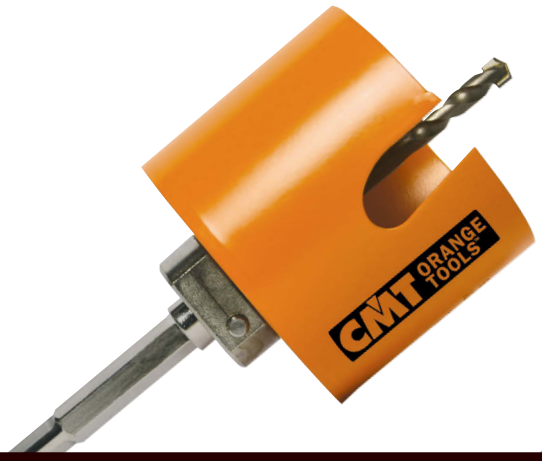
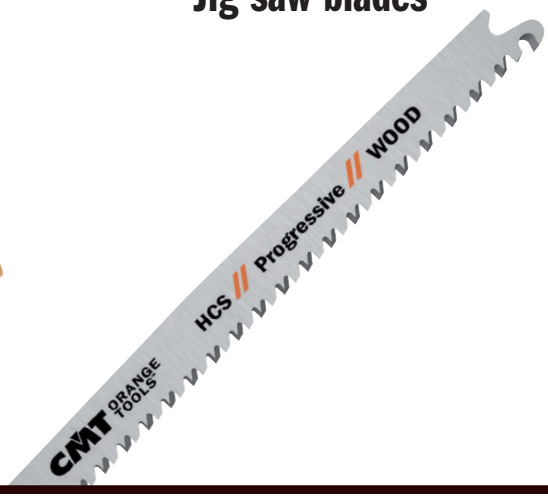
Saw blades

Hole saws



Jig saw blades



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PHOTOGRAPHS BY GMC/ANTHONY BAILEY

That's your shed or fence hanging up there. Perhaps it needed treatment sooner?

TOP TEN TIPS

Maintaining outdoor structures

Wood is amazing stuff but when it is out in all weathers it can suffer...

It is so easy to not take on board the fact that your windows, doors or shed are deteriorating, because it happens so slowly – much slower than watching paint dry but gradually degrading nonetheless. There are telltale warning signs in some cases but you also need to inspect woodwork every so often. A prod, a tap can tell you what you don't want to know but really ought to do something about.

1 Constant water contact will cause rotting. To avoid this check things like gutter leaks dripping on woodwork, remove earth or grasscuttings or compost from fencing. Any form of direct contact can cause rot. As soon as you remove the offending cause the biological action will reduce, but won't go away. However, applying a suitable protective finish to bare surfaces should help to stave off the evil day when replacement is necessary.

2 Checking for hidden rot in window and door frames is easy enough. Take a sharp tool such as a paint scraper and jab it in the wood. If it goes in then you have rot, of course. Don't just paint over and hope. Dig out the rot until you reach reasonably stable wood and remove loose flakes of wood. Now soak the area with a wood hardening compound and leave to dry before filling with two-part resin woodfiller. It is basically the same as car body filler so you can use that instead.

3 Older properties have puttied-in windows rather than double-glazing held with silicone. The bottom run of putty and a short distance up each side will harden and crack badly as water undermines it and the wood of the frame. It is worth renewing this putty before too much damage occurs. Take care not to strike the glass with the chisel edge and ensure a primer is applied around the rebate in front of the glass before applying new putty.

4 Felted roofs often fall victim to neglect. I have seen so many small garden sheds with lightweight roofing felt hanging off and exposed wooden roofs. It is so unnecessary and so easy to put right. Often a kit-built shed will have the thinnest felt supplied to reduce cost. If it is a new shed the a second layer of heavy grade stone chipping-covered felt needs to be laid, glued and nailed over the first layer with joints running 'downhill'

Oh dear, this is a bit serious. Ground contact is a real issue, damp and spores congregate turning it into a feeding ground that we call wet rot

Sometimes you need to go right back to basics with a thorough sanding and fill defects before applying a complete paint system right up to gloss coat

Creosote substitute is very effective because of its oily nature but it is messy so cover up anything that matters, such as plants or paving, while applying it

or right across the top to avoid water penetration. An existing shed needs the torn felt stripped off, a coat of a preservative applied and then refelted using a heavy grade, possibly with slaters felt underneath for extra protection, giving a life span of 15 years or more.

5 Gutters are essential and need to work properly. They prevent water penetrating around foundations and stop it falling off the faces of the building, including the woodwork. Many properties are sited near trees or have one side in the shade where damp and moss build up. Leaves, pine needles, seeds such as ash keys and lumps of moss end up blocking gutters, often congregating around 'cages' designed to keep the downpipe clear. The result is water overtopping the gutters, especially in heavy rain, and even plants growing in the rich nutrients that silt up in the gutter. It is unsightly but also a real threat to the health of the building and should be removed.

6 Fences and shed timber start to denature after a while. Fence panels go a silvery grey instead of their original honey or reddish colour and featheredge board starts to become a bit fibrous. You can tell if it is time for treatment when you see wasps making a 'bee line' for your softwood fence panels or flakeboard shed walls. They are busy chewing it off, only to fly to their nest-in-progress and add the fibrous goo to the exquisite structure hidden somewhere in your roof. If you care more about your property than nature, do apply some treatment well before winter.

7 There are various timber treatments you can use but the type of woodwork and its use will possibly dictate the type chosen. Among the simplest, messiest and smelliest are creosote substitutes. The original creosote was found to be potentially cancer-causing but the replacements still have the same apparent characteristics – dark, oily, smelly. They are remarkably effective (and cheap) because of the oiliness, but will need renewal every so often. Do cover plants and wear old clothes when brushing or spraying it on.

8 Tops of fence posts and other vertical wooden components are vulnerable to splits as they are affected by the weather. Capping them with lead sheet or flashing band will prevent this and extend their useable life considerably. Lead is much longer lasting but more expensive and needs shaping to fit, a whereas stick-on flashing band takes a few minutes to apply, but you must use the black sticky adhesive first, which also helps seal the cracks.

9 Where painted timber separates along join lines between, say, the sill and the window frame, water can lie in the gap or even run inwards. Filling these gaps with a flexible over-paintable mastic will extend the life of the woodwork and can form a smooth curve shape for water to run off.

10 Timber often needs help, this may be in the form of reinforcement, extra screws or nails or adding bracing. If it moves or wobbles, fix it or replace it before your fence/ trellis/ garden shed gives up the ghost. ■

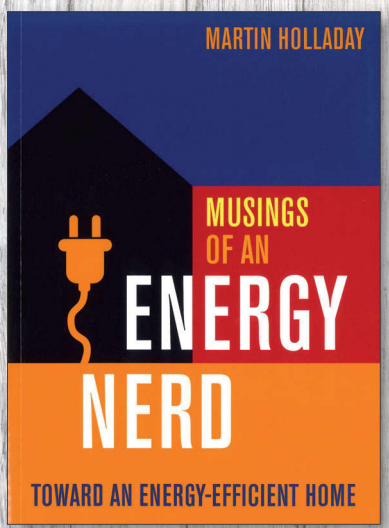
Gutters, felt roof and fascia boards all need attention or the integrity of an outbuilding is easily undermined

Fence posts are usually installed using concrete, which is easy to do, but rot sets in around the bottom. Using masonry to pack around the post makes it easier to remove later

BOOK REVIEWS

Anthony Bailey muses on the differences between US and UK practice with this book selection

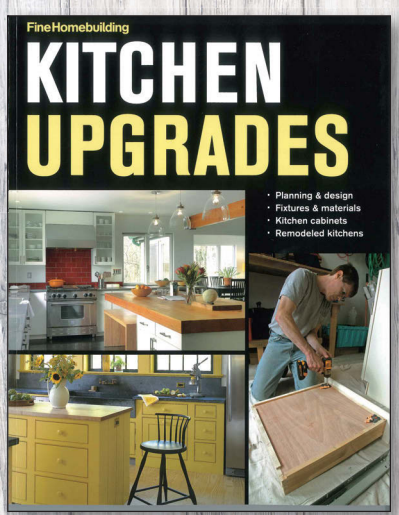
Musings of An Energy Nerd
by Martin Holladay



Published by Taunton
Paperback, 272 pages,
ISBN 978-1-63186-256-4
£21.99

The author comes from a practical background in building, roofing and plumbing but has had a long-time passion for 'green energy', having built his own 'passive-solar' house way back in 1974 and lived 'off-grid' from the following year. In other words, he lives how he writes. This book is filled with an immense amount of detail regarding the design, construction, insulation and day-to-day operation of various types of domestic dwelling which, inevitably, being an American book, have features not found here in the UK. Likewise, references to building codes are specific to the US. Nevertheless, as we are globally becoming more aware of the need to conserve energy and reduce pollution, much of the content chimes with best practice here and in the rest of Europe. Indeed, apart from frequent references to the Passivhaus concept developed in Germany, there is also a chapter devoted to it. This isn't just a technical book or a look at the way 'other folks' do things, it is a thought-provoking work that manages to engage the reader's interest about the need to conserve energy and the practical ways to achieve that, to the point that, as you keep reading, it becomes rather obsessional when you realise the problems and the personal responsibility to correct them. Yes, a very interesting read indeed.

Fine Homebuilding – Kitchen Upgrades



Published by Taunton
Paperback, 240 pages,
ISBN 978-1-63186-845-0
£21.99

Here is another book from 'across the pond', an extract of which we featured in issue 27. I thought it was worth giving it the once over as it had caught my eye last time. Inevitably, being American the kitchens are big, the designs fabulous and the styles a little different to our somewhat more restrained kitchen designs. However, it is an interesting book because it shows a wide selection of materials for countertops, cabinets and flooring. This seems rather like a book for kitchen fitters and flooring contractors because the information and excellent photography show methods and techniques which a novice might be advised not to try, but at least it does show how to do them. Respraying an entire run of kitchen units in situ, or using a floor sander to level a wooden floor are not skills for the faint-hearted. However, I learnt quite a lot to my advantage and enjoyed the book even if it did leave me feeling a little green with envy. Plenty of useful techniques and tips for readers to pick up on and put to good use in our slightly less generously appointed kitchens.

Both books available from
GMC Publications
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01273 488005

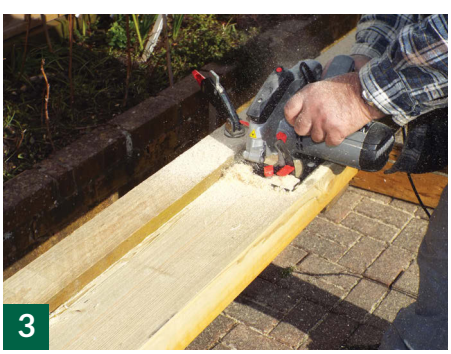
PHOTOGRAPH BY BOB ADSETT

New church gate

When an old church gate gave up the ghost, **Bob Adsett** rose to the challenge

1

2



3

1 This old gate was a five-bar and opened up a slope. Over the years it had rotted and collapsed and, as shown in the picture, the bottom had been cut to allow the gate to open fully. So I drew up a modified four-bar gate using the same hinge positions.

2 The timber sizes I needed were not available, so instead I started with one 4.2m length of 225 x 75mm and five lengths of 100 x 25mm for the rails.

3 Using a portable saw pressed against a clamped fence and working from both sides, taking care to align the cuts as near as possible, this was sawn into 95 x 75mm and 130 x 75mm sections. ➤

Tools and equipment

- Portable saw, from Wickes as my old one had been lent out and wrecked so I needed a quick, cheap way to get out of a problem.
- My Kity 439 planer thicknesser.
- My small bench drill and sawtooth bit.
- Jigsaw to cut the tops of the styles.
- Router and 12.5mm rad cutter.
- Cordless drill/driver.
- A hammer and good quality chisels.
- And the best glue you can get your hands on (in my opinion).

So it is possible to do large projects with minimal equipment.

4 Then it was thicknessed down to 92 x 72mm & 120 x 72mm and cut into the required lengths. Five pieces 100 x 25mm, intended for the rails and brace, were planed to 95 x 22mm.

5 The four mortises on each stile were marked out together to keep the alignment correct.

6 Having made a solid, square back fence for the bench drill, the mortises were cut out from both sides with a 22mm sawtooth bit with the workpieces pressed against the fence.

7 The reason for using this method was that my mortiser had packed up and needed repairing. It would have been easier with the mortise machine but needs must, as they say.

8 The lower rails were then planed down to fit the mortises – 'bare-faced' tenons as they are known (no shoulder).

9 Any tight spots in the mortises were taken down with a chisel and the sockets squared out to accept the tenons.

10 The tenons on the top rail were cut by first marking them out and then clamping a back stop in place to control the portable saw and maintain a straight cut. I set the blade to the depth needed and started against the fence working towards the end, cutting every 12mm or so. I did both ends, turned over and repeated on the other face.

11 The waste was removed from the cheeks of the mortises with a wide chisel to make paring easier. The frame was then put together to check all the components fitted OK. At this point two saw cuts were made into the ends of the tenons so wedges could be driven in once clamped up.

12 The gate was assembled and glued with Titebond PU (polyurethane) then, with the use of two ratchet straps (the type used to secure lorry loads), the gate was squared and clamped tight. The wedges were inserted and driven home. This spread the tenon ends tight to the mortise, making it not only a glued joint, but also a mechanical one.


4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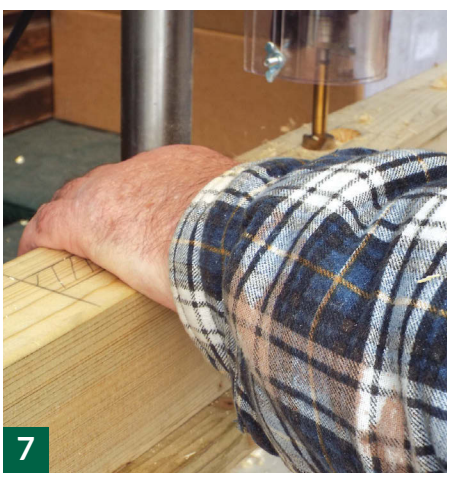
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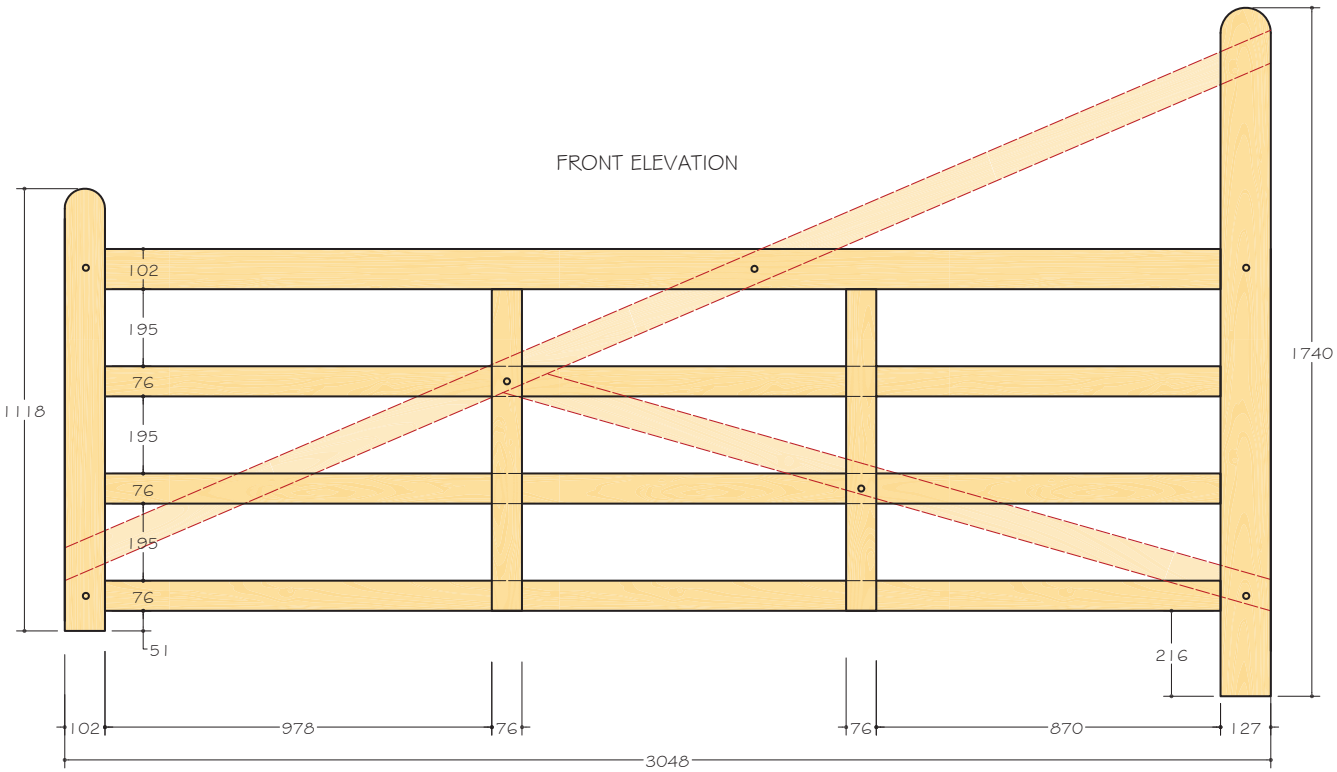

13 The diagonal cross brace was marked out and, using the same method as used on the tenons, the notch for the cross brace was cut out, using the wide chisel to remove the waste. This was repeated at the top of the hinge stile, the bottom of the latch stile and in the top rail. All joints were glued with Titebond PU and left to dry.

14 After all the glue had set the wedges were cut flush to the stiles and the ends of the cross brace were trimmed off. The whole gate was then belt sanded to remove all pencil marks, glue and saw marks on the ends of the rails and around the stile ends.

15 The gate then had the sharp corners removed with a 12.5mm radius cutter mounted in the router, before a final hand sanding and being treated first with a 5-in-1 wood preservative, then with three coats of external wood treatment. All joints were either bolted right through with coach bolts and stainless steel screws where the cross brace went over the rails. The original hinges were saved, cleaned and given a coat of black Hammerite paint as was the existing steel hinging post. A job well done. ■


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Work smarter
Shaped work

Woodwork projects can have such awkward shapes they very nearly drive you round the bend

The initial preparation of most stock is generally straightforward. You select and buy the timber and sheet material, mark it out and cut it then saw and plane to shape. Often in the case of solid wood it is bought as prepared straight, square or rectangular sections. That is all well and good if your project is straight and square but what if you have to deviate from the straight and narrow? Cupboards and the like have to be fitted into awkward spaces that no ready-made units will fit, or maybe you want an unusual shaped piece of furniture, or just want to play around with shapes and not be confined to the obvious – what then?

Here are some suggestions for making the job easier and what tools you need to do it. ➤

Too tight a curve and no relieving cuts can mean no way back, and a risk of blade jamming or getting pulled off the bandwheels

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

The 'nose' of a belt sander is great for internal curves but you need to be careful it doesn't pull the workpiece away from you unexpectedly

Jigsaws aren't known for precise cutting but they can go where no other form of saw can, especially as they can do mid-panel starting cuts

Planning bandsaw cuts can help avoid the workpiece clashing with the casing to the left of the operator

Cutting out and shaping

Cutting out isn't the same as delivering the final, finished shape. Usually you can safely cut near to the desired line but leave the last bit for sanding or using a suitable fine shaping tool. It may not even be possible to get near to the finished shape at the cutting out stage, an example would be trying to cut a tight radius on a bandsaw with a standard 9-12mm width blade. Are there tricks and means you can employ? Of course there are, but you might need to get better equipped to do it.

What shape do I cut?

A good question, because you need to work that out before you can cut a shape. It might be as small as cutting to fit a scribing infill around a skirting board or it might be creating the shape of a dining chair.

In the former case you need a template which could be cut from card and shaped until it fits, or perhaps an adjustable contour jig with adjustable metal pins or plastic fingers which is pressed against skirting board to give an accurate copy of the outline. In the second case, a chair will need to be built using a full-size drawing on a board which you can take tracings off and use as a constant reference.

Whatever you want to cut, if you know the shape that is half the battle.

Cutting the shape

Once you have marked out the desired shape you have to choose your weapons, so to speak. If you want to do a tight curve just once, it isn't worth investing in a jigsaw or scrollsaw if you aren't going to do anything like it ever again. The chances are you will, in which case it may be worth laying out some money. For a one-off, a coping saw is handy, if a little slow cutting to a line. It can help to remove large waste areas first, which can be done with a handsaw or circular saw. The waste can be useful and put straight back into stock, and cutting close to shaped areas makes it easier to use hand tools on the remaining smaller waste areas.

Cutting cheats

The bandsaw is incredibly versatile and every well set-up workshop should have one, but there are limitations in use. I mentioned tight curves but you may not have a really narrow blade or want to reset your machine to take a narrow blade just for one job. Instead do a series of relieving cuts into the waste area around the curve, then cut each piece out with a short, straight cut so you end up with a series of flats instead of a smooth curve. To remove the remaining waste try a sideways 'nibbling' action, where the tips of the teeth gradually eat into the waste as you move the workpiece sideways across the teeth.

Good though a bandsaw is, it is built with the casing to the left of the operator and your workpiece can jam against the case. A bit of forward planning can avoid this – mark on the underneath and cut with that face upwards if you think manoeuvering may be a problem.

A jigsaw is versatile and doesn't have a problem with curves so long as a narrow scroll blade is fitted, although it won't then go through thick stock. However, you cannot use the orbit control as this makes the blade swing forwards on the upcutting stroke, which sends it off the line of the curve, then you don't get a neat perpendicular cut.

A decent scrollsaw is excellent in thinner stock and perfect for scroll-type cuts of course, because it has such narrow blades that can be had in various coarse or fine cutting types. As with the bandsaw you need to take the workpiece to the saw and you are limited in capacity.

A disc sander will shape curves quickly and accurately but can get clogged easily. Use an abrasive cleaning block to refresh the disc, now you can get hook and loop discs for fast changeover

A bobbin sander or an attachment for a pillar drill are really useful for sanding internal curves. Do use extraction or wear a suitable dust mask

A traditional drawknife requires some care and skill and you need to respect grain direction to avoid digging in or tearing off wood unexpectedly

Creating custom sanding profiles is really useful and hook and loop fastening makes it quick to change grits if you are using Abranet

IMPROVING AND FINISHING SHAPES

Machine sanding

Having got near to your intended profile you need to get it to a finished shape. There are various means to do this and it partly depends on how true to your technique you want to be. If you are happy to use machine sanding then a static disc sander will make quick work of external curves and the cutting action is easily controllable – 80 grit is best for speed and a reasonable finish and you can now use hook and loop fastening for speedy changes of worn discs. A static belt and disc sander gives the best of both worlds, doing end grain on the disc and long grain edges on the belt or internal curves on the 'nose' at the front of the belt sander. A separate spindle sander with interchangeable abrasive covered bobbins is good for matching bobbin size to each internal curve, but runs at a slower speed than the other machines.

Hand shaping

If you are dedicated to hand working or don't want to invest in machines, you are still well catered for. A starting point is rasps. There are mass-manufactured 'machine stitched' (how the teeth are raised) tooth rasps or finer, beautifully created 'hand stitched' rasps which are more expensive but give a nicer result. For more gradual curves you could try a very sharp drawknife or a spokeshave. These need good control and have to respect the angle of the grain going 'downhill' into the grain so it doesn't tear out. These methods will get you to the right profile. You need to keep stopping to check the shaping is smooth and as you want it to be without dips and hollows.

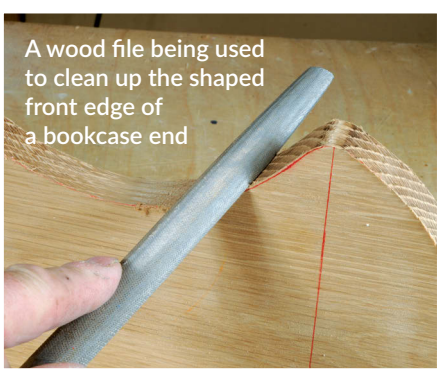
Hand sanding

Having created smooth shapes with rasps or other hand tools, you need to get the shapes to a higher level of finish. As always, you need to start with coarse abrasives and work through the grits to much finer ones, typically starting at 80 or 100 grit and going to 150 then 240 and possibly finer still until all obvious scratches are gone. Aluminium oxide paper is the usual way to achieve this but Abranet is particularly efficient at smoothing surfaces. Mounting abrasive on a block or pad for external curves is fine, but internal curves really need abrasive attached to large dowel or a section of plastic waste pipe so the curve mimics the radius you are sanding.

A last point

When you are shaping and sanding keep checking along the workpiece to ensure the shaped or sanded edges are crisp and at the correct angle, whether this is to be perpendicular to the faces or not. With the right tools and care you can conquer your devilishly shaped demons. ■

By approaching a tight curve with a wide blade from two directions it is possible to get them to meet in the middle without cutting into the drawn line, but the shape will need cleaning up afterwards



A wood file being used to clean up the shaped front edge of a bookcase end

Rasps, coarse wood files, Surform and Microplane tools give you a variety of ways to shape wood depending on the task

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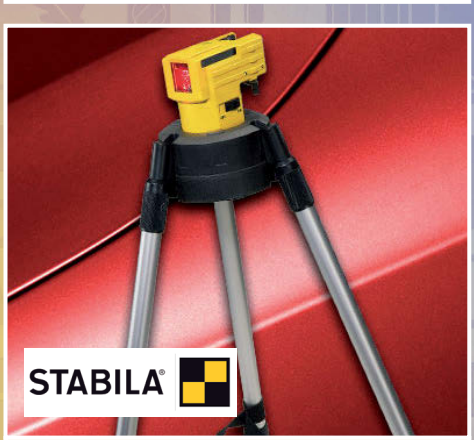

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PHOTOGRAPHS BY JOHN VARDON

Fruit panel

John Vardon shows you how to carve a simple fruit panel

This is a simple relief carving suitable for the beginner and introduces you to using a few basic gouges, thinking in three dimensions and holding the carving securely. The carving should take about two days to complete. The gouges referenced in the box on the following page are those used, but any suitable gouge could be used. Using big gouges often gives you better control. Ensure they are sharp not only at the start, but also throughout the carving.

The fruit panel relief design is based on a carving in Tyntesfield House, which is owned by the National Trust, *www.nationaltrust.org.uk/tyntesfield*. The design could be modified to show alternative fruit, e.g. apples, and it also allows the carver to include alternative shapes of leaves, etc. The principles for carving would be the same, however. I recommend you read through the entire article before you start carving, so that you have an understanding of those various steps. ➤

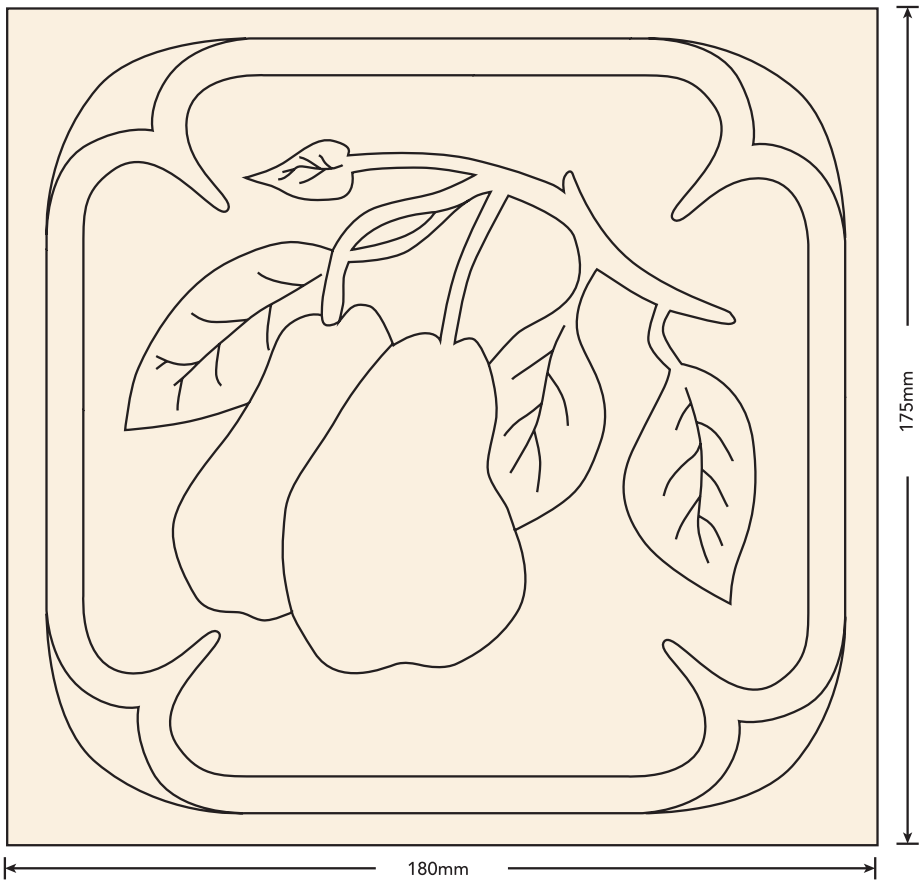
Project

Things you will need:

Tools:

- No.11, 6mm
- No.2, 25mm
- No.5, 12mm
- No.5, 15mm
- No.4, 6mm
- Small V gouge
- Mallet and range of abrasives
- G-clamp
- Finish of your choice

Wood: A piece of ash (*Fraxinus excelsior*) or lime (*Tilia vulgaris*) measuring 180 × 175 × 25mm

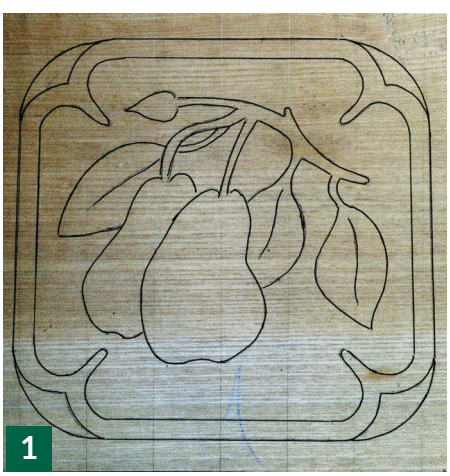


1 For this project a piece of ash *(Fraxinus excelsior)* was used, but any hardwood will do. The actual size of the panel can vary. Scale the design as required.

2 Draw the design on the wood but do not put in every detail, e.g. leaf veins. However, do not forget these details and redraw any design lines that may be carved away. Secure the carving with a G-clamp. Using a No.11, 6mm, carve a groove around the outline about 2mm inside the inner boundary and 2mm outside the fruit, leaves, stem, etc. Some carvers will stab the outline with an appropriate-sized gouge and mallet, but this is like using a gouge as a wedge and compresses the wood either side of the gouge. Also, the stab may 'creep' along the grain into areas that should not be carved.

3 Using a No.5, 12mm or similar, remove the wood between the fruit, leaves, etc. and the boundary to a depth of about 10mm. Care must be taken at the corners and at the stems. Using a No.5 rather than, say, a No.2 gouge will be easier. Also, take care in regions of short grain. It may not be possible to carve all areas until the fruit etc. has been carved. Leave the boundary vertical at this stage.

4 To check the depth construct a simple depth gauge. The one shown comprises a flat piece of wood with a screw inserted with the point at the required depth.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5 This is then laid on top of the carving and any high areas will be indicated by scratches on the surface of the project. An alternative to using a screw is a matchstick, but this would not scratch the surface – which may be desirable in some cases. The screw or match can be moved up or down to the required depth.

6 You now need to start to carve the fruit, leaves, etc. Decide on the various levels of the fruit and leaves – I find marking the high and low spots with 'H' and 'L' useful. Carve a groove at the boundary of the two fruits and leaves using a No.11, 6mm straight gouge. The groove should be on the outside of the items that are on top. The shape of the leaves should also be decided, i.e. are they flat, concave or convex? Mark the centreline of the fruit and leaves.

'Undercutting the fruit will further highlight the shape'

7 Using a No.2, 25mm, carve the fruit and leaves to the required shape. Using the No.5, 12mm may be easier and quicker near the edges of the fruit, where the greatest amount of wood is to be removed. As this is a relief carving the fruit will be 'flattened'. Turning the gouge over will help to achieve the required rounded shape here.

8 The left-hand fruit in this example is partly behind the right-hand fruit and therefore must be lower in this region. Away from the right-hand fruit, the left-hand fruit could be higher due to its shape. It may be necessary to reduce the background further to accommodate the shape of the fruits. Undercutting the fruit will further highlight the shape of the fruit, however, do not undercut at this stage. Continue carving to obtain the desired shapes of the fruit and leaves. Other – narrower – gouges may need to be used.

9 Now, using appropriate smaller gouges, shape the branches and fruit stems to the required shape and depths. Again, using the gouge upside down will help here – except in any concave regions, such as where a leaf stem blends into the branch. ➤


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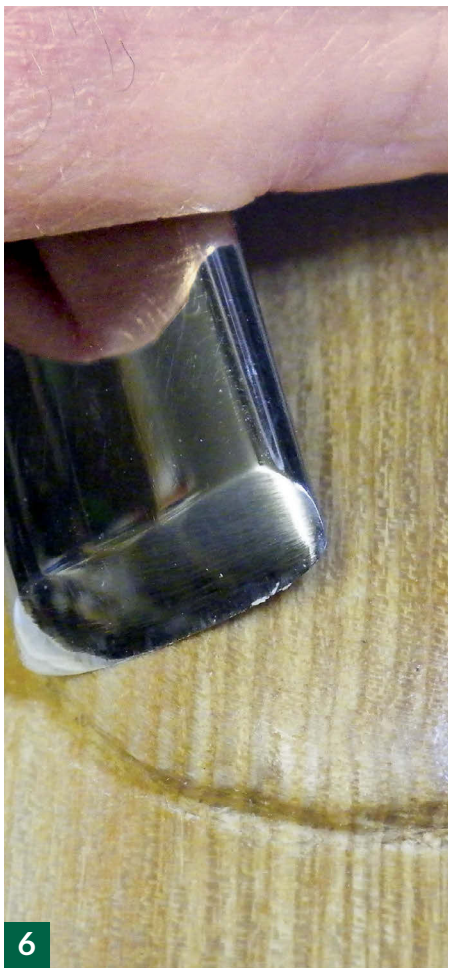
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10 Mark in the position and shape of the veins of the leaves. Using a V gouge or veiner cut the veins in, leaving the wood either side of the veins intact. You need to be careful using a V gouge or veiner as one side of the gouge will be working with the grain whereas the other side may be against the grain.

11 Now shape the outside boundary – in this example it is made concave. Use a No.5, 15mm straight or curved gouge and carve along each boundary. I found this easier than carving down. Note: if a different radii is required, then a gouge to suit the radii should be used. 'Rolling' the gouge around the corners will help to get the required shape. Care should be taken at the corners in particular not to break off the little spikes or cusps. It may be beneficial to carve in from the end of the cusp. The width of the cusp is fairly narrow and, to accommodate the curvature, it is necessary to lower the inner point of the cusp to about half depth. It may also be desirable to shorten the cusps.

12 Now to tidy up as required. Holding the carving at different angles will help. It is only at this stage where any undercutting should be carried out. Using a small gouge, e.g. No.4, 6mm, undercut the branches to provide the roundness. The left and middle leaves – in this example – should be undercut to enhance their convex curvature and thickness. No undercutting of the right-hand leaf is necessary as it is convex and the edges are 'into the background'. Slight undercutting of the fruit will enhance the shape as well as some rounding along the fruit edge.

13 Nearly there. You should now go around the whole carving again tidying up where necessary. Leaving some of the items 'tool-finished', e.g. branches, may be preferred. Unless you are leaving areas 'tool-finished', try to get as smooth a surface as possible with gouges, rather than spending lots of time sanding. The carving should now be sanded, going through the various grits of abrasives.

14 Finally, finish the project with a sealer and wax, acrylic varnish or other appropriate finish of your choice. Your final piece should look like this. ■


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Trees for life

This month we look at a tree which is inextricably bound up with city life –the ever resilient London plane

Take a walk in any Central London square surrounded by grand Georgian townhouses and you are bound to see *Platanus x acerifolia*, the London plane, which is thought be a hybrid of the Oriental plane (*Platanus orientalis*) and the American sycamore (*Platanus occidentalis*). It doesn't just exist in the capital but is also a common sight in other towns and cities in the UK and elsewhere.

The 'x' in the name denotes it is a hybrid – and what a hybrid it is. It has unusual scale bark, acer-type leaves and a timber grain that is unique, invariably sought after for the highly figured quartersawn boards which cabinetmakers want to work with.

As always there are variants in the plane family, of which the London plane is a very significant member. Its major claim to fame is being one of the most efficient trees for removing small particle pollutants in urban environments, being tolerant of atmospheric pollution and root compaction. It is a large deciduous tree growing 20-30m tall, although it can exceptionally grow as high as 40m. The bark can either be a smooth, pale grey-green covered in exfoliating patches, or buff-brown and non-exfoliating. The leaves are thick and stiff-looking, like maple leaves, which are between 10-20cm long and 12-25cm across. Young leaves are covered in fine hairs which wear off by late summer. The flowers are clustered on pendulous stems, with male and female flowers on separate stems. The fruit matures in about six months, growing to nearly 3cm in diameter, containing a spherical cluster of achenes with stiff hairs to aid wind dispersal and containing the seeds. The clusters break up over the winter to release the seeds. The tree looks like the American sycamore, from which it is derived, however it is almost exclusively planted in urban habitats, unlike the American sycamore, which prefers more rural settings.

PHOTOGRAPHS COURTESY OF WIKIPEDIA COMMONS UNLESS OTHERWISE STATED
PHOTOGRAPH COURTESY OF SHUTTERSTOCK

Fascinating fact

The London plane accounts for more than half our capital city's trees. The most valuable example is to be found in Mayfair's Berkeley Square, where its 6ft-wide trunk has an estimated value of £750,000.

Typical uses

Plane is used for furniture making, carving, turnery, cigar boxes, inlay and panelling. It is frequently cut on the quartersawn to reveal the striking lacewood patterning. It is available as a highly decorative veneer and can be chemically treated to turn the background wood a grey colour while retaining the flecking.

Symbolism

The symbol of the New York City Department of Parks & Recreation is a cross between the leaf of the London plane and a maple leaf. It features prominently on signs and buildings across the city. The London plane is a restricted tree in New York City as it constitutes more than 10% of the tree population.

Timber conversion

Plane dries fairly rapidly but care is needed to prevent it from splitting and distorting. Once dry there is very little movement.

Working characteristics

Plane has low stiffness but is generally very useable as a cabinet timber, including having a good steam bending capability. It works well by hand tools or machines with a moderate blunting effect. When planing quartersawn stock very sharp cutting edges are needed to prevent the rays from flaking, but otherwise it planes well. It can twist and bind on blades during sawing. It takes nails, screws, glues and stains well.

Exfoliating bark

Hazard

In an urban environment there are several problems caused by the plane tree. The short, stiff hairs shed by the young leaves and dispersing seeds are an irritant and can cause breathing difficulties, especially for anyone with asthma. The large leaves are tough and don't break down easily, often taking more than a year, so can create a disposal problem.

Diseases

The tree can be susceptible to plane anthracnose, which causes dieback in leaves and shoots.

Wildlife

There is very little wildlife associated with the London plane although grey squirrels may eat the seeds.

Fascinating fact

Plane was first formally recognised in 1789 by William Aiton, a botanist from Scotland who called it the Spanish plane tree as it was claimed to be hybridised in Spain. However, it may have occurred in Vauxhall Gardens, London, where it was discovered by John Tradescant the Younger, in the 17th century.

History

The London plane is, of course, a hybrid. The Oriental plane came from south east Europe. The first account of the Oriental plane in Britain is found in William Turner's book *Names Of Herbs* in 1548. The American sycamore arrived approximately 150 years later at the beginning of the 17th century. These gave rise to the tree we know today.

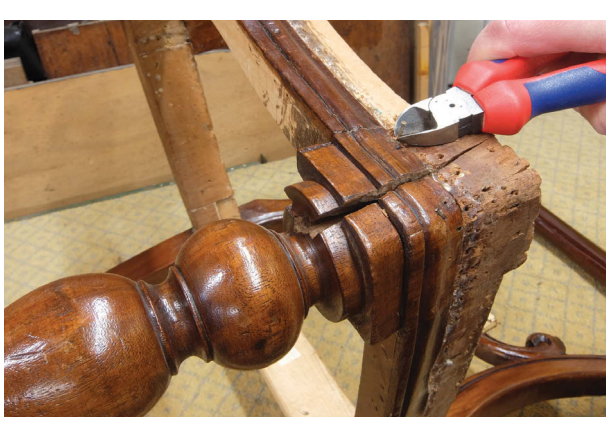
Quartersawn 'lacewood' plane

Make your own discoveries

This tree isn't just to be found in London but in other towns and cities across the UK in streets, parks and gardens. Visit **www.aranya.co.uk/planes/text/intro.html** for more on this important tree.

Coming next month in
Woodworking CRAFTS

ISSUE 30 ON SALE 3 AUG



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PHOTOGRAPH BY GMC/ANTHONY BAILEY

Mora knives

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What the testers had to say

Niki Swift – Mora 162 Double Edge Hook Knife

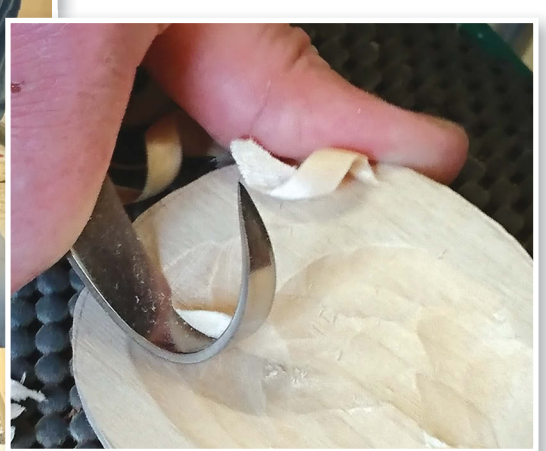
I used YouTube to obtain instructions on how to use the knife. I found it a little difficult at first as I tended to go too deep into the wood, but once I had got used to it I found it quite easy.

I have never attempted spoon carving before and I was quite surprised by the end result. It was a lot easier than I thought it would be. The hook knife did help a great deal with the shaping of the spoon. I am looking forward to experimenting further with other carvings.

The radius of the blade was plenty adequate for the shaping of the spoon head. This blade may also be useful when step carving if medium to large areas need to be worked on.

I found that my index finger was constantly sitting on the top edge of the blade instead of being on the base of the handle, and this was a little uncomfortable. It would be ideal if handles and knife length could be provided in sizes to suit the difference in hand size.

PHOTOGRAPHS COURTESY OF JOHN GORDON



John Gordon found the cutting edge supplied with the Mora 164 surprisingly sharp

John Gordon – Mora 164 Single Edge Hook Knife

I have never undertaken spoon knife carving before, but have used standard carving knives in relief carving. The knife was suitable for carrying out spoon carving. It was comfortable to hold and blade size provided appropriate radius for removal of correct amount of wood on each carve.

The edge supplied was surprisingly sharp. It was suitable for use with lime wood and spalted beech, which I also experimented with. Previously seen reviews on Mora knives stated that they required sharpening after purchase. This was not the case and I was able to maintain the blade on a leather honing wheel after prolonged use.

It took a short time to establish a rhythm and confidence in using carving strokes. I am right-handed so unable to make carving strokes away from myself using my other hand to stabilise the blade.

It was easily resharpened but I would have liked a longer period of time to trial the blade to see how it stands up to long-term use. A very good product at the retail price of £23.

Dave Hyne – Mora 164 Single Edge Hook Knife

I have spoon carved for at least 10 years. The curvature of the knife worked a treat and I completed the project in the photo without resharpening. There were no problems using it whatsoever – very, very good. I have already recommended it to a friend who is starting his first spoon. It appears to be much improved from the one I bought 10 years ago.

David Jones – Mora 163 Double Edge Hook Knife

I have made several spoons previously, but have never used a specialised hook knife during carving. The knife radius was suitable for hollowing out a scallop shell carving.

The knife was sharp enough to use without further work; it felt comfortable and well balanced in the hand and cut easily through a piece of lime. Initially I found the double-sided blade a little bit tricky to use, as you cannot apply much pressure to the sharp non-cutting side during carving, particularly when cutting across the grain. There is a small blunt area next to the handle where additional pressure can be applied with practice.

Mark Hammond – Mora 163 Double Edge Hook Knife

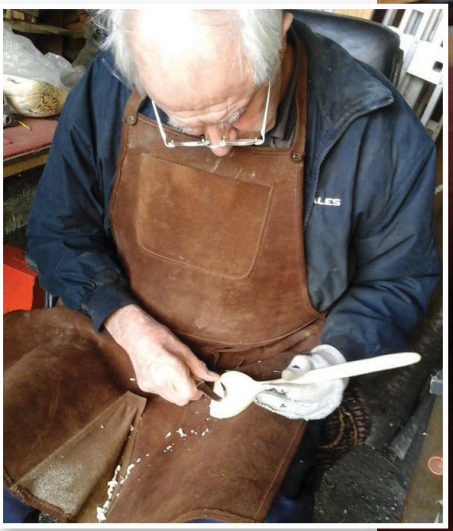
Having only ever carved one spoon before, and only having moderate carving experience, this was the first time I had used a spoon carving knife, starting with green sycamore. The knife was simple to use and, while not razor sharp, it was certainly good enough to produce some elegant shavings.

It was a perfect radius for a large spoon or small bowl and provide a great amount of cutting surface for its size.

The knife benefited from a little work with 600, 800 and 1000 grit abrasive paper and a leather strop that brought the edge up.

A double-edged blade took some getting used to as you can't apply force to the blade itself. There was a definite knack to be developed, either pulling the blade towards you or pushing the blade away with a roll of the wrist. With this technique it provided a lot of power and control.

I've use lots of different Mora knives in the past and think they generally represent good value for money. I think the combination of ease of use, 'out of the box performance' and quality materials used in this knife continue with this tradition. ■



PHOTOGRAPHS COURTESY OF DAVID HYNE

David Hyne found the newer Mora 164 much improved on the older model. Right: David's spoons

PHOTOGRAPHS COURTESY OF DAVID JONES

David Jones had to find how to apply pressure on the area near the handle on his Mora 163

How our testers rated the product

How would you rate the product performance?	8.2/10
How would you rate the product ease of use?	7.6/10
How would you rate the product overall?	8.4/10

Editor's comment:

The Mora hook knives, which are available with different radii for the curves of the hook and also as single or gouge edge variants, are traditional designs that have been made for many years. The first thing of note is that they fit in the hand well and can be easily manipulated as you work. The finish on the handle is such that a sure non-slip grip is achieved. The cutting edges are ready to use but, as with many tools, the edges can be improved with a little honing prior to use. The cutting edge achievable when honed is excellent. When one is able to hold the tool and manipulate the cutting edge for maximum efficiency, it is – depending on the timber used – easy to make heavy roughing cuts or light refining/planing cuts with ease. These are great knives that work very well indeed.

If you would like to be part of our panel of product testers, please go to our website www.woodworkersinsitute.com – and **SIGN UP NOW!**

Ask the Experts


ANTHONY BAILEY
Editor,
Woodworking Crafts magazine


MARK BAKER
Group Editor,
GMC woodworking magazines

Another selection of awkward questions for our experts to answer

COUNTER INTUITIVE

I've moved into my new (old) home and I'm trying to get it straight – there's plenty to do. Eventually I want to replace the kitchen but for the moment the worktop bothers me because there are these ugly plastic dividers between each section. There are worn, starting to bend out of shape and lifting up – one I partly pulled out had loads of crumbs and food muck underneath. I don't really want to replace the worktop right now. Is there a quick fix I can use to make it more pleasant and hygienic?

Jill Moorhouse

The old plastic dividers were yucky, mucky and unhygienic, but now replaced with a neat run of silicone being used as a short-term solution

Anthony replies: The plastic dividers you are referring to are a cheat way to close worktop joints where they intersect at right angles, because the curved postform front edge has to meet a straight-cut chipboard end on the adjoining section. I've only ever done the job properly with a router and a worktop jig so there is a tight sealed continuous surface without any food or dirt traps – not a jointing strip in sight.

It sounds as if these worktop joints are probably held in with mastic alone if they are lifting. The first job is to prise them out without damaging the surrounding worktop. Now clean the worktop thoroughly to remove dirt and grime and use a sharp chisel to clean off the ends of the worktop and scrub any remaining silicone off with a scourer until clean. Now run two neat parallel lines of masking tape both sides of the opening. Use a kitchen silicone mastic in a suitable colour and fill the gap completely. Now wipe evenly along the joint to get a neat fill level. This is a bit messy on the fingers but it wipes off easily. Repeat the wipe but wet your finger to lubricate as you wipe the mastic along. With any luck you should get a nice smooth mastic infill. Repeat if necessary with a wetted finger until it is even. Now remove each line of masking tape quickly with a flourish and chuck in the bin before the messy tape gets on everything. You should be left with a very neat result that's good enough until worktop replacement time.

GO FOR THE BURN

My circular saw table used to cut really well but it seems to be getting slower and the wood is burning. I checked the blade and it looks alright, it is the one I've had from new about eighteen months ago. Is there something else going on?

Ben Waters

Anthony replies: Um, this is a simple one I'm afraid – your blade is blunt, trust me. The first clue is it is the same blade bought with the machine, not only might it be cheaper quality, but it has probably been rather 'hammered' – am I right? Unplug the machine and check the manual for any advice on removing the blade. Unscrew the insert plate that sits around the blade. Lock the saw arbor in place or use a block of wood to trap the blade and stop it from moving. Use the correct spanner to undo the arbor nut – note: it turns 'the wrong way' to undo. Don't lose it or the plate holding the blade down the chute. Remove the blade and examine it carefully with a magnifier and you will find the teeth will be worn or damaged, with chunks of carbide missing if it is a TCT blade. This level of wear is a fact of life and not worth sending to a saw doctor to be honest. Invest in the best new blade you can afford, fit it and look after it, avoid metal in wood, such as old nails and screws, or you will be back where you started.

Do you really know how worn your blade teeth really are? No matter what it looks like, if the cut is slow and burning keeps happening, your blade is blunt



From L-R: stainless steel-cased door magnet, much tougher than plastic; a sprung touch latch with a press-to-open action; the bar that locks into the touch latch

THERE'S ALWAYS A CATCH

I want some strong wardrobe door catches but I'm not sure what type are best. I was thinking of using magnetic catches but the ones I've found in DIY shops don't seem that strong. Any suggestions?

Jan Van Dilk

Anthony replies: There are magnets and magnets – some are remarkably weak for the job they have to do. Another problem is the standard type are used mounted in plastic and eventually the force of opening and closing the doors will break them around the screw fixing holes. If you go online you can buy heavy-duty types, I recently bought some in metal casings and a 6kg pull. This latter figure is important – check the kg force rating, 6kg is probably about right but there are other sizes depending on the size of door or use. Another option which works well is touch latches, sometimes referred to as loft latches. They aren't tricky to fit and they work by pressing the door to open and pressing to close. The advantage is they will definitely hold a door shut even with pressure from behind caused by contents such as hanging clothes.

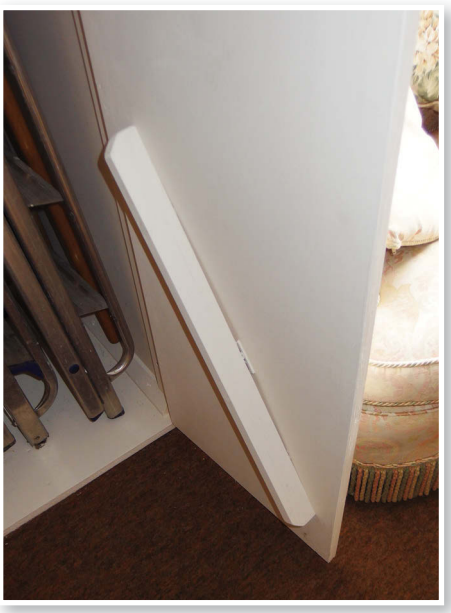
UNSPRUNG HERO

I have a problem – I made a tall, lightweight ply cupboard door and it doesn't lie flat. I've fixed it at the hinge side by having extra hinges but at the door catch side it bows outwards top and bottom. Help!

Gerry Manders

Anthony replies: Generally it is best to start again with new materials but that is wasteful, of course. When sheet material is manufactured it lies completely flat waiting for transportation to various timberyards. The good work of producing flat, square, thickness-calibrated boards is then slightly undone because a timberyard will store the sheets on racks that allow them to sag and deform, which is what I would suspect has happened here.

I wouldn't recommend this course of action as rule, but if you aren't fussy about having strips of wood on the back of the door or washers and screws on the front, you can fit short lengths of batten edge on, to the back of the door running from the highest or lowest hinge as required, to near the outer corner or corners of the door. In the middle place a small pad under the batten and use long screws sitting in steel washers on the door front as the force applied will otherwise take the screws straight through the ply. What you are creating will be torsion bars that bend the door corners backwards. You need a cordless drill to give enough torque to drive the screws as the door starts bending. It does work, trust me I've done it – see photo.



If a door has really gone out of shape it is possible to tension it with a batten and a thin block used to force the door to bend the other way

STAR QUESTION PRIZE

The Tool Marketing Company, or TOMACO, as it is known, which sells a variety of tool brands, including COLT, Sharp Edge and Narex, is pleased to be sponsoring the Ask the Experts section in collaboration with GMC Publications. Each issue's Star Question winner will receive a Narex six-piece chisel set worth £79.95 and all other published questions will receive a 20mm half-round fine-cut Narex rasp worth £20.95.
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N.B. If you do need help or advice you can email me: anthonyb@thegmcgroup.com or visit: www.woodworkersinstitute.com where there are lots of useful articles. Either way the service is free.

Making wooden rings

Making wooden finger rings can be fun, as **Michael T Collins** discovers

'I want to make a wooden ring for my sister,' were the words of my young 'Padawan', Wes. 'It's simple,' he said, as he proceeded to explain how we could do it on the lathe. I pointed out that, while my turning skills are pretty good when it comes to big stuff such as table legs, candle sticks and bowls, tiny finger rings were a whole different story.

We mulled over the idea of taking a piece of wood, boring a ring-sized hole down the length and turning the outside. However, I imagined the pieces falling apart as we got closer and closer to the right thickness.

The other downside to this method is that the grain in the ring would be running perpendicular to the ring and therefore would offer no structural strength, meaning that any sharp tap could break the ring.

We could build a block of alternating woods and grain orientation – but we would still be faced with the prospect of turning.

We really needed an alternative method and a sandwich.

Making a sandwich

1 The first step is to re-saw several strips of differing species of wood into wafer thin sheets – in this example they are 2mm thick. The species I used were yellow heart, purple heart, maple, and black walnut. In fact, a variety of any contrasting coloured hardwood will work.

2 Once sliced cut the pieces into squares and arrange each layer so that the grain is running at right angles to each other. This creates the plywood effect and greatly adds to the ring strength.

3 Using a waterproof glue, sandwich the pieces together and firmly clamp. A 75 x 75mm sandwich will produce about five size M rings.

Cutting/sizing the ring size

4 With a Forstner bit of the appropriate ring size, drill holes leaving about 6mm to 9.5mm space between holes. You want the final ring to be at least 3mm thick.

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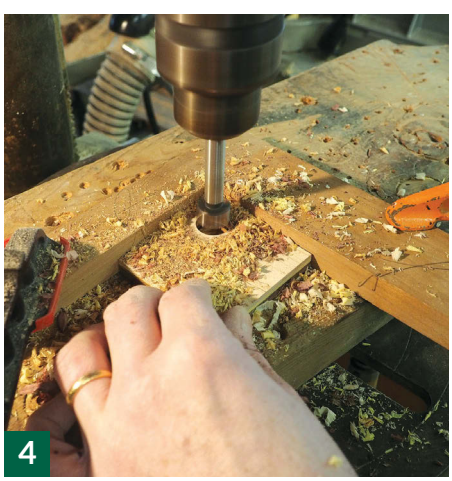

4

PHOTOGRAPHS BY MICHAEL T COLLINS

5 Roughly cut out the holes using a fret saw.

Sanding the outside of the rings

6 To get the rough shape of the ring, sand the outside of the ring with a belt sander, with 320 grit paper.

7 Alternatively you can sand by hand – this will allow more finesse and the ability to add features such as facets. Note that I have a towel under the sandpaper – this gives a cushioning effect and allows for the rounding of edges.

Sanding the inside of the rings

8 If you opt for using a spindle sander go easy and be very careful – it's amazing how much an oscillating spindle sander will remove. And keep those knuckles out of the way.

9 I opted to roll a piece of sandpaper and rotate the ring, working up to 320 grit paper.

Finish

10 For finish I went with Danish oil, it's an easy finish to apply and waterproof. To add lustre, spray with a polyurethane gloss finish.

11 Apply light sanding between coats and support in such a way as to not mar the finish. I hung them on a 3mm dowel to dry and then buffed them with furniture polish.

12 And there you have it – a very simple way to make an elegant statement.

Variations on a theme

I have created one ring by staining the edges before gluing, this would work best on similar coloured wood.

Another idea – how about making larger rings for napkins? And remember, they do not have to be round. ■

Save those scraps

Generally the advice is to have a regular clearout of anything too small. However, anything exotic or interesting – perhaps with an unusual grain patterning – is worth keeping for small projects such as this. I have a smaller size storage box just for small pieces that I think could be useful one day... Ed.


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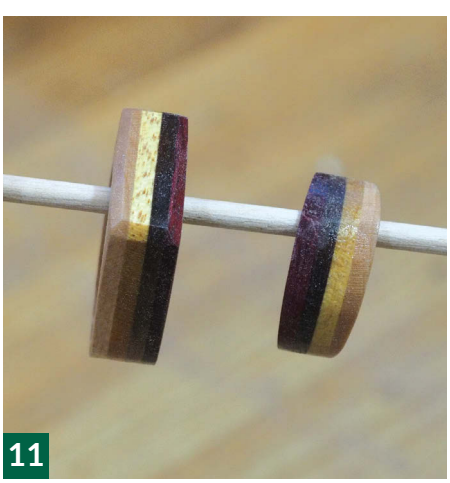
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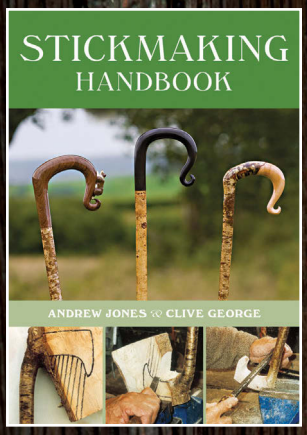

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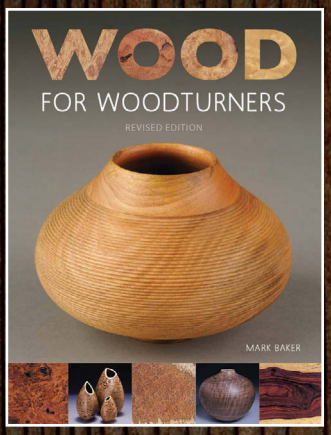

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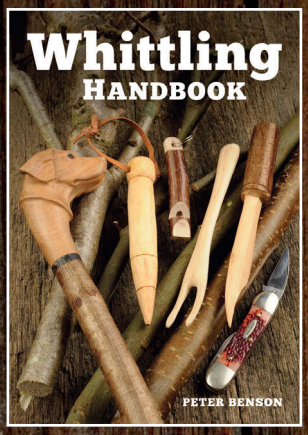

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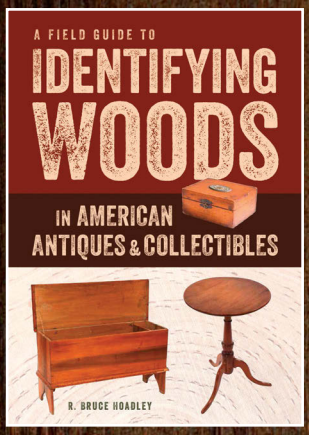

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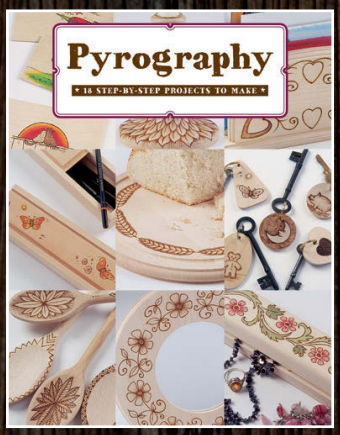

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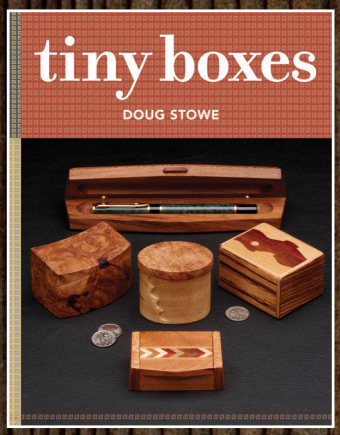

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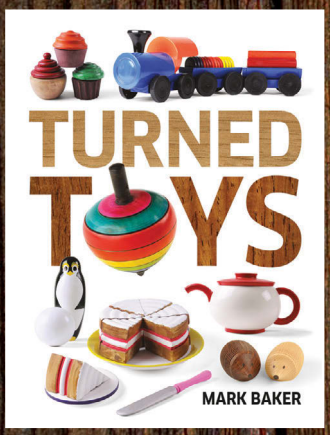

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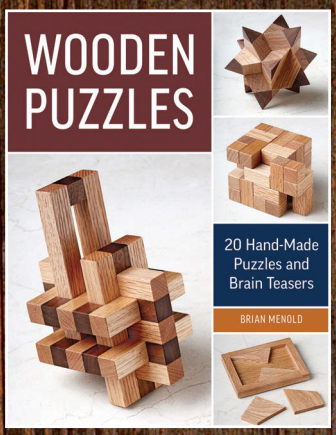

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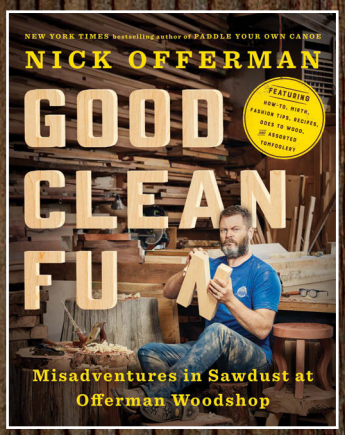

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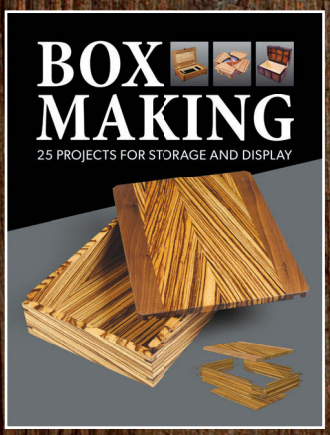

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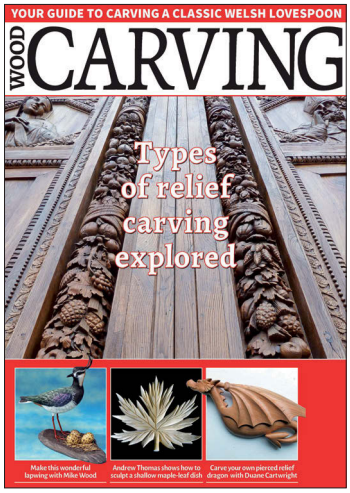

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Focus on…

Metropol Parasol

Sometimes it seems impossible to justify the cost of something until you see it for yourself – one such is the staggering Metropol Parasol

The Metropol Parasol building in the old quarter of Seville, Spain, is claimed to be the largest wooden structure in the world. It certainly covers a vast area and catches the imagination, such is its staggering mushroom-shaped multiple parasol design that spreads overhead. It is 150m by 70m and 26m tall. It has been the subject of much controversy because of its appearance and location and the inevitable delays and cost overrun.

It is sited where there used to be a market building, which was partially torn down for urban renewal in 1948. The rest of it remained until 1973 but the area was undeveloped until 1990, when plans were developed for an underground car park.

During construction, ruins dating back to Roman and early Christian times were discovered, leading to construction being frozen, having already cost €14 million.

In 2004 the city decided once again to develop the area and held an international competition to find a winning design, which was created by architects J. Mayer H.

It involved a vast canopy of shade in the Iberian sun, while allowing commercial activity at street level and yet still being able to protect the important archaeological remains underground, where visitors would be able to view them.

Unfortunately, like all great projects, it had problems. Its vertical grid structure of laminated Finnish birch plates, sprayed with polyurethane and painted ivory white, had never been attempted before and engineering firm Arup informed the authorities that the structure as designed was 'infeasible'.

Eventually, after numerous attempts to find ways to strengthen the structure, a method using adhesive and criss-cross metal ties was developed that would keep the whole edifice rigid and safe. It was finally opened in 2011 at a staggering final cost estimated to be in the order of €100 million.

It has resulted in an imposing and daring design with tree-like references that not only shades, but invites people in to enjoy its sculptural space and the museum hidden underneath.

To learn more about Metropol Parasol visit: **setasdesevilla.com**

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