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Issue 82 July 2013

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Workshop extraction

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PRINTED IN THE UK BY

Stephens and George Print Group

DISTRIBUTED BY

Seymour Distribution Ltd

Tel: 020 7429 4000

WOODWORKING PLANS & PROJECTS

(ISSN 1753-254X) is published every four weeks by GMC Publications Ltd,

86 High Street,
Lewes,
East Sussex,
BN7 1XN**SUBSCRIPTION RATES** (includes postage & packing)

	UK	Europe	Rest of World
12 issues	£47.50	£59.25	£66.36
24 issues:	£94.80	£118.50	£132.72

To obtain a copy of this magazine speak to your local newsagent

US customers should call the Subscription Department for subscription rates in USD (\$).

Cheques made payable to: GMC Publications Ltd.

Current subscribers will automatically receive a renewal notice (excludes direct debit subscribers). Post your order to: the Subscription Department, GMC Publications Ltd, 166 High Street, Lewes, East Sussex, BN7 1XU, UK. Tel: +44 (0)1273 488 005 Fax: +44 (0) 1273 402866 Email: pubs@thegmcgroup.com

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Welcome from the Editor

Hello everyone and welcome to the July issue of *WPP*. Here we are in the middle of the year, busy beaver away in the workshop or outdoors designing and making all things wood. For us here at GMC, it's a bit of a show month for us with the Peter Sefton School of Furniture Open Day, Malvern, Worcs, on 13 July followed one week later by the PR Industrial Show at the Amex Stadium, Falmer, East Sussex. Both are very worthy events in their individual ways and I will be demonstrating at both. In fact I will be showing live at Peter Sefton's how to make the Shaker tripod table project in this issue and also reviving old planes and sharpening blades at the PR Industrial show, so hopefully you can visit one or other of these shows and say hello!

Timber storage

One of the things that arose from refitting the GMC workshop was timber storage. Most of our stock is bought in kiln-dried ready for use, after planing and thickening and kept in the separate storage



PHOTOGRAPH BY GMC/ANTHONY BAILEY

Some of the contents of our GMC timber storage area



area and machine shop, beyond the bench shop in the middle of our long building. However, some of it, especially turning timber, is now stored neatly in the bench shop which is generally quite dry and moderately well-insulated, although not enough to defend against the heat of the sun. Winter, not a problem, but these summer months have caused various splits and checks, in some cases reducing valuable timber to firewood as a result. We are trying to mitigate this problem and in the case of turning blanks, it is possible to bag it to keep moisture in. I wonder how readers cope with changes in humidity and conditioning of timber? I have some substantial logs of garden grown walnut (*Juglans regia*) under cover with tarred ends staying put until it's time to convert it on a resaw. Then the fun begins and all the inbuilt tensions in the 'round' are released and it's anybody's guess as to how it will behave after that. A natural and versatile material like wood is full of surprises and sometimes disappointment, too. I would be interested to know how you source and keep your timber; drop me a line and share your experiences with us.

Anthony Bailey, Editor

Email: anthonyb@thegmcgroup.com

SAFETY MATTERS

Woodworking is an inherently dangerous pursuit. Readers should not attempt the procedures described herein without seeking training and information on the safe use of tools and machines, and all readers should observe current safety legislation

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You can reserve a copy from your newsagent or call Tony Loveridge, our circulation manager, on 01273 477374 or email him at tonyl@thegmcgroup.com. Alternatively save money and take out a subscription (see left hand panel)

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Noticeboard

We bring you a roundup of some of the best upcoming events for the woodworker's diary...

FRAME 2013

FRAME 2013 will take place in the medieval barns at Cressing Temple on Friday 30 August, Saturday 31 August and Sunday 1 September, 2013. The focus of this year's event will be imagining the future and considering the past of timber frame construction. Speakers and demonstrators will offer an informed theoretical and practical view of what timber frame construction might look like in the future. Speculation about the nature of materials, design, manufacture, transport and assembly will be accompanied by talks and presentations dealing with the historical evolution of timber framing. Connections between methods of construction and types of culture will be explored. Some of the questions we will consider include: what is timber framing? How and why has it changed over time? What is a timber frame carpenter? How and why has his role changed over time? Does the future of our industry lie in the craft of our past? What can we expect moving forward? How is the way we build – our method of construction – connected to our way of life; our culture? See right for further details.



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www.carpentersfellowship.co.uk
editor@carpentersfellowship.co.uk

PHOTOGRAPH COURTESY OF FRAME 2013

DETAILS:

When: 30 August–1 September, 2013

Where: Cressing Temple, Witham Road, Cressing, Braintree CM77 8PD

Contact: Cressing Temple

Tel: 01376 584 903

Web: www.cressingtemple.co.uk

NEW RECORD POWER DISPLAY FOR D&M TOOLS

D&M tools of Twickenham have been extremely busy over the last few months, fully refurbishing their machinery showroom. At the heart of this is the expanded and improved Record Power display. This area now includes a huge range of Record Power's machinery, including lathes, bandsaws, planer thicknessers, tablesaws and mortisers, making this the most impressive display in the South-East of the UK.

For full details, see the D&M website!



PHOTOGRAPH COURTESY OF D&M TOOLS

DETAILS:

Where: D&M Tools, 73-81 Heath Road, Twickenham, Middlesex TW1 4AW

Contact: D&M Tools

Tel: 020 8892 3813 **Web:** www.dm-tools.co.uk

WIN TICKETS to the Chilterns Craft & Design Show

We have teamed up with the organisers of the Chilterns Craft & Design Show to offer 10 lucky readers a chance to win a pair of tickets to this fantastic show. Set in the picturesque surroundings of Stonor Park, Henley-on-Thames from 23–26 August, visitors can spend a day exploring the best that British craftspeople have to offer.

This inspiring show will offer some of the finest handmade crafts for your home and garden from over 250 skilled craftspeople from all over the UK. For full details of the huge range of things to do, from demonstrations to workshops, plus loads for the kids, see the website!

To be in with a chance of winning, just email your name and address to teganf@thegmcgroup.com with 'Win tickets to the Chilterns Craft & Design Show' as the subject title. The closing date is 15 August, 2013. Good luck!

DETAILS:

When: 23–26 August, 2013

Where: Stonor Park, Henley-on-Thames, Oxfordshire RG9 6HF

Contact: ICHF Events

Tel: 01425 277 988

Web: www.ichf.co.uk



PHOTOGRAPH COURTESY OF ICHF EVENTS

Tools of Yesteryear

Ohio Tool Company 16in 'transitional' jack plane

The Editor adds another tool to his ever-growing plane collection

This unusual jack plane was another recent acquisition; I saw it online and I was bemused by its rather bodged-together appearance. In fact, the 'transitional' design isn't so unusual and they were produced in decent numbers, mainly in the USA, but to a lesser extent in the UK. They were being produced at the same time as both traditional all-wood designs and the newer Bailey pattern that were in production. The term 'transitional' is a more recently adopted term to try and pigeonhole this type of crossbred design, but at the time they were presumably marketed to persuade

traditionalists to change over to more modern tools and also bulk out the manufacturers' tool catalogues. Ohio

Tool Company produced this model roughly between 1884 and 1910. Up to 1880 they used quite a lot of prison labour building their tools, they then merged with, and effectively subsumed, the Auburn

Tool Company NY, who also used prison labour, so this plane with its Auburn 'Thistle' blade mark and Ohio production number 356 may have been through convicts' hands!

The Bailey-type castings sit on

The manufacturer's name and serial number clearly visible

A strange combination of Bailey-type mechanism and wooden body

the beechwood (*Fagus grandifolia*) body, which exhibits hammer marks at both ends for some strange reason. It proved easy to strip off all the parts, although the knurled brass blade depth-adjusting knob wouldn't separate, unlike the Stanley design. A good dewaxing all over, some brass dipping and a body polish before reassembly made it look respectable, even with some paint loss evident on the castings. The tapered blade and cap iron had been 'restored' by some uncaring person but looked reasonable. On sharpening the blade it proved quite hard and slow to get an edge on the grinder and without discolouration, the reason being it was a laminated blade! This meant they had gone to some trouble to create a superior cutting edge for this tool. Unfortunately, the japanning on the 'half frog' had originally slumped into a couple of slight lumps which prevented the blade assembly from seating perfectly – once scraped off I could then align the frog assembly and the blade nicely. I also scraped a lot of paint gunk off the base, presumably from door trimming work, and then checked it was flat and didn't need levelling before it could be used.

When correctly sharpened and set, this plane cuts really well and makes a really good tool not just to collect but to use. If you keep a keen eye open you may well find one of these unusual but very functional planes, too. ■

Ohio Tool Company's rather basic frog design

The tapered laminated blade and cap iron



Workshop notes

The current solution



The Editor shows you how to remove rust by the wonder of electrolysis...



A while ago in our sister magazine *Furniture & Cabinetmaking*, Colin Sullivan showed how the mystical process of electrolysis could be used to de-rust old tools. I thought I would give it a go as I had a rather unloved DIY Stanley No.4 plane I was given for nothing. To show the difference this process makes, I deliberately just did one side of it for demonstration purposes, but of course you would normally immerse the whole plane or tool body. Here is what you need to do.

Safety Note

Do not touch your mouth or eyes if your hands get contaminated with the caustic soda solution used in this process. If it does happen, wash the affected areas with copious amounts of clean water.



1 Here you can see my mucky, very rusted, shed-found old Stanley No.4 smoother that doesn't show much promise at all. The challenge – could I make it look and feel good again? Let's find out ...



2 The sole looks equally bad, but significantly any pitting of the cast iron seemed to be minor rather than deep. I had a hunch it could be cleaned up to a reasonable standard and it would cost me little to do it



3 The first step was to strip it all apart. The handle and knob were bare of any finish, which would make that job easier. The non-ferrous components could be dipped in a cleaning agent and wirewooled bright again



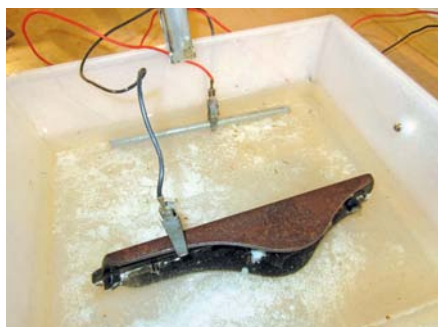
4 I used a small Silverline magnetic parts dish to keep everything together. Using this ensured that none of the parts were lost on the workshop floor in the shavings and yes, there are the brass fittings sitting there too!



5 To de-rust the ferrous components I was going to need to set up an electrolysis tank to do the job. So I used a 'chuck out' plastic – not metal! – drawer, my seldom-used battery charger and a 79p bottle of soda crystals



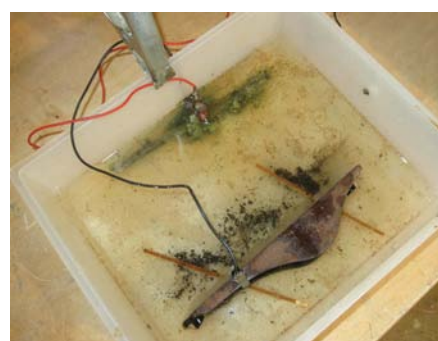
6 A couple of tablespoons of soda crystals are mixed into clean cold water until it goes cloudy. The crystals will start clumping but don't worry about that. As I am doing this as a 'demo' piece, the water level is lower than normal because I didn't want to fully immerse the components



7 Now for the crucial bit. Half the plane body will be cleaned so I laid it on its side sticking out of the solution. The battery charger is left unplugged from the mains and the black negative lead clipped to bare but rusty metal on the body casting. The red positive lead is clipped to a steel rod to act as the anode. In addition it has been clipped to the tank side so there is no danger of touching the plane body and accidentally shorting out the charger!



8 Place the charger away from the tank to avoid water contacting it, plug it in to the mains and switch on. The first thing you notice is the water starts fizzing around the target metal as the electrolytic reaction begins. The presence of the soda crystals in solution enables this process to take place



9 I realised that the underside might not get the same level of treatment as it was sitting directly on the tank base, so I used a couple of tiny strips of wood as supports so the chemical reaction was completely effective. Note how the flakes of rust have fallen away from the casting and a strange green gunge has collected around the anode. The longer you keep the current running, the greater both visible effects are



10 The plane body was removed from the tank after the mains supply was switched off. The blackened half has received electrolysis and now needs to be scrubbed clean and bright



11 Before that step, however, it is wiped dryish and then blasted with WD40 to prevent re-rusting. All the other major plane components are put through the same electrolysis process



12 Here the blade half which has been treated exhibits only light rust spots, and scraping quickly removes the remaining residues. As this project is meant to demonstrate this restoration technique, just the good cleaned-up half of the blade will be ground and honed



13 The de-rusted half of the sole is given the usual flatting procedure using several grades of emery paper spraymounted to a flat cast iron machine table

14 It will never be brand new in appearance, but it will have a characteristic patina of age and use. The left-hand half of each component is bright and finished, while the right-hand halves are rusty and bare. The blade has a step as I wanted to do a heavy re-grind and sharpen on one half of it only. This plane will probably never do a stroke of work now; however, for almost no cost, I managed to discover for myself how to 'deep' de-rust hand tools in the future! ■



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Pivoting plywood cart

Michael Puryear makes a handy pivoting plywood cart which makes moving large boards around the workshop a breeze

I build a variety of furniture using solid wood, veneer and plywood, and since I work in a one-man workshop, I constantly look for ways to make the experience as easy and efficient as possible. One of these ways is my panel cart. With this cart, I can stop struggling with 4 x 8ft sheet goods such as medium-density fibreboard – MDF – and plywood, and easily move them about the shop. And because I built the cart to the height of my tablesaw, I can tilt the sheets horizontally to feed them directly from the cart onto the tablesaw.

Large swivel casters, a brake and a steering handle make for easy manoeuvring. A simple design and very basic joinery, tied together with bolts, make this a project that easily can be built in a day, so you can get right back to making furniture. Next to its usefulness, the best thing about this cart is that the materials are relatively inexpensive. Because you can use dimensioned construction timber and/or scraps you have kicking around the workshop, the cost is limited and mostly for the hardware.



PHOTOGRAPHS COURTESY OF FINE WOODWORKING MAGAZINE

MOVE AND CUT LARGE PANELS WITH EASE



Roll

Large wheels and a pull handle help you tow a heavy load. Note that the back side can hold a pile of rough lumber. A foot brake locks the cart in place.



Pivot

Tip the support frame that holds the sheet goods into the horizontal position, where it locks automatically, then move the cart into position and apply the brake.

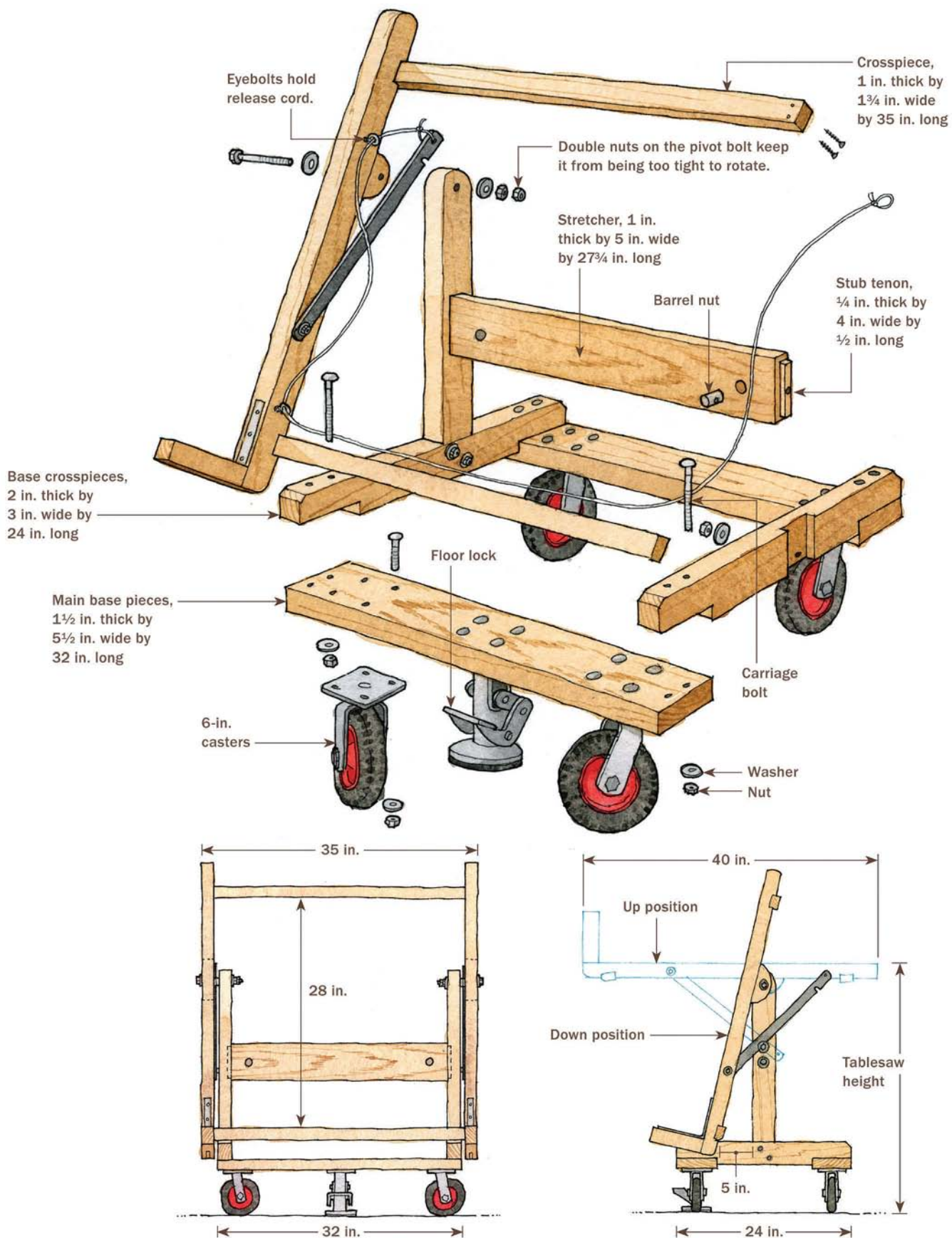


Push

The cart supports the back end of the plywood, freeing you up to feed the material and apply pressure against the face.

Silent partner

Build this simple cart in a day, then use it to store sheet goods on the panel support and lumber on the deck. Fully loaded in the vertical position, you can pull it around the shop on its large casters. Pivot the panel support frame into the horizontal position in front of your tablesaw and use it as an infeed table. It's almost as though you have another person in the workshop lending a hand.





Using the cart

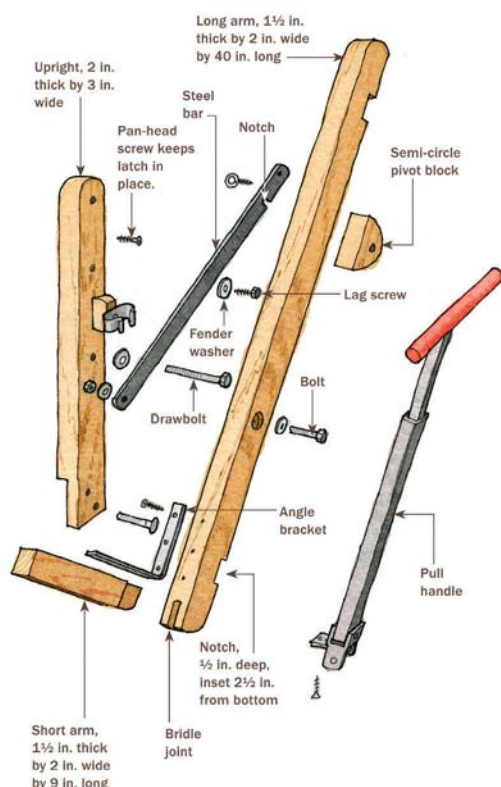
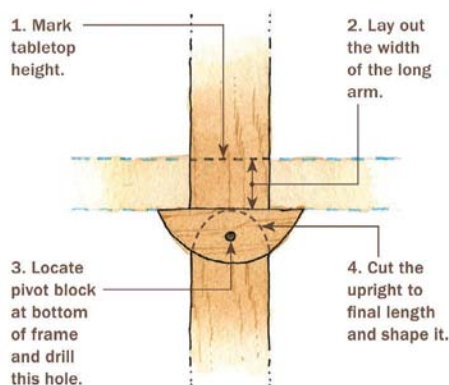
I load 4 x 8ft sheets on the panel carrier side and rough lumber on the other. I can then move the cart around the shop wherever it is needed, and it doesn't disturb the lumber when I tilt the sheet goods to the horizontal position. The four swivel casters allow me to push the cart in any direction without having to turn it around, and the handle lets me tow the loaded cart.

The cart lets me store, move, and rip up to eight 4 x 8ft sheets.

With multiple sheets stacked on the cart, the top sheet will be higher than your tablesaw when you tilt the sheets up into position. But you can still slide it onto the saw table and cut it safely. When you lift the pivoting frame, two latches lock it into position. To lower the pivoting frame, you pull a cord to release the latches and lower the structure. What a pleasure not having to wrestle sheet goods onto the tablesaw when working alone.

Set the pivot height

The frame's height is important. It can be a little higher than the tablesaw height, but not lower.

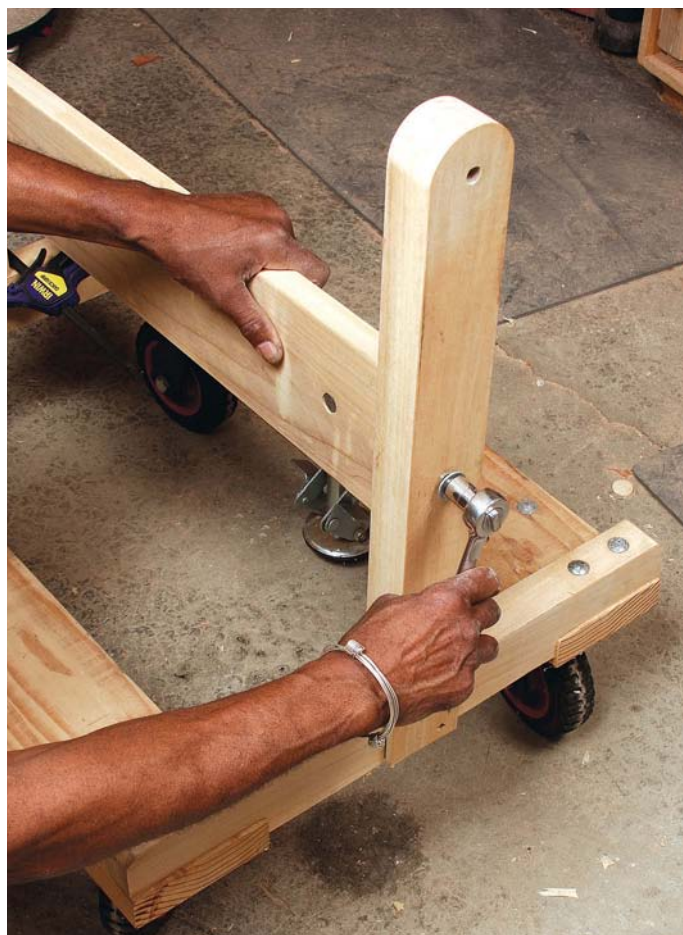


Take your time & get it right

Once the base frame is built, add the casters and clamp an upright to the base. Adjust a marking tool to the tablesaw table. I use an Accuscribe from FastCap and then I transfer that mark to the upright.

To lower the pivoting frame, you pull a cord to release the latches and lower the structure.





Assemble the base. Connect the four base pieces, attach the casters and add the stretcher and two uprights

A very basic base with casters

The base construction is simple. Except for the mortises in the uprights, I cut all of the joinery on the tablesaw. To line up everything perfectly, cut both crosspieces at once, clamping them together and using a mitre gauge and dado blades with multiple passes. The uprights that hold the tilting panel support frame determine the final height of the cart in its horizontal position. Base their length on your caster height and the height of your tablesaw. Right now, cut them longer than you will need until you settle on a final height – a little later in the process.



Glue on the pivot block. With the pivot block marked for position, glue and clamp one to each L. Now you can glue in the crosspieces to complete the panel support frame



Locate the panel support. After marking the two L-shaped pieces and notching them for the crosspieces, but before gluing in the crosspieces, you need to locate the Ls on the uprights. To do this, bold a semicircle pivot block to its upright and clamp one of the Ls to the top of the base so its lower crosspiece will hit the base about 5in from the upright. Mark the block's location on the L

The bottom end of each upright gets a half-lap that corresponds with the half-lap in the base of the crosspieces. Each upright also gets a centred mortise – cut with an edge guide on a router – to hold the stub tenon of the stretcher. I reinforce this joint with a drawbolt. I clamp the stretcher to the uprights and drill through both for the drawbolt and barrel nut. Once this joinery is cut, bolt the casters and the crosspieces to the main base. Don't attach the uprights yet.

This is a good time to talk about the casters. The loaded cart can get heavy. I use four heavy-duty 6in swivel casters rated at 330lb each, which are not available with total locking brakes. In lieu of brakes, I added a floor lock. I prefer all four casters to swivel because it makes manoeuvring around the workshop easier. I wouldn't use casters smaller than 5in, because small obstacles on the floor will stop them dead.



Connect the panel support frame to the base. Nuts and washers on either side will keep things together

Tilting panel support affects the height of the uprights

To build the panel support frame, start by making the two L-shaped pieces. Cut the notches for the crosspieces using a dado blade. The elbow is a bridle joint that I reinforced with angle brackets because they will carry all the weight of the 4 x 8ft sheets.

To determine the height, clamp an upright to the base. Roll this assembly up to your tablesaw and mark the height of the table on the upright.

Then move to the bandsaw and cut two semicircular pivot blocks from 1½in thick lumber and drill a hole centred between the corners and 1in from the flat side. Clamp each block to its upright with the flat side parallel to and 2in below the line marked as the tablesaw height. Centre the hole in the block on the upright and drill through it into the upright. Repeat for the second upright. Now the pivot blocks are located on the uprights so that they will hold the support frame level with the top of the tablesaw when the frame is tilted to the horizontal position.

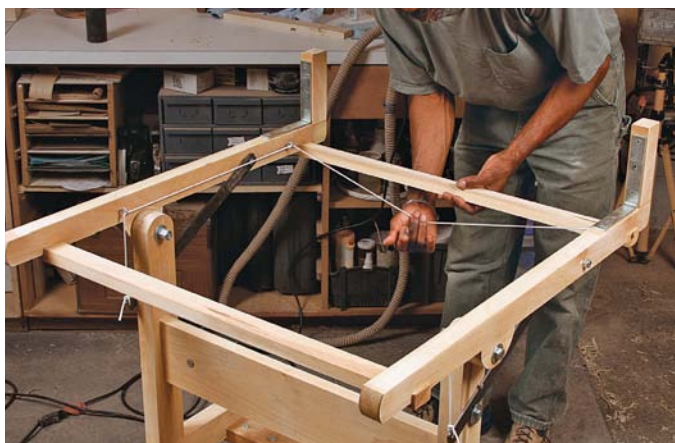
Cut the uprights to length, radius their tops, and bolt each one to the base. Then round over the top and bottom of each L – for aesthetic purposes only. Once that's done, insert a bolt through one pivot block and into its upright. Rest one of the Ls on the block and adjust it so that the bottom of the lower crosspiece will land on the base 5in from the upright. Clamp the L to the base and then to the pivot block and mark the block's location on the L. Transfer the marks to the other L and glue the blocks in place.

Safety note

We felt this was a really worthwhile project for our readers, however, you may notice that the tablesaws are shown without blade guarding. US woodworkers don't usually fit crown guards on tablesaws. In the UK, however, this is a legal safety requirement. Always make sure you use a guard when sawing!



The notch in the latch rests on a lag screw between a washer and the upright. An extra screw will act as a stop and keep the latch from jumping out of line. the washer guides the bar back in place



Simple release. A cord that runs from the end of one latch around the frame through eyebolts and to the end of the second latch is pulled to lift the latches, releasing the panel frame so it can pivot into the vertical position

Latch system holds panel support horizontally

For the latch system, I use two steel bars – available at most hardware stores. I drill holes on each end and use a hacksaw to turn one hole into a notch – also drill a smaller hole for the release cord. One end gets screwed to the L of the support, and the notched end hooks over a lag screw in the upright. To mark the latch's bolt hole on the L, pivot the panel support horizontal and level and place the latch notch over the lag screw on the upright. Drill the bolt holes, then bolt the latches loosely in place so they move easily using locking nuts. Place pan-head screws on the uprights above each latch so that the latches can disengage but not rise above the fender washer. Leave 1/8in between the head and the upright.

Because I can't unhook both of those bars and hold the cart support while it's pivoting, I attached a cord that runs between the bars and allows me to unhook them at the same time. Finally, attach a pull handle to one end of the plywood cart.

This project comes courtesy of Best Workshops from the Editors of Fine Woodworking magazine. ■

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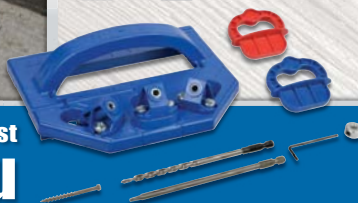
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MACHINE WORKSHOP



Walter Hall clears the air with this guide to dust and chip extraction

Extraction

In this series of articles, we have looked at a range of different woodworking machines that all have one thing in common: they all produce wood waste or wood dust of some kind. I have stressed throughout the series the need to take proper precautions to protect against dust hazards, including the use of appropriate personal protection equipment and dust extraction. This article explains the types of dust extractor available and how to make best use of them in a small workshop. It is aimed at the amateur since in professional woodworking environments, because of the potential health problems, wood dust is covered by the Control of Substances Hazardous to Health Regulations (COSHH). These set out the legal requirements to protect workers from health risks arising from hazardous substances at work. Under COSHH, employers have a duty to carry out a suitable and sufficient risk assessment and take steps to ensure they prevent or adequately control exposure. Professionals should take advice from the Health and Safety Executive; visit www.hse.gov.uk.

TYPES OF DUST CONTROL EQUIPMENT

There are basically three types of machine available for the collection and/or filtering of dust in the workshop. Chip extractors, which move high volumes of air at low pressure and are best for collecting large volumes of chips and dust from machines like planers and thicknessers: vacuum extractors, which work at higher pressure but lower air volumes and are better at collecting and filtering finer dust: and ambient air filters, which remove residual dust from the air in and around the workshop.

HOW THEY WORK

Chip

Chip extractors have a centrifugal fan which draws dust through a large diameter – 100mm – inlet pipe, past the fan itself and into a collection bag or bags which may be fitted with filters to collect finer particles. In order not to limit the flow of air, the filters in these machines are usually quite coarse and thus not particularly effective at removing finer dust particles. They may be mounted on a wheeled base, so that they can be moved between waste producing machines as required, or wall mounted, in which case they are usually connected to a fixed system of pipes with blast gates regulating

the flow from individual machines. They range in size from very small machines suitable for a small shed or garage to large industrial models that are often sited outside the workshop. Chip extractors do not work well with smaller diameter pipework as this restricts the airflow and reduces their effectiveness; they are best used with machines that produce large volumes of chip waste such as planers, thicknessers and spindle moulders. They are not effective at removing the fine dust from saws and sanding machines, nor can they be used effectively with portable power tools because of the need for smaller diameter hoses.



Vacuum

Vacuum extractors work on the same principle as domestic vacuum cleaners, in that the air and waste is drawn in to a drum or casing by a fan protected by filters. The waste is collected in the drum or a filter bag and never comes into contact with the fan itself. These machines will work with reduced diameter hoses and are thus suitable for use with power tools and smaller diameter pipework.



Ambient

Ambient air filters work to remove the finer dust particles in the workshop air by drawing the air through a fine filter. They do not collect dust other than in the filters themselves, so cannot be used to extract dust from machines, but are rather mounted above or near to dust-producing machinery to remove residual dust.

FEATURES



Small portable chip extractors are usually mounted on a base with castors and can be either floor or wall mounted as required. They are fitted with a single collecting bag with limited capacity, so are only suitable for small machines, or will require frequent emptying



Larger chip extractors fitted with two or four bags may still be fitted to a mobile base so they can be moved between machines, but work slightly differently in that chippings fall into the lower bag whilst the lighter dust is collected in the upper bag. They can cope with the waste output from much larger machines



Vacuum extractors, other than those designed for large industrial installations, are usually of the drum type and small enough to be portable and moved from machine to machine. They may have either 100mm or smaller intake ports. Single or dual motor versions are available to suit the scale of the work required



Vacuum extractors are fitted with filters to ensure that fine dust particles are collected; these usually consist of a cartridge filter to remove the finer dust and a paper or cloth outer filter to prevent the fine filter clogging with larger particles



Vacuum extractors may also take the form of versatile workshop vacuum cleaners. These can be used like domestic machines to clean up the workshop or attached to machinery to collect fine dust or even the chippings from smaller machines



All chip extractors have 100mm intake ports and work best with large diameter hoses so that air flow is not restricted



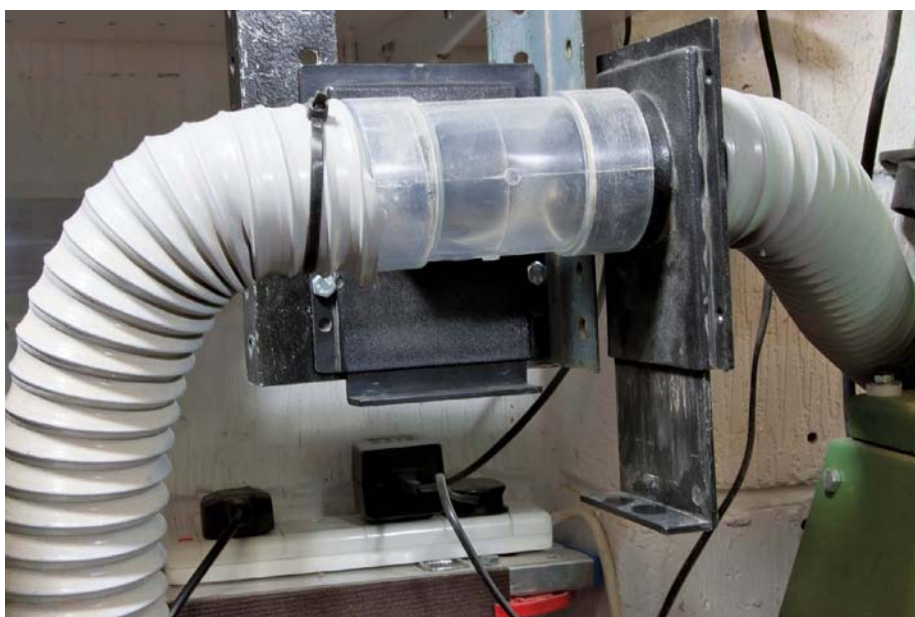
Some machines may be fitted with dust collection bags such as those used in domestic vacuum cleaners rather than using paper filters



Larger extractors may alternatively be wall mounted, in which case they are often connected to a number of machines by a fixed system of pipework with the extraction from individual machines controlled by blast gates



Workshop vacuums or vacuum extractors may be fitted with a power take off so that they start and stop along with the machine or power tool in use



Vacuum extractors may also be fitted to fixed pipework systems of either 100mm or smaller diameter so that a single extractor can serve a number of machines. In my workshop this system of blast gates allows me to direct the extraction between my lathe and bandsaw

HOW TO MAKE THE BEST USE OF EXTRACTORS

You can maximise the effectiveness of your extraction equipment by matching the extraction type to the machinery you are using.



Planers, thicknessers and spindle moulders are best connected to a chip extractor which will remove the bulk of the waste. Residual dust can be dealt with by means of an ambient filter and by wearing suitable PPE such as a respirator or mask



Saws of all kinds produce fine dust and should be connected to a vacuum extractor. There is likely to be some dust that is not collected, particularly with mitre saws, so again additional precautions should always be taken



Portable power tools such as sanders, planers and biscuit jointers are best connected to a vacuum extractor with a power take off



There is no standard size for machine and power tool extraction outlets so you will need a collection of adaptors



In larger workshops, or where a number of machines need to be served, a system of fixed pipework will facilitate effective working. Such systems may need to be earthed to preclude any risk of fine dust particles exploding



Lathes are particularly difficult to extract from. I prefer to collect the chippings afterwards, by sweeping up the majority of shavings and then using the workshop vacuum. I only use the dust extractor in conjunction with a poseable hose to deal with the fine dust produced

Even in smaller workshops, a system of smaller diameter pipework and blast gates can be installed. I find that mounting the blast gates either horizontally in a downpipe or vertically with the slides opening downwards prevents dust from falling into the slides and causing the gates to jam. Finally, when emptying extractors, take care to avoid releasing dust back into the workshop and wear suitable respiratory protection, or all your efforts to produce a safe workshop will be wasted ■



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Woodland Heritage



An introduction to an important woodland charity organisation

To explain what it is that Woodland Heritage do, their simple founding principle is perhaps the best place to start: the importance of uniting the people who use wood with the people who grow trees; so, what better cause to bring to the attention of our woodworking readers?

How it began

In 1993, Peter Goodwin and Lewis Scott were speaking of their concern for the UK's relatively low tree cover – around 10% compared with a European average of 27% – when they decided to make a change. Their plan was to set up an accessible way for wood users to put something back – for the processes of wood use and wood renewal to be appropriately linked. They proposed the idea to 20 fellow furniture makers, all of whom joined the cause, and thus Woodland Heritage was born.

Woodland Heritage is not only for woodworkers – they involve 'wood users' of all professions including wood buyers and vendors, sawmillers, loggers and even the consumers. Their members, which now number several hundred, range from corporate participants in manufacturing, retail and associated trades, to landowners, estates, and other private members, with the patronage of HRH Prince Charles. They also run 'Woodland to Workshop' courses, which bring together wood users and wood growers over three days in the woodland, sawmill, timber yard and joinery workshop, so a diverse range of students involved in some way with wood can learn from one another as well as the course leaders.

WH is a registered charity which as well as educating, supplies funding to research and conservation projects in our woodlands. They publish a yearly journal full of topical research, education and articles on silviculture – the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values – as well as celebrating what is finally done with



PHOTOGRAPHS COURTESY OF WOODLAND HERITAGE UNLESS OTHERWISE STATED

Earth Trust's ash seed orchard at Little Wittenham, Oxfordshire

wood by skilled craftspeople. Here we have collected and condensed some varied pieces from the 2013 edition to give you some idea of the breadth of concerns and activities this fantastic organisation is involved in.

Tree disease

Our forests are certainly under attack. In addition to the recent devastation caused by ash dieback – the *Chalara fraxinea* fungus – Acute Oak Decline hit the national headlines a few years ago, closely followed by chestnut blight and the oak processionary moth. Other threats on the horizon include, among others, the Asian longhorn beetle, which we brought to your attention in *WPP* 68. The Woodland Heritage is instrumental in raising the necessary funds for numerous projects to protect our trees from these threats.



PHOTOGRAPH COURTESY OF FOREST RESEARCH

Nathan Brown examines a young dying oak

Acute Oak Decline

In 2012, WH raised over £200,000 from their members, with support from three charities, to fund Forest Research's vital study into Acute Oak Decline. The money meant that Dr Sandra Denman could equip the study with the necessary involvement of a molecular microbiologist, an internationally recognised bacterial



Acute Oak Decline Appeal

Research is expensive, and further mapping and research is necessary to try to isolate the causes and find a way to understand and tackle this potentially devastating disease.

If you would like to help support this vital research to save the nation's oak in our historic landscape, cheques made payable to 'Woodland Heritage (AOD)' can be sent to Woodland Heritage, PO Box 168, Haslemere, Surrey GU27 1XQ. For Pledge and Gift Aid forms, please contact Woodland Heritage by telephone on 01428 652 159 or email enquiries@woodlandheritage.org.uk

taxonomist and a laboratory assistant. It is vital to attain a proper understanding of the causes and prevention of Acute Oak Decline while the problem is on a small scale – we need the knowledge and means to restrict the damage should the situation change, to prevent large-scale losses of oak (*Quercus robur*), our iconic and immeasurably important native tree, from occurring. The research is centred on the bacteria and microbiology in the damaged tissue of AOD trees, discovering what attracts the agrilus beetle – which is often found in co-occurrence with the AOD – to the oak trees, whether volatiles from the bacteria attract the beetle, and raising beetles in captivity to ascertain the effects of different temperatures and compounds. Modelling work will estimate the boundaries of the distribution of AOD

A wild service tree. This fine specimen was growing amongst oak and hazel in a Suffolk woodland on heavy clay. It had a girth of 2.25m but succumbed when a violent storm damaged its crown and it had to be felled



"Nothing is the worst thing we could do"

and model the risk of spread. Much of this work is being carried out by PhD student Nathan Brown, who has been working on AOD for the past four years, and has an intimate knowledge of the condition. WH have managed so far to raise half of the £90,000 needed to renew Nathan's PhD contract for another three years, so securing his essential services for 18 months, but £45,000 is still needed to fund his research for the necessary period. Dr Denman is finding evidence of more and more English oak trees suffering from poor root health caused by *Armillaria* – honey fungus – which she considers to be a key dimension in her quest to find the cause of AOD. Nathan Brown's work will also include working on root health under Dr Denman's guidance.

Replacing ash

It is sadly now widely accepted that the majority of our ash (*Fraxinus excelsior*) will be lost from our forests in the next few years due to widespread ash dieback. Many foresters are now considering their options for planting alternative

species in their place in the absence of confirmed resistant ash, and in their journal the WH propose the wild service (*Sorbus torminalis*) tree – see above – as a replacement in mixed woodland. In mainland Europe and North Africa, the wild service grows in association with whitebeam (*Sorbus aria* (L.) crantz). Whitebeam can be taken as a possible indicator of suitable wild service sites, even when the latter is absent. British trees have recently been recorded at up to 26m tall. The timber is a rich creamy colour with striations of pink and green, and it is hard and very smooth when worked. The Swiss regard the



One of the 'Preston Twins', a pair of English elms in Brighton's Preston Park, largely considered the oldest and largest surviving English elms in Europe



The adult agrilus beetle, found in concurrence with Acute Oak Decline

PHOTOGRAPH COURTESY OF FOREST RESEARCH



Course students learning how to prepare logs for air-drying

species very highly, giving it an almost mystical status – hence the alternative name ‘Swiss Pear’. Consequently, fine specimens can be worth as much as, and sometimes more than, walnut (*Juglans regia*).

Ash dieback echoes the Dutch elm outbreak, which led to the felling of 30 million mature elms in the 1960s and 70s, raising the question: can some semblance of the species be saved like that achieved for English elm (*Ulmus procera*) and other elm species in Brighton and Hove? This will largely depend on central government and whether politicians are prepared to invest in a long-term, scientific research programme, covering the identification, selection and breeding of ash trees that are genetically and sustainably resistant to *Chalara fraxinea*. “The omens are not good,” says Dr Terry Mabbett, “DEFRA has shown no real interest in financing urgently required research into acute oak decline to unravel quickly the cause of this fast-moving, complex and serious problem threatening the very future of Britain’s top hardwood



Woodpecker hole in a prime oak. A defect discussed on the course

Right:
Will Bullough
standing in his
own oak wood,
near his sawmill



timber tree. Raising and furnishing the extra funding required had so far been left to charities like Woodland Heritage,” he finishes.

Woodland to Workshop

Woodland Heritage held their first three-day Woodland to Workshop course in 2008 at Whitney Sawmill near Hay-on-Wye, and run similar courses throughout the year, with attendees ranging from furniture

makers, sawmillers, timber buyers, horse loggers and tree growers – the value of interactions between this diverse student group connected by wood gives the course a real sense of added value.

The woodland part of the course is led by Geraint Richards – Head Forester of Duchy of Cornwall and Graham Taylor – Forestry Consultant – in the woodland adjoining the sawmill. The tutors cover a range of



Tutors, Gavin Munro (left) and Will Bullough (right) explaining defects in an oak butt



Gavin Munro points out how to identify shake in an oak tree

topics and demonstrations, which include tree species selection, planting designs in relation to tree competition and the landscape, protection from grey squirrels and deer, recognising potentially valuable stems of oak, and the importance of the British and Irish Hardwoods Improvement Programme's work, to whom WH have donated since 1994.

The workshop discussions and demonstrations take place at the sawmill, where the group learns about distinguishing between normal drying splits and shakes, minimising damage caused by ambrosia beetles, identifying various kinds of damage and undesirable features of logs such as woodpecker damage and blue stain, likely markets for unusual logs such as 'pippy' oak and ripple-grained sycamore (*Acer pseudoplatanus*), the merits of a portable bandsaw, measuring and calculating timber volumes both in the forest and the sawmill, and air drying. The courses have received high praise from the students, such as Eoin, who has been working with wood for 35 years said of the course, "for an old cynic like me to learn something new every hour was extraordinary," while Sharon, working in forestry and woodland management wrote "A mix of students is vital as everyone learns from each other. Hands-on, brilliant!" ■



You can find out much, much more, and even download the Journal for this and previous years for free on Woodland Heritage's website

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In makers' hands



Among WH's members is the renowned British furniture designer, John Makepeace OBE. Some of his latest creations include this dining table in English mulberry and bronze, designed by Makepeace and made by Clive Baines for a private vaulted dining room. The design was devised to use a particular series of saw-cut veneers so that each 'panel' follows the grain to make the best use of irregular shapes of the timber. Once these were laid, the recesses for the water-jet cut bronze inlay were made by CNC router.

'Wings', a 2.4m high cabinet is made from a single tree of English ripple sycamore. Elliptical and tapering in plan, this cabinet was designed for storing bottles and glasses, and for serving drinks. The back, comprising one-third of the perimeter, the top, bottom and shelves are all fabricated, lipped and veneered with saw-cut veneers. The doors are solid, and carved both inside and out with the 'drapery' pattern that provides the handles. The serving shelf contains a tray for carrying glasses. The cabinet was designed before finally selecting the tree. Although the timber was originally going to be cut from 70mm quartersawn boards, on more precise assessment, John decided to saw at 60mm. A veneer-quality tree, thankfully it had no defects. The wide boards would be used for the less curved parts of the ellipse, and the narrower ones for the sharper curvature to each side. A week or so after sawing and end racking, it went into the kiln and was delivered to the workshop three weeks later, pale and beautiful.



PHOTOGRAPHS COURTESY OF JOHN MAKEPEACE OBE



A perfect example of an English woodland, with mixed species and abundant flora



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Shaker tripod table

The Editor is of course a man of taste and discernment, especially when it comes to design, so making a traditional Shaker tripod table was a natural choice to take

The religious movement that later became known as 'Shakers' due to their unusual form of movement worship was formed in 18th century England and in 1774 led by Anne Lee, a small group emigrated to America and gradually formed utopian communities there. They made whatever they needed including furniture, the designs of which are clean lined, simple and appealing even to a modern audience, so much so that genuine early Shaker pieces can change hands for considerable sums of money, which would have appalled Shaker adherents. However, you can make your own tripod table based on a typical Shaker design for £20, which is what my ash (*Fraxinus excelsior*) offcuts cost me!

TOP

1 The first step is to plane the top boards to thickness – in my case they were sold already thicknessed. Carefully choose the order in which the boards should lie in so the figure in the grain is shown to best effect. Mark across them so you get the order correct before glue up.

2 The edges need to be planed true so they fit together both gap free and level with each other when clamped upright in the vice. Here a No.6 fore plane is being used as the longer sole makes it easier to achieve straight meeting edges.



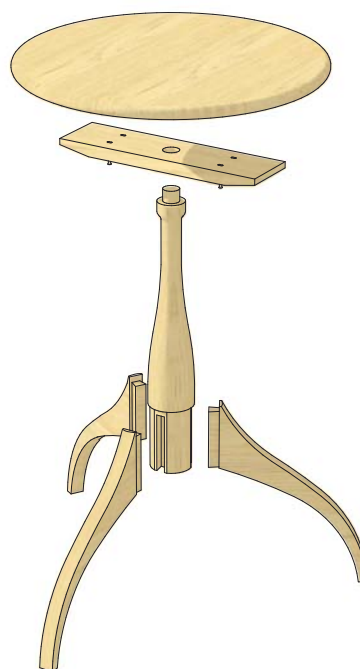
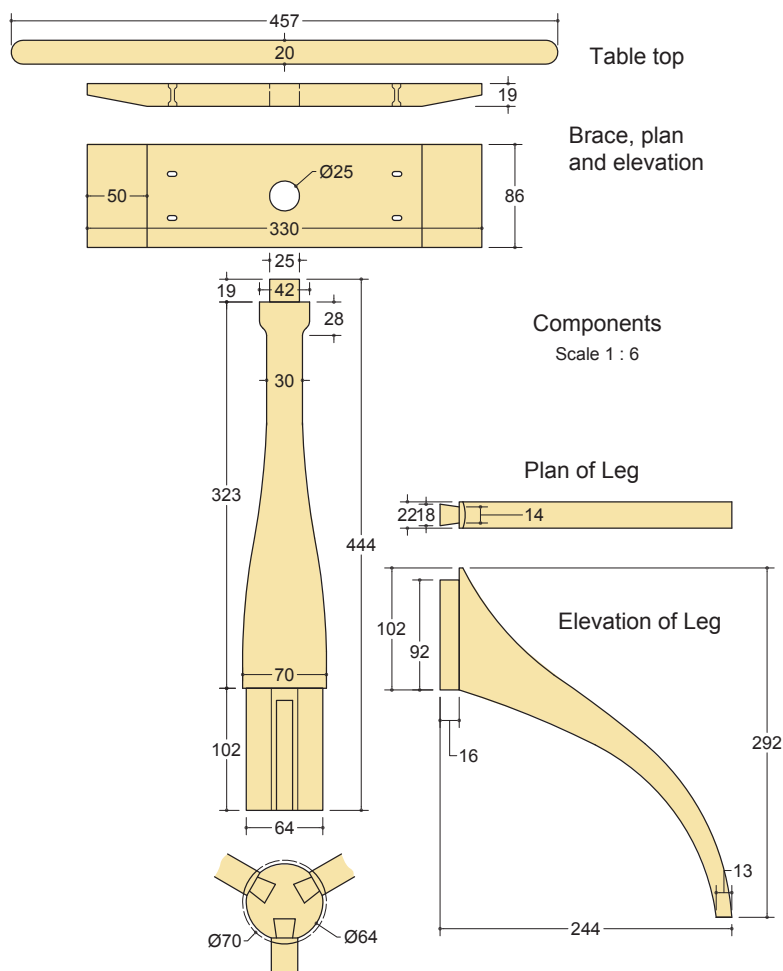
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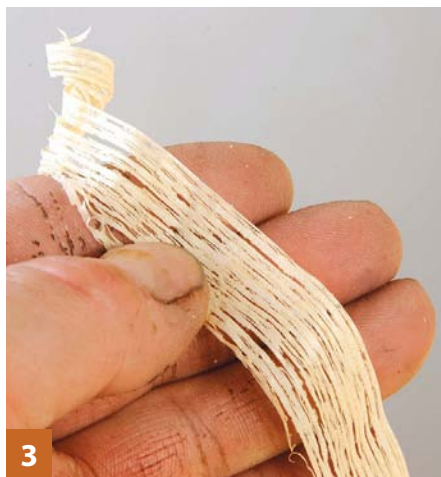
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PHOTOGRAPHS BY GWC/ANTHONY BAILEY

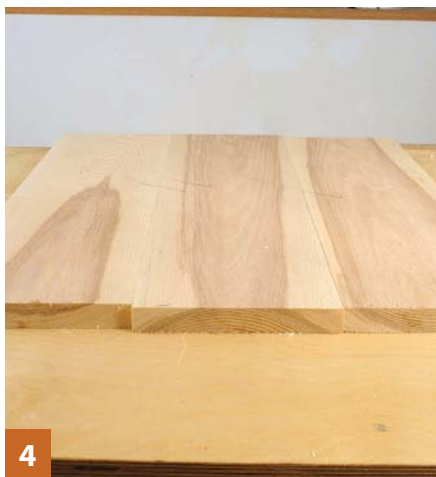




Turning tools you will need



3



4

3 Getting good meeting edges involves not just straightening in length but getting the boards to lie level, too. By biasing the path of the plane towards one side you can achieve a 'feathered' shaving which will cause the edge to angle a fraction, and thus the board that rests on it.

4 The dark ash heart has been placed so it faces upwards and consideration given to how it will look when cut into a circle. Note from the view of the board ends how the annual rings alternate to reduce any tendency to bowing in the top.

5 The circular top will be cut out using a trammel fitted to a router. I used a 12mm straight cutter and part of a long trammel arm. I wanted to maximise the size of the top so I drilled an extra hole for the machine screw that will be the pivot.



5

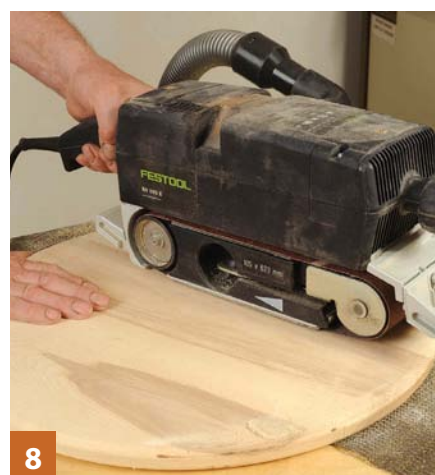
6 A blind hole is drilled in the underside of the top and the trammel fitted in place. After each complete pass the router is un-plunged and swung back to the beginning so the hose doesn't get wound up. A final pass at full depth with the pivot point moved slightly inboard will give a clean edge.



7 Once the top drops through on to the bench, the supports are then moved under it ready to machine the roundover. The cutter is big enough to create a radius from both faces while still keeping the bearing in the middle of the board edge.



8 Belt sanding with the grain is needed to level the boards properly. This is followed by a thorough orbital sanding to a finish.

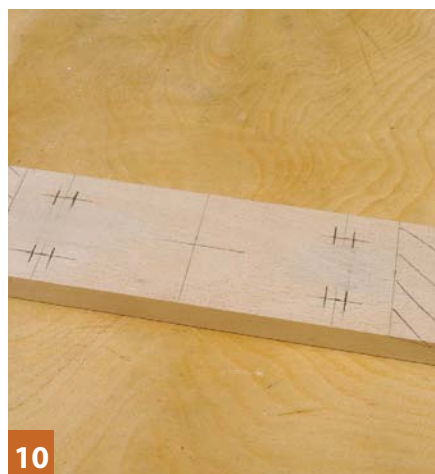


9 The edges need attention to smooth and blend them into the top. I made an MDF 'bat' and cut a wide section of self adhesive Velcro to fit and then cut out a couple of pieces of different Abranet abrasive mesh grades to attach to it.

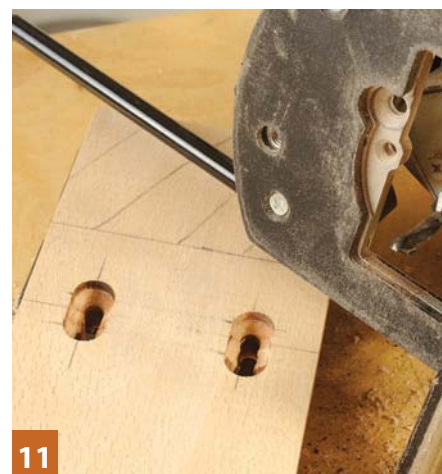


SUPPORT

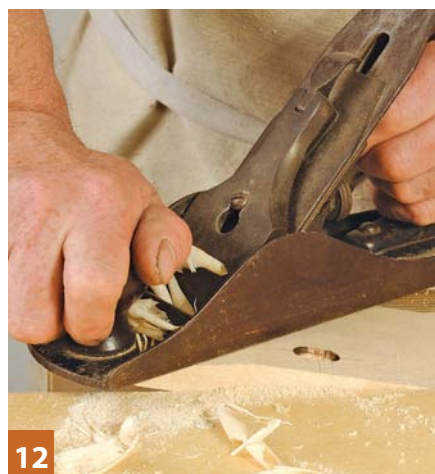
10 The support has two functions: it supports the table top but also holds it flat to prevent bowing. Thus it needs to lie across the grain and therefore needs screw slots to allow for shrinkage, which is much greater across grain. The slopes, slots and tenon hole are all marked out.



11 I used a screwsink bit plunging repeatedly to create the slots. You may need to use a chisel to create a straight line between sinkings so the screws can move freely. The tenon hole is done on a pillar drill.



12 My Stanley No.4 made quick work of smoothing the slopes after the bulk of it was sawn away.



COLUMN

13 I used a pre-turned cylinder of ash, which makes the process quicker. However, I still needed to use a spindle roughing gouge to get it smooth, even and the correct diameter. This was my first attempt at lathe work in 15 years, which was the last time I regularly turned spindles, knobs and bun feet!



14 All the sections are marked with the lathe running. This also includes imaginary points along the curved part as a guide to where the shaping needed to change.

15 A parting tool is used to shoulder the tenon which is turned down to 25mm diameter to suit a standard Forstner bit. Check with callipers that the size is correct.

16 The bottom end where the legs fit is also shouldered with a parting tool and a wide skew chisel used to plane to the correct diameter. This is checked with callipers.

17 The spindle roughing gouge is used to shape the curve, with a spindle gouge used from the other direction to create the smaller radius neck and working between the two tools. The gracefulness of the curve is very much down to your own eye and imagining what the column will look like when stood upright.

18 After some heavy sanding on the lathe with the toolrest removed and extraction in place, I achieved a reasonable result from the wood lathe.

LEGS

19 The leg shape is quite elegant and delicate and now needs to be drawn out full size on thin MDF. I completed the curves by eye in pencil then overdraw with felt tip pen before bandsawing out. Note the hatched area which will get cut away on each leg later, but for the purpose of machining, is left in place. The template needs to be sanded square along its edges; a narrow homemade Abranet file is the perfect tool.

20 The legs are drawn out on a board of thicknessed ash interlocking the shapes to minimise waste. They are bandsawn out oversize to allow for profiling on the router table.

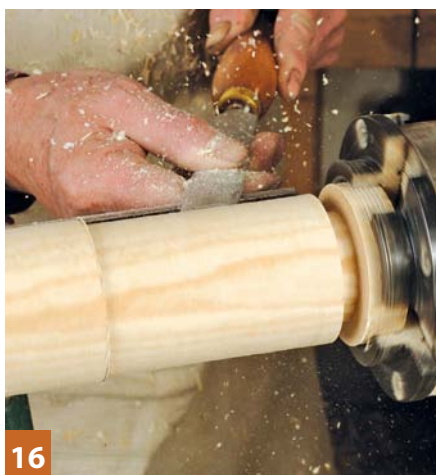
21 Copying spindle moulder practice – the template has two dowel handgrips glued and screwed to it. The right-hand one needs to be reasonably near the end and fully supported. Note how the dowel is ‘necked’ so it doesn’t overhang and foul the cutter bearing.



14



15



16



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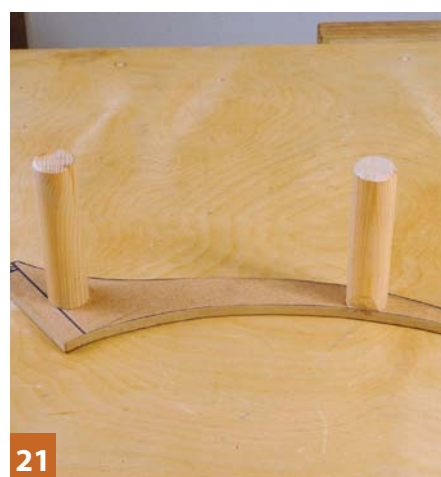
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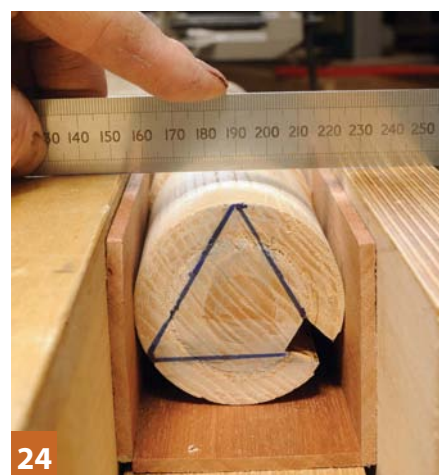
22 Profiling in progress. Always machine into the direction of cutter rotation. Do NOT attempt to machine the bottom tip of each leg. Note that small panel pins are used to fix the template to each leg in turn.



23 Use a narrow Abranet 'bat' to smooth the leg's internal curve and the wide bat on the outer convex curve.



24 To machine the dovetail housing use a standard small dovetail cutter and router with fence attached. The end of the column is marked with an equal triangle and rather than making a special jig, I chose to use packers underneath the column and narrow slips of wood to hold the shouldered section which will have the housings in. The router fence runs along the vice facing.



25 A mortise cutter is ideal for machining the flats needed for the legs to sit against. The end of the flat section is squared with a chisel.



26 The critical bit is machining the dovetail housing. It needs to be the same height each time and you will need to machine without being able to take out most of the waste with a straight cutter first. Stop short of the shouldered section as this piece will be cut away on each leg. Do not unplunge the router.



27 Now fit the same dovetail cutter in the router table and fit a sub table surface and through fence for full support around the cutter. Each dovetailed leg must be matched to its own housing and marked accordingly so you get the best fit. The first cut is done with the leg facing one way and then reversed to do the other side.



28 The three completed legs marked with letters to match letters on the column underside. Note they are all shouldered with a hand saw at the top. The leg in front lost a small amount that tore off when machining, but it won't be visible once the table is assembled.



29 Sliding the last leg into position. Once this is done the support piece can be fitted on to the column top and glued in place. ■



Triton Woodworker of the Year

PLUS YOUNG WOODWORKER OF THE YEAR COMPETITIONS

GMC Publications in conjunction with Triton Precision Power Tools are proud to announce the Triton Woodworker and Triton Young Woodworker of the Year competitions 2013

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£5,000
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Triton Precision Power Tools in conjunction with GMC Publications are again looking to unearth a wealth of woodworking talent up and down the country. We know you appreciate quality because you buy this magazine and we also suspect that you make some spectacular pieces but are too shy to show them off. But that was then. Now, with a prize pot of over £5,000, we are hoping to tempt you to show us what you are making. So enter and you will be in with a chance of winning a handsome amount of Triton tools and cash too. There are effectively two competitions: Triton Woodworker of the Year and Triton Young Woodworker of the Year.

The Triton Woodworker of the Year category is open to absolutely everyone, no matter what discipline you work in, so long as the piece or structure you submit is made predominantly of timber. Triton Young Woodworker of the Year is open to any woodworker aged 21 years of age or younger. All you need to do to enter is submit sufficient photographic evidence of your work by 31 October, 2013 and then just sit back and bite your nails. A shortlist for each competition will be drawn up from all the entries, and our team of expert judges may well call

you/make a visit to see the piece or request extra information from you as required. The competitions will be judged by *Woodworking Plans & Projects* editor Anthony Bailey, editor of our sister magazine *Furniture & Cabinetmaking*, Derek Jones, plus two Triton-nominated judges, who will decide the winners from a shortlist of six in each category.

Finally, first, second and third place winners will be decided and announced by the middle of February 2014, and the prizes awarded at a special ceremony – the date of which is yet to be set. So what are you waiting for? It's time to get woodworking! **For the full terms and conditions, plus photographic requirements and tips for taking suitable pictures, please visit www.woodworkersinstitute.com/forum and click on Triton Competitions 2013 in the General News & Press Releases section.**

Triton Woodworker of the Year

1st prize – £1,000 tools (RRP ex VAT) + £1,000 cash

2nd prize – £500 tools (RRP ex VAT) + £500 cash

3rd prize – £250 tools (RRP ex VAT) + £250 cash

Triton Young Woodworker of the Year

1st prize – £500 tools (RRP ex VAT) + £500 cash

2nd prize – £300 tools (RRP ex VAT) + £300 cash

3rd prize – £200 tools (RRP ex VAT) + £200 cash



The Triton Woodworker of the Year 2011, Luke Miller's winning piece, a table made from iron which was influenced by the Giant's Causeway in Northern Ireland

How to enter

To enter, all you have to do is send us the package of items as mentioned in the **Photographic, entry requirements & guidelines** found online – www.woodworkersinstitute.com/forum – along with the name of the category you are entering, your name, address, daytime phone number and email address. Closing date is 31 October, 2013 but we would of course like to see entries as soon as possible in order to feature them in the magazines in the run up to the final. Label the relevant package and send it to the following address:

FAO Karen Scott
Triton Woodworker of the Year or
Triton Young Woodworker of the Year
competitions
86 High Street
Lewes
East Sussex
BN7 1XN



The winners of the last Triton Woodworker of the Year Competition with their awards

Chest of drawers



Kevin Ley makes this commission for a very special customer!

This piece was made for my most important client – my wife, Yvonne. I had sold off some demonstration pieces and in the consequent furniture shuffle she decided another chest of drawers was required... and she knew a chap who could make one to her exact requirements!

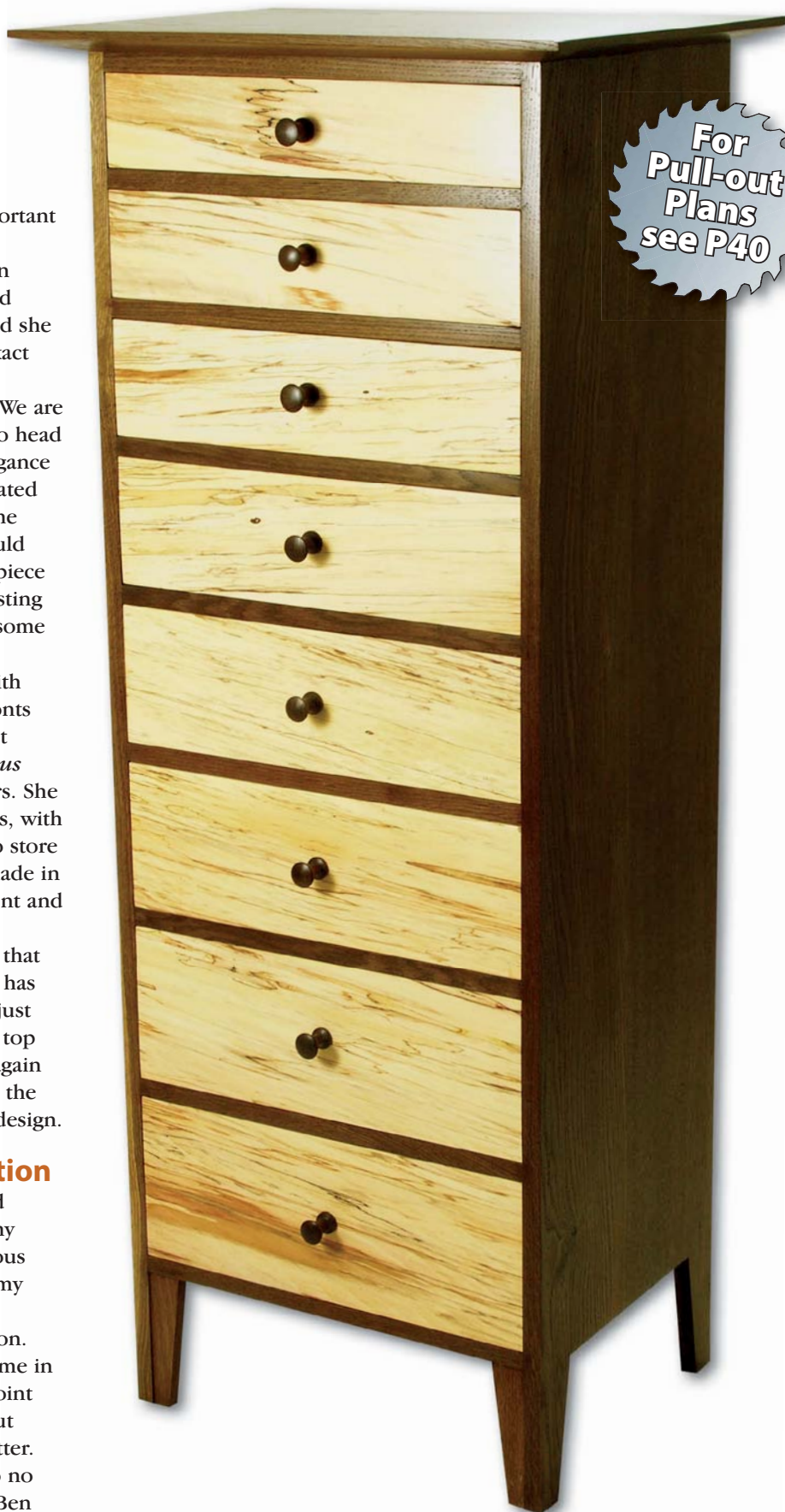
We had fun designing the piece together. We are both fond of the Shaker style and decided to head in that direction. We wanted height and elegance with a bit of pizzazz. A tall chest with graduated drawers and slim tapered feet, to lift it off the floor and give a certain visual lightness, would fit the bill. If you can see the floor under a piece of furniture, it makes it look lighter. Contrasting timber in the drawer fronts would provide some extra interest.

I had used fumed oak (*Quercus robur*) with sycamore (*Acer pseudoplatanus*) drawer fronts in the past and Yvonne was fond of that, but she had always liked the spalted beech (*Fagus sylvatica*) I used in another chest of drawers. She really wanted that used on the drawer fronts, with fumed oak for the carcass. This piece was to store clothes so the drawer carcasses would be made in cedar of Lebanon (*Cedrus libani*) for its scent and insect repellent qualities.

There is a particular shape of drawer pull that the Shakers used that I have always liked; it has a flattish dome and tapered underside that just suited this piece. Plenty of overhang on the top provided balance and under chamfering it again lightened the effect. We played around with the dimensions a bit and finally settled on this design.

Timber selection and preparation

The oak was no problem – I had some good pieces of American oak (*Quercus alba*) in my timber store that was left over from a previous project. It had been sticked and stacked in my dehumidified store for some months so was ready for use. I also had the cedar of Lebanon. I tend to buy this when I see it and keep some in stock – it is a very popular unique selling point to my work and adds considerable value. But good quality spalted beech was another matter. I rang round all the likely sources I knew to no avail. At a local show I met another maker, Ben Homer, who gave me a lead to Dave Telling.



PHOTOGRAPHS BY KEVIN LEY

He is a farmer and wood lover operating near Cirencester, you can contact him on 01285 831 392. I contacted him and he seemed to have a stock of almost anything I could want. Burr elm (*Ulmus procera*) and oak, lacewood (*Calycophyllum candidissimum*), spalted beech and other unusual pieces. Dave knows and loves wood and is able to find, transport, cut up, and store unusual timber, but his main work is as a farmer, so one must be flexible about meeting up.

We decided on a trip out to have a look and were not disappointed. We got just what we were looking for, and more – who could resist?...

Stock preparation

1-2 All the timber for this piece was cut slightly oversize for its relevant components and sticked and stacked. The oak and cedar was stored in the workshop to settle and condition. The spalted beech was air dried, so I made up a mini kiln with a dehumidifier in a polythene tent and sticked and stacked the oversize drawer front pieces in there for a couple of weeks to finish off. Afterwards they joined the other drawer components under weight until I was ready to make the drawers. The cedar of Lebanon drawer casings were deep sawn from 25.4mm stock.

CONSTRUCTION

Sides

3 The sides were made up from narrower pieces and butt jointed in the usual way with biscuit reinforcement.

4 Once cured, the glue ooze was scraped off with a scraper plane, the piece cut to exact size and the surfaces belt sanded. A housing was cut for the ply back and another was cut for the front feet.

5 Biscuit slots were cut for the biscuits that would locate the drawer rails.

6 The feet shapes were cut out at the base of the sides on the bandsaw, using a taper template against the rip fence, and finished with a block plane, scraper, and sanding block. Biscuit slots and screw pockets were then cut in the top edge to attach the top.



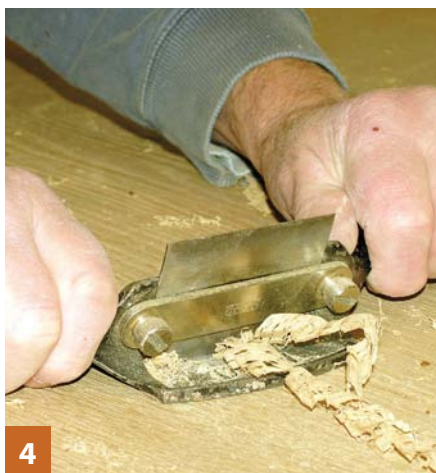
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Top

7 The top was made up in the same way as the sides, and trimmed to exact size. A housing for the back and biscuit slots to correspond with those in the side tops were cut. The bulk of the waste for the under chamfer was removed on the surface planer and the chamfer finished with a jack plane. The chamfer was then scraped and sanded smooth.

"Screw pockets were cut in the ends of the front and back rails to form the joint with the sides"

Drawer frames

8 The drawer frame components were cut to size allowing for a 3mm movement gap on the side pieces. The ends of the frame components were slotted for the Dominos which would form the joints. The Dominos between the front rails and the side pieces would be glued and the Dominos from the sides to the back rails left dry to allow for movement.

Back

A back was cut to size from oak faced ply. Using sheet material in the back means it can be glued into the housings in the sides and top, and glued and screwed or pinned to the back drawer rails. This gives great added strength to the carcass.

Carcass assembly

9 Screw pockets were cut in the ends of the front and back rails to form the joint with the sides. The bottom face of the bottom front rail had a housing cut in it to take the front feet. The drawer frames were fitted gluing the biscuits at the front and leaving them dry at the back. The sides and frames were clamped up and adjusted for square. Once squared the screws were driven into the pockets.

10 The pocket plugs were trimmed flush.

11 The feet were tapped into the slots in the sides and the bottom drawer.



12 The carcass and feet were clamped into position.

13 When cured, glue was applied to the housings in the top, sides, and the back rails and the ply back sprung into position. The carcass was adjusted as necessary for square and the back pinned to the back rails.

14 The sides were power sanded before the fitting of the top.

15 The top was glued and clamped in position.

Finishing the carcass

16 When cured the carcass was sanded with the random orbital sander and by hand taking care to remove all blemishes and leave a perfect finish. A polythene tent was constructed and the carcass placed inside with two open containers of .880 ammonia and left to fume.

The ammonia was poured outside into the smaller lidded containers and carried in to the tent where they were placed inside and the lids removed. Appropriate safety gear was worn. I left it for a couple of days to get maximum colour change and penetration, then opened the windows and removed the polythene.

When the air had cleared several coats of finishing oil were applied in the usual way, gently rubbing down with Scotchbrite orange and grey pads to denib between coats. Don't use wire wool on oak, as it reacts with iron. During the curing time between coats I started on the drawers.

Safety Note

Working with .880 ammonia is potentially quite hazardous as it is much, much stronger than household ammonia. The fuming chamber should be capable of being hermetically sealed once everything is ready to fume. Take care when pouring the ammonia into the dish – this must only be done in a very well ventilated area. It is sensible to have a means of checking progress, such as a dowel of the timber you are fuming, placed in the enclosure and withdrawn later to see the amount of colouration. Once the process is complete, make sure you put the spent ammonia safely into a spare plastic container.



Drawers

17 The drawer components were cut to size and individually fitted; the sides to a running fit and the fronts to a push fit, the backs were cut using the relevant front as a template. Housings were cut for the oak faced ply bases in the sides and fronts. The dowel holes for the pulls and the screw counter sinks and pilot holes for the pull screws were drilled in the fronts.

Dovetails

18 The dovetails were marked with a cutting gauge...

19 ...and a 2H pencil on the sides.

20 The sides were taped together in pairs and the bulk of the waste around the tails cut out on the band saw, again using a taper template.

21 They were cleaned up with a scalpel and used to mark the pins on the fronts and backs.

22 The bulk of the waste around the pins was removed on the router table with a straight cutter.

23 The joints cleaned up with a paring chisel.

"A reinforcing strip of timber – a drawer slip – was glued and clamped to the side and base"

Drawer slips

24 The inside faces of the drawers were sanded and the drawers were assembled using sash clamps to pull up the joints nice and tight. They were checked for square and left to set. The drawer sides had been left thin for aesthetic purposes, so the housing for the base was a bit shallow. Cedar of Lebanon is also quite a soft wood, so to add support for the base and provide a wider running surface on the bottom of the sides, a reinforcing strip of timber – a drawer slip – was glued and clamped to the side and base.



Drawer pulls

25 The drawer pulls were turned on the lathe using a sizing tool to make sure the diameters of the pull tops were equal and the fitting dowels were exact. An extra insurance pull was made just in case. The pulls were placed in a plastic container and fumed, then oiled in the same way as the carcass.

Drawer fitting

26 Before attaching the pulls the drawers were fitted into the carcass using planes and sanding blocks until a perfect fit was made. Then, after a final clean up all round, the stops were fitted to the front rails.

27 I then adjusted where necessary with a rebate plane; this ensured that the drawer fronts were set slightly recessed into the carcass of the chest.

"In spite of its size it looks light and elegant, and the spalted beech really adds something extra"

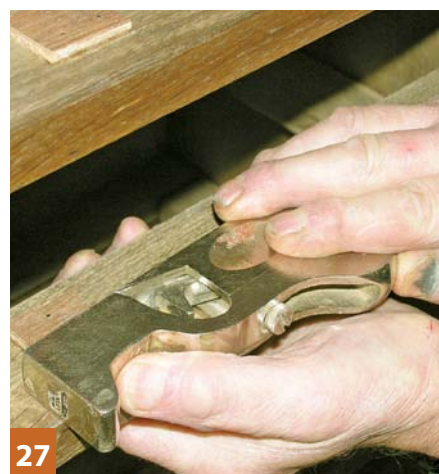
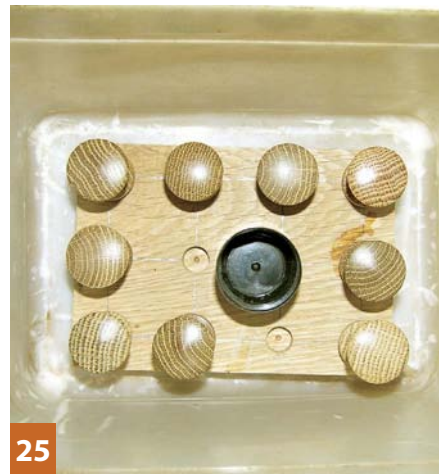
Drawer finishing

28 To keep the crisp cream colour of the spalted beech, an acrylic water-based floor varnish was used on the fronts of the drawers. Masking tape was used to leave a clean line on the dovetails after the thickness of the front had been coated. Three coats were applied with gentle denibbing between coats. Once cured the pulls were glued and screwed into place and the running surfaces given a light rub with candle wax for smooth operation.

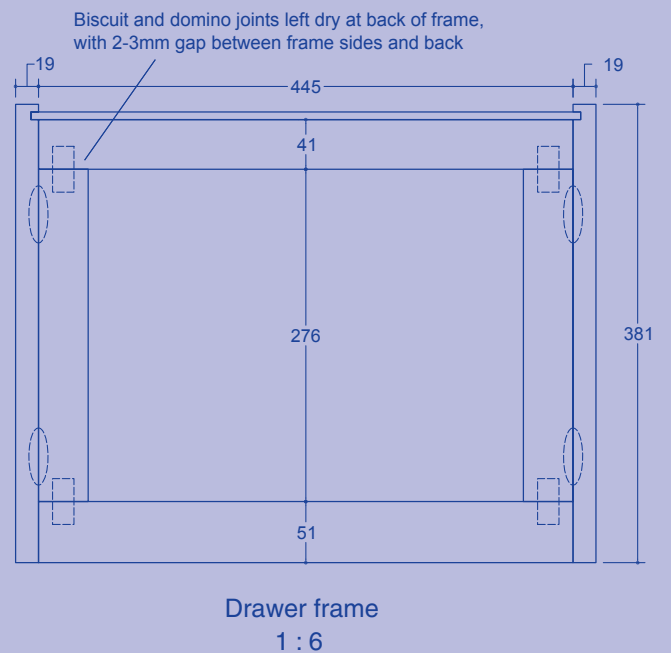
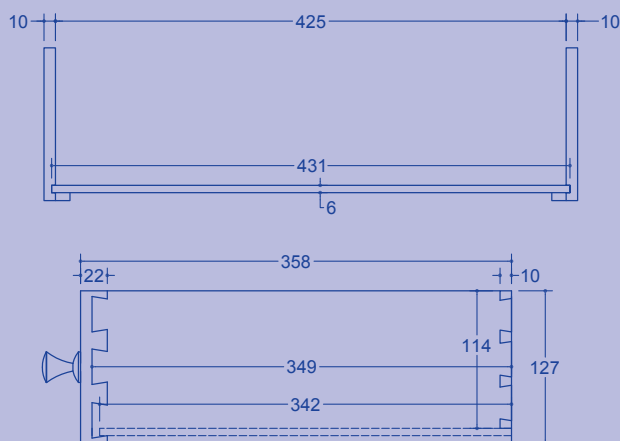
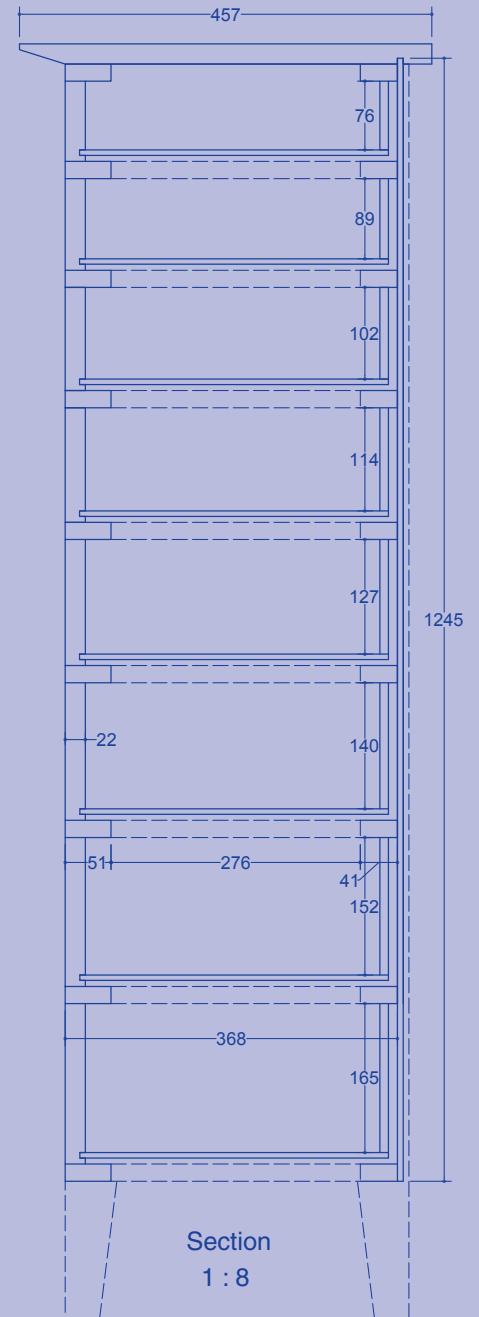
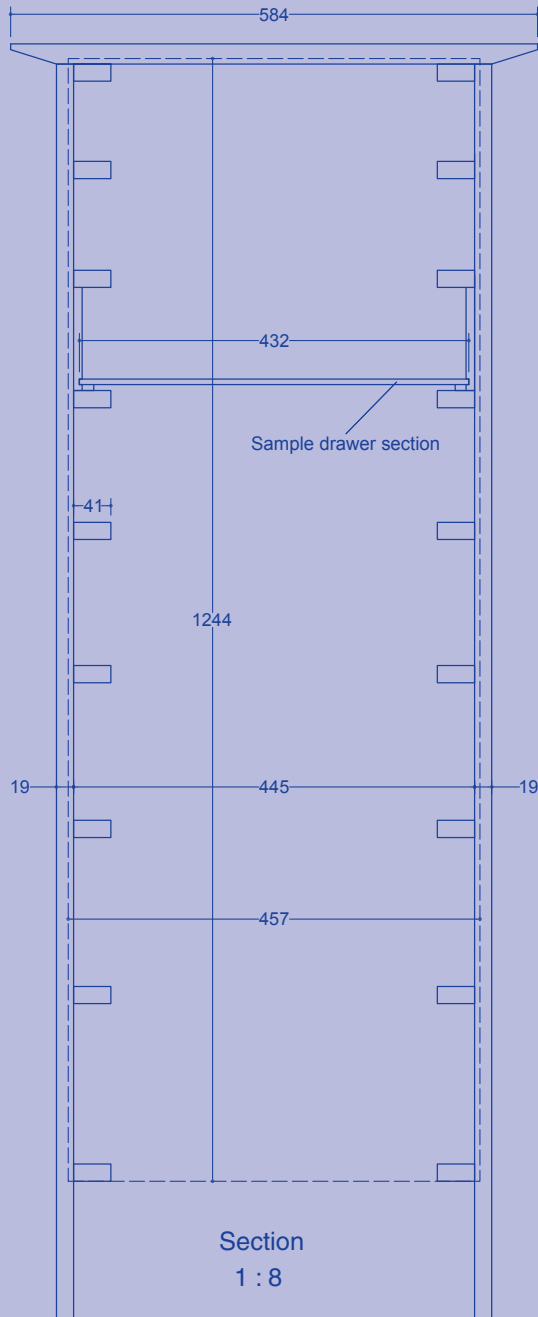
Conclusion

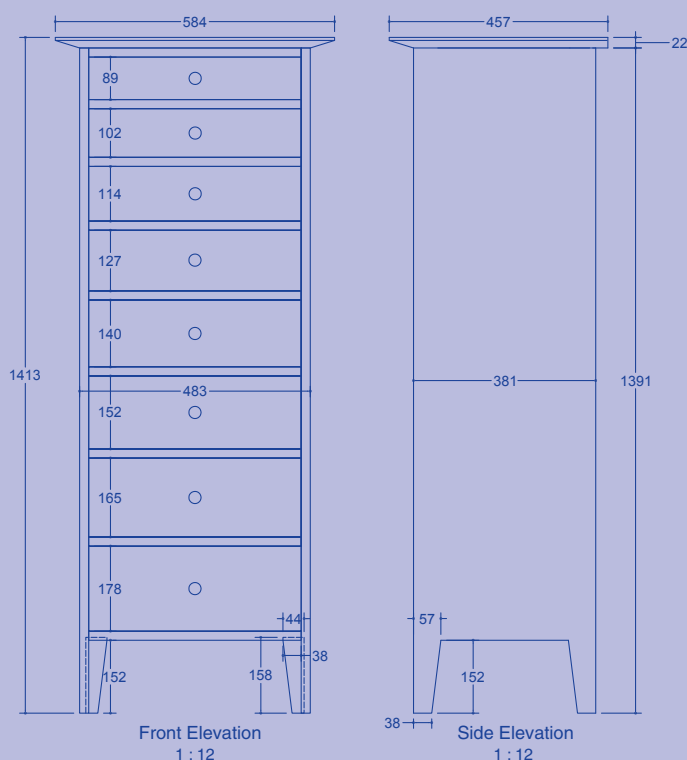
Overall, we are both very pleased with this piece. The drawer capacity is considerable for very little floor space. In spite of its size it looks light and elegant, and the spalted beech really adds something extra to the overall look of the piece. It is exactly what Yvonne wanted – marital harmony is preserved! ■

www.freewebs.com/kevinley



Your free chest of drawers plan

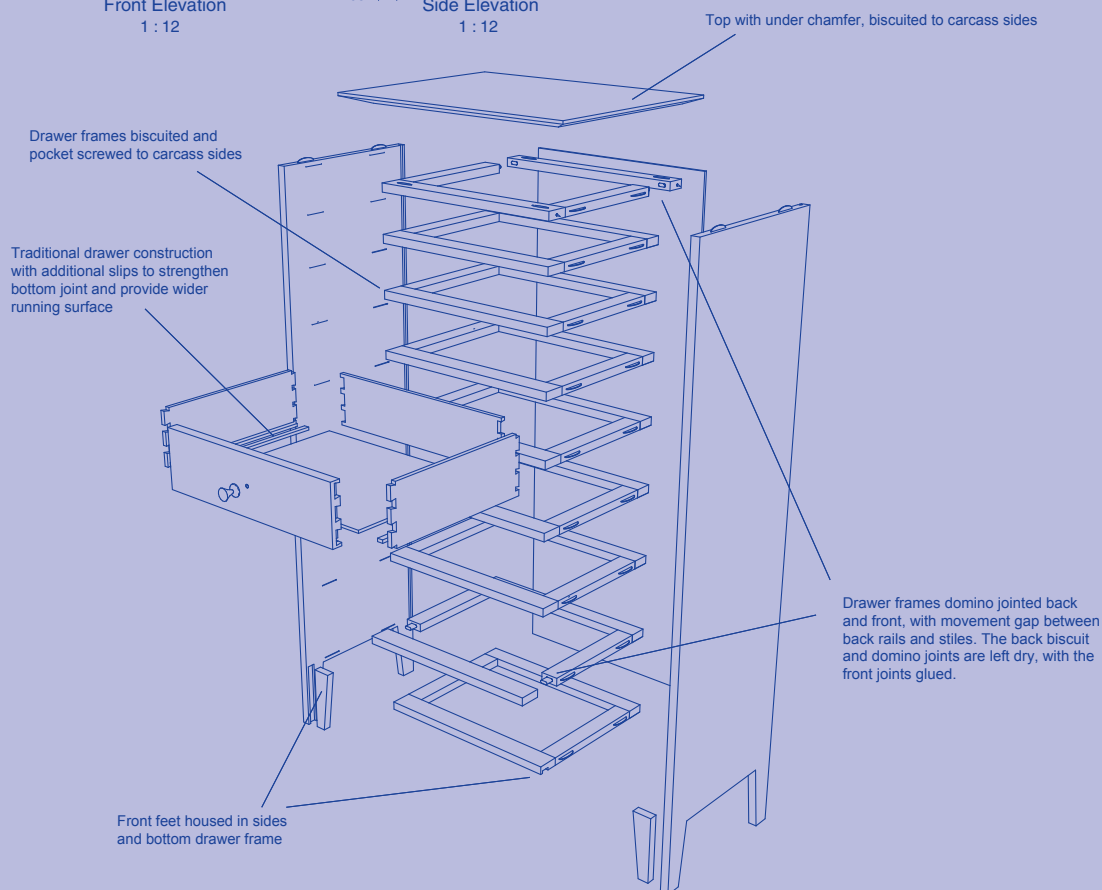




Cutting List

TOP	1 @ 584 x 457 x 22
SIDES	2 @ 1391 x 381 x 19
BACK	1 @ 1244 x 457 x 6
FRONT FEET	2 @ 158 x 44 x 19
DRAWER FRAMES	
FRONT RAILS	9 @ 445 x 51 x 19
STILES	18 @ 273 x 41 x 19
BACK RAILS	9 @ 445 x 41 x 19

Graduated drawer dimensions can be established from the elevations and sections, using the sample drawer detail supplied.
The drawer frame stile length is shown in the cutting list reduced by 3mm to allow a movement gap.



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EVOLUTION

255mm MULTIPURPOSE TABLE SAW

RAGE5

• Powerful 1800w/ 230v motor

• Max depth of cut (45°/90°) 55/79mm • Includes TCT blade, mitre fence, wheel kit, folding stand, push stick, steel extensions • Available in 110v & 230v

£279.99
EX VAT
£335.99
INC VAT

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TABLE SAWS

CTS10D

LEG STANDS AVAILABLE FOR

CTS11 - £21.99 EX VAT

£26.39 INC VAT

CTS10D - £21.99 EX VAT

£26.39 INC VAT

FROM ONLY

£69.98 EX VAT

£83.98 INC VAT

Includes LEFT & RIGHT TABLE EXTENSION

*Moulded base

MODEL MOTOR BLADE EX VAT INC VAT

CTS800B 600w 200mm £69.98 £83.98

CTS11* 1500w 254mm £139.98 £167.98

CTS10D 1500w 254mm £149.98 £179.98

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Clarke MORTISING MACHINE

FROM ONLY **£139.99** EX VAT
£167.99 INC. VAT

- Accurately creates deep square recesses
- Table size 150 x 340mm
- Maximum chisel cap. 76mm

CHISELS AVAILABLE FROM
£6.99 EX VAT £8.99 INC VAT

MODEL	DEPTH OF CUT	EX. VAT	INC. VAT
Clarke CBM18	95mm	£139.99	£167.98
Record RPM75	76mm	£149.98	£179.98
Record BM16	120mm	£219.98	£263.98

PRICE CUT! £ was £215.98 inc. VAT
was £298.98 inc. VAT

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Clarke 12" CONTRACTORS SAW

INDUCTION MOTOR

CCS12

FROM ONLY **£239.00** EX VAT
£286.99 INC. VAT

- 1600w motor
- 315/30mm blade / bore diameter
- 90mm max cut depth at 90°

Clarke SCROLL SAWS

CSS16V

FROM ONLY **£62.99** EX VAT
£75.99 INC. VAT

- 120w, 230v motor
- 50mm max cut thickness
- 400-1,700rpm variable speed
- Air-blower removes dust from cutting area

MODEL	MOTOR	SPEED RPM	EX VAT	INC VAT
CSS400B	85w	1450	£62.99	£75.99
CSS16V	120w	400-1700	£84.99	£101.99

Clarke DUST EXTRACTOR/CHIP COLLECTORS

FROM ONLY **£129.99** EX VAT
£155.99 INC. VAT

METABO ALSO AVAILABLE

- Powerful 750w motor
- 56 litre bag capacity
- Flow rate of 850M3/h

MODEL	MOTOR	FLOW RATE	BAG CAP	EX VAT	INC VAT
CDE35B	750w	850 M3/h	56Ltrs	£129.98	£155.98
CDE7B	750w	850 M3/h	114Ltrs	£139.98	£167.98

Clarke DUST EXTRACTOR

CDE1000

- 50 litre tank capacity
- 183 m³/h flow rate
- 1100W input wattage

OTHER MODELS AVAILABLE

FROM ONLY **£99.98** EX VAT
£119.98 INC. VAT

Clarke BELT SANDERS

FROM ONLY **£29.98** EX VAT
£35.98 INC. VAT

BOSCH Power Tools

BS1

MODEL	WATT	M/MIN	EX VAT	INC VAT
Clarke BS1	900w	380	£29.98	£35.98
Bosch PBS7A	600w	250	£74.99	£89.99
Clarke CBS2	1200w	480	£69.98	£83.98
Makita 9911	650w	75-270	£92.99	£111.59

Clarke MITRE SAW STAND - CUTS1

FROM ONLY **£74.99** EX VAT
£89.99 INC. VAT

- Suitable for most sizes/makes of saw
- Inc. outriggers & rollers

Clarke 16" VARIABLE SPEED SCROLL SAW

CSS400C

WITH FLEXI DRIVE AND WORKLAMP

INCLUDES 64 PIECE KIT

FROM ONLY **£99.98** EX VAT
£119.98 INC. VAT

- Parallel action arm design produces quick, accurate cuts in wood and plastic
- 50mm cutting depth
- Flexible drive kit for additional grinding, polishing & sanding

Clarke BANDSAWS

FROM ONLY **£109.99** EX VAT
£131.98 INC. VAT

HUGE RANGE IN CATALOGUE & ONLINE

INCLUDES STAND

MODEL	MOUNT	MOTOR	THROAT	EX VAT	INC VAT
Clarke Bench	350w	190mm	£119.98	£143.98	
CBS190					
Clarke Floor	370w	245mm	£179.98	£215.98	
CBS250					

Clarke CORDLESS DRILL/DRIVERS

BOSCH Power Tools

PSR18

PRICE CUT! £ was £82.79 inc. VAT

MODEL	VOLTS	BATTS	EX VAT	INC VAT
CDI180	18v	1	£36.99	£44.39
CDI240	24v	1	£46.99	£56.39
Bosch PSR18+	18v	1	£59.98	£71.98

airmaster TURBO AIR COMPRESSORS

Superb range ideal for DIY, hobby & semi-professional use

BIG 2HP 7.8CFM

CLARKE 8MM AIR HOSE FROM ONLY £5.99 EX VAT £7.19 INC VAT

FROM ONLY **£114.99** EX VAT
£137.99 INC. VAT

STAPLE & NAIL GUN KITS
HUGE RANGE IN CATALOGUE & ONLINE

MODEL	MOTOR	CFM	TANK	EX VAT	INC VAT
Tiger 8/44	2 Hp	7.8	24lt	£114.99	£137.99
Tiger 8/64	2 Hp	7.8	50lt	£164.99	£197.99
Tiger 9/24	2.5 Hp	8.7	24lt	£149.98	£179.98
HUNTER 55	2.5 Hp	8.7	50lt	£179.98	£215.98
Tiger 9/60	2.5 Hp	8.7	50lt	£189.98	£227.98
AM17C510	3Hp	14	150lt	£419.00	£502.80

10" SLIDING MITRE SAW ON BASE

- For easy, precise and smooth cutting of wood parts
- Carbide tipped saw blade
- Rotating table for precise angle cuts ranging between -52° and +60°

FROM ONLY **£159.98** EX VAT
£191.98 INC. VAT

RT-SM300U "Includes laser guide"

MODEL	BLADE DIA./BORE	MAX. DEPTH	EX VAT	INC VAT
RT-XM305U	250/30mm	75mm	£219.98	£239.98
RT-SM305L**	210/30mm	65mm	£219.98	£263.98
RT-SM430U	250/30mm	75mm	£239.98	£287.98

PRICE CUT! £ was £299.98 inc. VAT

EVOLUTION MITRE SAWS

Makita

RAGE3

FROM ONLY **£119.98** EX VAT
£143.98 INC. VAT

- Quality range, ideal for cross, bevel & mitre cutting
- 45° tilting blade & table
- Dust extraction system

MODEL	BLADE DIA./BORE	MAX CUT DEPTH/CROSS	EX VAT	INC VAT
Fury 3	210/25.4mm	60/200mm	£119.98	£143.98
Evolution 255/25.4mm	75/300mm	£169.98	£203.98	
Age 3				
Makita	260/30mm	95/130mm	£199.98	£239.98
LS1040				

Clarke 1000M VARIABLE SPEED WOOD LATHE

CWL1000V

FROM ONLY **£249.98** EX VAT
£299.98 INC. VAT

- Large 350mm turning capacity; great for producing stair spindles, balusters, table and chair legs etc.
- Lockable tailstock
- High quality cast iron build

Clarke DRILL PRESSES

- Tables tilt 0-45° left & right
- Depth gauge
- Chuck guards
- B-Bench mounted
- F-Floor standing

FROM ONLY **£64.99** EX VAT
£77.99 INC. VAT

MODEL	WATTS/ SPEEDS	EX VAT	INC VAT
CDP55D	250/5	£69.98	£83.98
CDP101B	245/5	£79.98	£95.98
CDP151B	300/5	£106.99	£128.39
CDP108	370/12	£159.98	£191.98
CDP301B	510/12	£199.98	£239.98
CDP451F	510/16	£239.98	£287.98
CDP501F	980/12	£429.00	£514.80

Clarke BENCH GRINDERS & STANDS

STAND AVAILABLE FROM ONLY **£41.99** EX VAT **£50.39** INC. VAT

- Stands come complete with bolt mountings and feet anchor holes

6" & 8" AVAILABLE WITH LIGHT

FROM ONLY **£27.99** EX VAT
£33.99 INC. VAT

CBG8W features 8" whetstone & 6" drystone. # With sanding belt

MODEL	DUTY	WHEEL DIA.	EX VAT	INC VAT
CBG6RP	DIY	150mm	£27.99	£33.59
CBG6RZ	PRO	150mm	£37.99	£45.59
CBG6SB#	PRO	150mm	£49.98	£59.98
CBG6RW	HD	150mm	£54.99	£65.99
CBG6RSC	HD	200mm	£59.98	£71.98
CBG6W (wet)	HD	150/200mm	£55.99	£67.19

MITRE SAWS

BT-MS 2112

FROM ONLY **£49.98** EX VAT
£59.98 INC. VAT

MODEL	BLADE DIA./BORE	MAX CUT DEPTH/CROSS	EX VAT	INC VAT
BT-MS2112	210/30mm	65mm	£49.98	£59.98
BT-MS1534	210/30mm	62/310mm	£149.98	£179.98

VAC KING WET & DRY VACUUM CLEANERS

Earlex

FROM ONLY **£46.99** EX VAT
£56.99 INC. VAT

- A range of compact, high performance wet & dry vacuum cleaners for use around the home, workshop, garage etc.
- SS - Stainless Steel

BLACK & DECKER POWERFILE

KA900E

FROM ONLY **£54.99** EX VAT
£65.99 INC. VAT

- Great for hard to reach areas
- 13mm wide belt, 120mm long arm
- 350w motor

Clarke WOODWORKING VICES

FROM ONLY **£13.99** EX VAT
£16.19 INC. VAT

Record wv7

MODEL	MOUNTING	JAW (WIDTH/OPENING /DEPTH)mm	EX VAT	INC VAT
Clarke	Bolted	150/152/61	£13.49	£16.19
CHT152				
Stanley	Clamped	72/60/40	£16.99	£20.39
Multi Angle				
Record V75B	Clamped	75/50/32	£18.99	£22.79
Clarke Wv7	Bolted	180/205/78	£24.99	£29.99

Clarke 6" BENCH GRINDER WITH SANDING BELT

FROM ONLY **£49.98** EX VAT
£59.98 INC. VAT

CBG6SB

- For sanding/shaping wood, plastic & metal
- Supplied with coarse grinding wheel & sanding belt
- Complete with tool rest, eye shield & wheel guard

Clarke 10" SLIDING MITRE SAW

- For fast, accurate cross, bevel & mitre cutting in most hard & soft woods
- 1800w motor
- 6000rpm

FROM ONLY **£129.98** EX VAT
£155.98 INC. VAT

CMS10S2

Clarke PORTABLE THICKNESSER

- Max thickness capacity 130mm
- Planing depths adjustable from 0-2.5mm
- Powerful 1250w motor
- 8000rpm no-load speed

FROM ONLY **£179.98** EX VAT
£215.98 INC. VAT

CPT250

Clarke WHETSTONE SHARPENER

- Produces accurate razor sharp cutting edges on chisels, scissors, tools etc
- 120w motor
- Grinding disc dims: 200mm dia x 40mm x 12mm bore
- Wet bath

FROM ONLY **£109.98** EX VAT
£131.98 INC. VAT

CWS200

Clarke 6" BENCH GRINDER WITH SANDING BELT

FROM ONLY **£49.98** EX VAT
£59.98 INC. VAT

CBG6SB

- For sanding/shaping wood, plastic & metal
- Supplied with coarse grinding wheel & sanding belt
- Complete with tool rest, eye shield & wheel guard

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Hot Stuff

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

Bench Dog lettering and numbering sign kits

MINI TEST

£23.76



The Editor likes the simplicity and ease of use which these kits offer

Making up signs can be difficult and tedious so the two sets from Bench Dog, one numbers and the other letters, are a very quick and easy shortcut to creating signs in wood.

Each set consists of flat plastic interlocking pieces which include characters and spaces where appropriate as well as multiples of letters or numbers. The Comic Sans font style is 'informal' and avoids problems with trying to rout sharp corners. Simply clip the pieces you want together and tape down to the job. The dollar and hash symbols in the number kit are not relevant for the UK of course. An American style plastic guidebush insert for a fixed-base router is provided; however, a standard 12mm UK type seems to be perfectly adequate although you will need to trim the collar down to suit the thin plastic template. I like the simplicity and ease of use and each are provided at a cost to match.

CONTACT: Bench Dog
WEB: www.benchdog.eu



£395

DEROS from MIRKA

The world's lightest electric sanding machine in its class, featuring a brushless motor combined with patented driving technology, the Direct Electric Random Orbital Sander or DEROS, plugs into an ordinary power supply, making it easy to move around, and is suitable for multiple sanding operations to produce a highly effective smooth finish. The DEROS is designed to deliver a rapid, efficient, consistently powerful performance comparable to a conventional 500W electric machine, even under heavy load. It is economical to use, reducing energy costs.

This low-maintenance, extremely reliable sander has a long lifespan and features a 'closed construction' preventing dust from entering the motor, avoiding typical wear and tear damage experienced by electric machines. This product also has a range of innovative features.

CONTACT: Mirka (UK)
WEB: www.mirka.com

NEW catalogue from J & CR Wood Ltd

One of the country's leading manufacturers of metalcraft tools has just launched their new catalogue which features a range of products for woodworkers. The company has been supplying hand-powered ornamental metalworking tools for over 60 years, which are popular with woodworkers, DIY enthusiasts, as educational tools in school, and also to businesses across a range of industries.

CONTACT: J & CR Wood Ltd
WEB: www.metal-craft.co.uk





LEIGH D4R Pro dovetail jig

£468

In a class of its own, with a full 610mm capacity, the Leigh D4R Pro can produce through dovetails, half-blind, end to end and sliding dovetails with infinite adjustment of pins and tail widths. It comes with the added bonus of being able to produce single pass half-blind dovetails plus two sizes of box joints straight out of the box. A precision one-piece extruded aluminium body, with non-marring textured clamping surfaces and machined-in side stops adds extra rigidity and accuracy. The D4R Pro produces joints with that classic hand-cut look.

The jig is supplied with three robust 8mm diameter shank cutters, plus much more. Also, until 30 June 2013, the jig comes with a free router bit set worth over £100.

CONTACT: BriMarc

WEB: www.brimarc.com

FREE SP-650 Stone Grader with Tormek T-3



£279.95

The Tormek T-3 is ideal for sharpening cabinetmaking hand tools, knives, scissors and woodcarving tools. You will be able to grind your plane irons and chisels with a perfectly square edge using the latest design of jig which is included with the T-3.

The powerful industrial AC motor maintains all the drive needed from start to finish. The 200mm diameter stone has the Tormek EzyLock mounting for fast stone changes without a spanner. The stainless steel shaft and hardware eliminate any risk of corrosion and there is a seven year warranty. The standard T-3 package includes the patented SE-76 Square Edge Jig, WM-200 Angle Master, PA-70 Honing Compound and the unique Tormek Handbook and DVD.

Until 30 June, 2013, the T-3 also comes with a free SP-650 stone grader – worth £19.90 – for a 1,000 grit finish.

CONTACT: BriMarc

WEB: www.brimarc.com

WIN! 1 of 50 bottles of Elmer's Glue-All MAX

Elmer's Glue-All MAX offers outstanding holding power and you could be in with the chance of winning 1 of 50 bottles worth £9.89

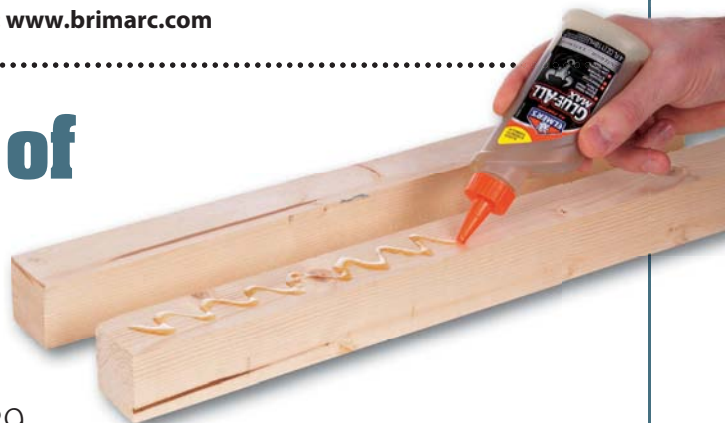
Elmer's Glue-All MAX is the ultimate glue that bonds almost anything to anything – the wood will break before the bond does!

Providing all the strength of other heavy duty glues, Glue-All MAX requires no mixing and doesn't foam, so creates less mess. It will bond metal, stone, wood and more, and because the solution contains real wood fibres, it can be sanded, stained or painted for a professional result with no visible sign of the glue.

Completely waterproof, Glue-All MAX can be used indoors and out, so is ideal for occasional use at home or in the workshop. Cleaning up is easy – if the glue is wet it can simply be wiped away with mineral spirits or acetone; once dry, it just needs to be sanded or scraped to remove the excess.

Setting time, depending on application, is between one and four hours, and it is recommended that parts are clamped together after the glue is applied for best results.

Elmer's is one of the most trusted adhesive brands in America, and has been continuously developing innovative adhesive products for over 60 years – for exceptional performance in the workshop, home or at the craft table.



How to enter

Send your details on a postcard with the title 'Elmer's Glue-All MAX Giveaway' to WPP Reader Giveaway, 86 High Street, Lewes, East Sussex BN7 1XN. The closing date for the competition is **11 July, 2013**

The competition is open to UK residents only. Only completed entries received by the closing date will be eligible. No entries received after that date will be considered. No cash alternatives will be offered. The judges' decision is final and no correspondence can be entered into. The winner will be expected to be in possession of a copy of this issue of *Woodworking Plans & Projects* magazine. One entry per household. Employees of GMC, their associated companies and families are not eligible to enter. By entering the competition, winners agree to their names being used in future marketing by GMC Publications, unless you mark your entry otherwise.

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Einhell WELL DONE.



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GET KITTED UP THIS SUMMER WITH THE EINHELL RED POWER TOOL COLLECTION

1800 W Double Bevel Mitre Saw

TH-SM 2131 DUAL

ART.-No: 43.008.35



RRP
£144.99
(INC VAT)

FEATURES

- 1 Carbide Tipped Professional Quality Saw Blade
- 2 Double Pivoted Sliding Feature
- 3 Power: 1800 W
- 4 Cutting Speed: 5000 rpm
- 5 Max. Cutting Width: 310 mm
- 6 Rotating Table For Precise Angle Cuts Ranging -45° to +45° With Positional Lock



10.8 V Lithium Cordless Drill

RT-CD 10.8LI

ART.-No: 45.131.85

RRP
£59.99
(INC VAT)

**HIGH
POWER
25 Nm**

FEATURES

- 1 Single-sleeve Quick Chuck
- 2 Automatic Spindle Stop
- 3 Lithium Ion Battery
- 4 Sturdy Metal Gearing
- 5 LED-Light
- 6 Soft Handle



Scan the QR code to view the **video demo** online now!



200 W Soft Start MultiMaxx

RT-MG 200E

ART.-No. 44.650.40



RRP
£69.99
(INC VAT)

FEATURES

- 1 Soft Grip
- 2 Cutting Speed Regulator
- 3 Soft Start
- 4 Scraper
- 5 Triangle Sanding Disc
- 6 6 x Sanding Paper
- 7 Metal Saw Blade



The Woodworker
Performance
★★★★
Value for money
★★★★

750 W Pendulum Jigsaw

RT-JS 85

ART.-NO: 43.210.80



RRP
£59.99
(INC VAT)

FEATURES

- 1 Keyless Blade Change
- 2 45° Bevel Cut
- 3 Parallel Guide
- 4 Power: 750 W
- 5 Speed: 800-3000 rpm
- 6 LED Light for Accuracy and Precision
- 7 Cutting Depth: Wood (85 mm) / Steel (8 mm)



The Woodworker
"This is a very capable tool with a good range of features and sparkling performance"

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Craftsman's corner



Jost abrasives

These fine grit abrasives from German company Jost are definitely worth investigating, as **The Editor** finds out

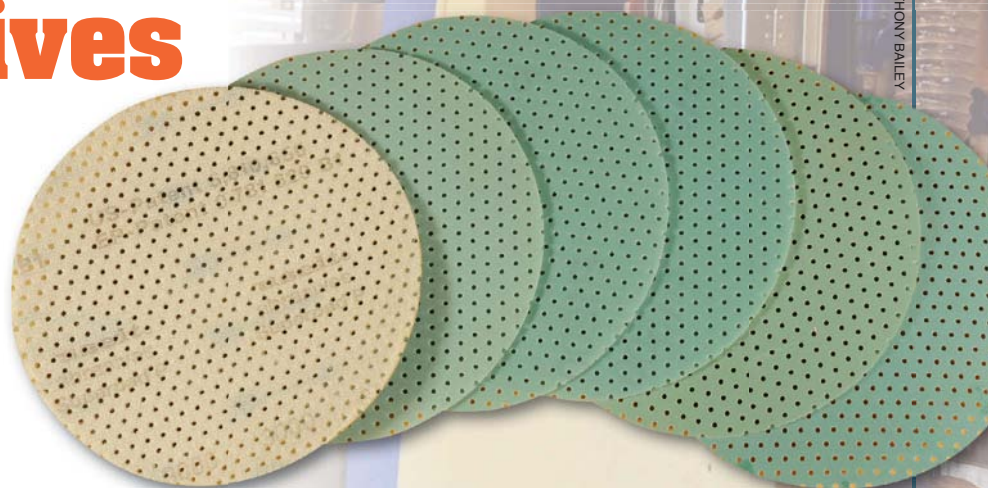
There's always a need for a finer finish on our work, and what better way than to try out some abrasives that help us do just that – Jost abrasives to be precise.

In the past, woodworkers tended to use a fairly basic range of abrasive papers for initial preparation and then the finishing stages. However, an increasingly broad range of specialised finishing materials are now available from manufacturers who are often less well known, such as Jost from Frankfurt, Germany, which are now available in the UK via Southern Filters – www.southernfilters.com. I decided to try out their Useit – Abrafilm abrasive discs.

Useit – Abrafilm

Abrafilm is an abrasive particle coating in grits from a very coarse 40-240

Zirconia grit and 240-3,000 ceramic grit with a consistent spread of grades in between. The grit is applied to a film carrier, hence the name, and it is an 'open coat' type. It is suitable for wet or dry sanding and has a stearate coating to ensure it doesn't clog. Their 'Superpad P' material is a porous foam backing which attaches straight on to hook-and-loop sanding pads without the need for an intermediate attachment layer and thus helps to avoid 'scrub damage' to the machine's sanding pad. A massive advantage of these pads is that they extract through the entire pad for improved dust removal and are suitable for use on any make of sander of the correct size, which makes them



THE NUMBERS

Pack of 25 x 150mm dia.
Abrafilm discs

Price: £20.39 (inc VAT)

WHERE TO BUY

Web: www.southernfilters.com

incredibly versatile. Because the pads are soft you can always cut them down to fit a smaller machine if you need to. In addition, this material can also be used for manual finishing and I understand that Southern Filters are expecting to introduce rolls of the Abrafilm as well as the discs currently supplied, so keep checking the website for updates. ■

Bosch GAS extractors & PortaLED worklight

Anthony Bailey puts these new extractors and a clever portable worklight from Bosch through their paces

One of things that craftsmen all need, but seldom seem to use, is extraction. Considering the mess and health risks involved, this is strange; there is nothing macho about allowing yourself to get asthma or lung disease. Bosch know this and they also understand, along with other power tool manufacturers, what a big market is waiting if tradesmen everywhere equipped themselves properly for personal safety. The new range of GAS extractors are designed to answer a lot of the problems by delivering complete solutions as part of a system of tools and accessories. We tried out the GAS 25 L SFC in issue 71, so this time we turned our attention to the new models.

GAS 35 L AFC and GAS 55 M AFC Professional

These are two of a range of four new models which have similar specs, but represent them all quite well. They all have the same turbine motor and assembly, but the differences are in the filter type, filter cleaning operation and dust container size. The 35 L has the normal filtration standard which is suitable for woodworking and



Bosch L-Boxx system cases clip on top of the extractor so your kit can travel with it



Manual cleaning can be activated as well as the normal automatic mode

similar dust-producing tasks, while the 55 M has a higher filtration level for fine building dust, etc. Both have automatic filter cleaning, although there is another version of the 35 L AFC – the 35 L SFC – which has semi-automatic cleaning via a button at the tool end of the hose. You can select manual or auto-switching for working with power tools. As you work, the filter cleaning kicks in at regular intervals which can sound alarming, a bit like a door banging, but this is your assurance the filter element is being kept at maximum efficiency as you are working.

Ease of use

All models are highly manoeuvrable thanks to small swivelling wheels at the front, and large wheels at the rear, designed for going up steps and over minor obstacles. Bungee-type clips finally deal with the knotty problem of stowing the hose! Accessory storage is at the rear with cleaning tools included. A key feature that could easily be overlooked is the fact that these units are compatible with Bosch L-Boxx storage units. This means you can clip power tools or fix compartmented cases on top and wheel the whole thing round when you get on site – so the tools you want to use with extraction can stay with the extractor.



The rectangular filter is fitted directly underneath the extractor



All the new GAS extractors come with a set of cleaning tools

GLI PortaLED

Here is an early preview of an amazing L-Boxx variant, the GLI PortaLED. This is no gimmick but a really powerful site light in a case. Again, it clips to other L-Boxxs and if you put it on top of an extractor as well, you can get it up to a very reasonable working height for plenty of working light 'off mains' thanks to a 14.4V or 18V Li-ion battery, when you plug it in to the light and still have room to store cordless tools in the case as well. Its 60 LEDs give a really bright output, depending on the setting, and last on charge up to three hours. It is very robust and lightweight and has a long service life. ■



The Porta LED is excellent in dark corners when carrying out a variety of tasks

SPECIFICATION

GAS 35 L AFC

Power input: 1,380W
Container volume: 35 litres
Max vacuum pressure: 254mbar
Max airflow: 74 litres/sec
Dust class: L
Weight: 12.2kg
Price:
£507.60
(Inc VAT)



GAS 55 M AFC

Power input: 1,380W
Container volume:
55 litres
Max vacuum pressure:
254mbar
Max airflow:
74 litres/sec
Dust class: M
Weight:
16.2kg
Price:
£780
(Inc VAT)



GLI PortaLED

Power supply: 14.4/ 18V Li-ion batteries (not supplied)
Light source: 60 LEDs
Brightness settings: 30, 70 & 100%
Run time: Three hours at 100% setting with 18V 3Ah battery
Bare weight: 1.2kg more than equivalent L-Boxx size
Load bearing: 100kg
Prices: From £125-149 (Inc VAT)



www.bosch-professional.com



BOSCH

My Working Day

Bill Francis

The perfect example of a qualified, time-served chippy

When I went to interview him, he was busy polishing the stock of a hunting rifle; he had added some contrast timber strips to the butt so it was a better 'fit'. Bill will turn his hand to any woodworking tasks with skill and alacrity. His boyish, infectious smile and twinkle in the eye belies a huge amount of talent and knowledge built up over time. He and his wife Sam live in a delightful early 19th-century cottage, much extended and improved by Bill from its humble origins as a cobbler's shop. The kitchen with its raised, vaulted ceiling and oak truss is one example of his care and attention to detail. The – almost! – featherboarded garages built by him give no clue to the large cottage garden to their left complete with his new 'cold smoker' – Bill's other passion apart from hunting is trout and salmon or sea fishing – to be run on all the oak chippings and dust from the substantial workshop it sits in front of. Inside the building there is a true believer's array of the most heavy, cast iron machinery you are likely to see – not a bit of pressed steel in sight.

Among the kit is a Wadkin planer/thicknesser, Cooksley tablesaw, Smith chain mortiser, Wadkin crosscut, a large bandsaw and a recently acquired Viceroy lathe among other items. It is spacious with plenty of roof space, which is currently

Right: Bill standing in his kitchen with its vaulted oak beamed ceiling

Below: Bill in his spacious workshop using the Wadkin crosscut saw



being insulated so he can get the best from the woodburning stove in winter. Bill Francis had three phase current installed at great expense and annoyance to other people when underground cable was installed across the busy main road outside!

Bill takes on a wide variety of work, recently he completed a very heavy butcher's block island unit which needed four people to carry it down a staircase to install, he also completely refitted the local village hall bar to a standard that would shame many pubs. However, he is really in his element doing first fix, e.g. putting up roof framework and the like. One thing is for sure, Bill is always busy doing something and doing it well. ■



The village hall bar fit in solid oak and oak-veneered MDF, finished with two part clear lacquer



The massive butchers block trolley recently completed for a private client



PHOTOGRAPHS BY GMC/ANTHONY BAILEY, UNLESS OTHERWISE STATED

Bill's Golden Rules

- "Use a joinery ready reckoner; gone are all the headache calculations or having to climb back up a building to recheck measurements – just look up the correct span for rafters and get a quick answer."
- "Buy timber, especially oak and similar hardwoods, from sources you know and trust so you get the right thing for the job."

Likes

"My Stanley No.7 jointer and No.10 carriagemaker's rebate plane – had them for years."

"First fix work. Nothing quite like working on a roof, provided the bricklayer has given you a level course to work from!"

"If it's miserable weather, shutting the workshop door with the stove lit, busy making up joinery."

Dislikes

"I'd much rather pitch a roof than fit wardrobes any day!"

"I hate hanging a run of doors, second fix isn't really my thing."

Proudest moment

"Sam and I won a village conservation award after we did the kitchen rebuild with the vaulted ceiling. Our village historian Tony Turk was appreciative of our efforts to improve the building."

Contact

www.chippyminton.net





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RT0700CX2

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- Tilt base
- Plunge base
- Carry bag

Variable Speed Control

Aluminium Body

Precision Depth Adjustment

Interchangeable Bases



Plunge Base
195563-0



Trimmer Base
195560-6



Tilt Base
195561-4

Spindle Lock
Accepts 6mm & 8mm
(1/4" & 3/8") collets.



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Trimmer Base

- Enlarged opening section of base assembly for excellent bit visibility.
- Round base assembly for smooth and fast cutting.



Tilt Base

- Enlarged opening section of base assembly for excellent bit visibility.
- Tilting capacity: -30° to 45°



Plunge Base

- Ergonomically contoured handles.
- 3 stage cut depth adjustment.
- Plunge capacity: 0 - 35mm (0 - 1-3/8")



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Diamond plate & lapping fluid

Diamonds are an **Editor's** best friend when they put a mirror shine on his tool edges!

Trend have been bringing us a number of very useful diamond sharpening products for some time now. What I wanted to try was a diamond plate that was the best of all worlds: double-sided with both coarse and fine grits, and large enough for any plane or chisel iron. The answer is their improved double-sided whetstone with both 300 and 1,000 grades. The coarse side has a diamond pattern intended to help prevent clogging when creating the initial edge before turning it over for the fine finish. It comes with a non-slip mat and pouch and a rubber to keep the faces clean. Of course it wouldn't be complete without their lapping fluid which, unlike the image on the box that features a pump spray, has instead a flip-up lid for squirting on the diamond plate. While you can use a diamond plate dry or with standard tap water – which won't stay on the plate due to surface tension – lapping fluid has low surface tension and prevents rusting of tools.

Verdict

A note about working with diamond plates. Just like any other abrasive

medium you are effectively 'roughing up' a surface or surfaces in order to make it very smooth, which seems ridiculous but true. Diamond plates are 'raw' when you buy them, and it is only after a while that the rawness goes and they give a better, silkier finish to cutting edges. As I write this review the Trend plate has had very little use so it sharpens perfectly, but with a rather 'mean' edge to it which won't last for long. Another point is that not all tool steels are the same in their composition, so an ordinary plane or chisel blade may have too much of a 'wire edge' to remove once sharpened, whereas say an O1 carbon steel blade is harder and has only a fine wire edge to strop off after sharpening. Having said that, I decided some time ago that diamond plates are the most reliable and consistent method of sharpening for me. The lapping fluid is convenient and there is no immediate rust worry afterwards. A really good working combination in the workshop or on site and a worthwhile investment. ■

THE NUMBERS

Trend DWS/CP8/FC double-sided whetstone – £95.40 (RRP inc VAT)
Trend DWS/LF/250 diamond abrasive lapping fluid 250ml size – £18.60 (RRP Inc VAT)

WHERE TO BUY

www.trend-uk.com





Making & installing skirting



Last month he showed you how to install hardwood floors, this time **James Hatter** completes the job with some new skirting

PHOTOGRAPHS BY JAMES HATTER

Skirting is the traditional way to finish off the join between the wall and the floor. As well as a decorative feature, skirting provides protection to the wall. If you require skirting for a new extension, are replacing flooring, or you simply wish to replace existing skirting for a change, then a wide range of mouldings made from solid timber, MDF or plastic are available. Alternatively, this guide shows how you can make your own.

MDF provides a useful material for skirting because it can be cut and shaped easily, although personal care has to be taken to avoid inhaling the dust. MDF is free of the usual surface imperfections of real timber, and is fairly stable. It does need to be sealed well, and some cheaper grades may not give clean edges when machined. Moisture resistant grades not only tolerate a degree of moisture, but will also give cleaner edges, so are worth considering, even though they are a little more expensive. Skirting can also be made to contain an internal channel that can provide a means of concealing pipes or cables.

MAKING YOUR OWN SKIRTING

A simple form of skirting can be made by cutting a sheet of MDF into strips and adding a decorative top outer edge. The simplest way is just to bevel the edge using a plane. The strips can be cut using a tablesaw or a circular saw against a guide. For example, a standard 1,220mm x 2,440mm sheet of 12mm MDF will produce about 38m of 12mm x 70mm skirting in 2,440mm lengths, at a cost of approximately 50p/m.



MDF sheeting cut into strips can form the basis for skirting

Forming the decorative edge can make use of a table-mounted router and simple roundover bits, or more elaborate designs can be produced depending on your range of router bits and imagination. Run short test samples before committing the longer lengths. One type shown in the example illustrated is made of 145mm wide strips of 18mm thick MDF. A decorative moulding was selectively cut along the top edge using an ogee cutter, and a 'V' cutter in a table-mounted router. The lengths were cut taking into account the positions of the door surrounds, so that the decorative moulding stopped short of the door architrave. This allowed the bottom 145mm of the existing door architraves to be cut off, so that the end of new skirting boards fitted in the architrave gap.



Another option is to make use of a table-mounted router; in this example, a 6mm roundover bit is being used

Solid decorative timber

Although MDF provides a cost-effective means of producing skirting, more decorative timbers such as ash (*Fraxinus excelsior*) or oak (*Quercus robur*) could be used, or a base of painted MDF could be given a plain or decorative cap using a solid decorative timber.



Solid decorative timber can be shaped and used instead of MDF



A simple skirting board can be made by putting a bevel along the top outer edge of the MDF strips. Alternatively, the bevel could be cut using a tablesaw with the blade angled at 45°



In this example, a large ogee cutter is used to form a decorative edge on the router table

SERVICES

If you need to conceal cables or pipes, then skirting can be adapted by adding strips of wood to the top and bottom inside edges to form a cavity. Design must take into account any precautions necessary for the services that are being covered, and include an access panel if maintenance is required.



Making box skirting enables cables to be safely and discretely covered. In this example, cables needed to be covered crossing a hallway



The sections are formed and attached to the wall using a grip adhesive



Any repair and sealing can now take place



The end result provides a safe route for services, and gives a smooth transition

PREPARATION, PLANNING AND INSTALLATION

If you are replacing old skirting boards, these can be removed with a bolster chisel and hammer. If the original skirting was attached using nails then it is likely that some of the nails may be cut clasp types. When the old skirting is levered away the nail may still remain. To remove, first apply a blow to the head of the nail, then use the claw on a hammer to lever the nail out. Some can be very stubborn, and these can be broken off by knocking the nail from side to side until it breaks. Prior to this may involve removing old floor coverings, and the gripper rods which will be nailed or stuck to the sub-floor. The gripper rods can also be removed with a bolster chisel and hammer. Wear safety glasses and suitable gloves to protect against the sharp spikes.



A bolster chisel and hammer can be used to lift any gripper...

...you can use the same tools to prise away the skirting, too



Mark and trim to the exact sizes required



Cut the required mitres for the corner joints



If longer lengths are required, skirting can be joined using biscuits and adhesive

Make a sketch of the floor plan and measure the lengths of skirting required; give each length a label as a means of identifying the various lengths. Cut to length, and cut mitres for the corner joints. Inside skirting corner joints are often scribed to overcome the problem of the joint opening up with temperature and humidity changes – this is less of a problem with MDF, so straightforward mitre joints can be used, although check what the actual angle is. A powered mitre saw will give quick and accurate results. You should also take into account out-of-square corners when cutting your mitres. Longer lengths can be achieved by joining shorter lengths using jointing biscuits and adhesive.

Use an abrasive paper to give a smooth finish to any cut edges; it is best to prime and paint all the skirting boards prior to them being attached. With MDF, seal first, either with a specific MDF sealer, or a diluted solution of PVA. When dry, give a sanding with a fine abrasive paper; follow this with two coats of primer/undercoat. Give a light sanding after each coat has dried. Finish off with topcoat. If quick drying water-based products are used, then the process can usually be completed in a day. This type of paint is best applied with a synthetic bristle paint brush or a small flock roller. More decorative timbers could receive three coats of clear quick-drying varnish. It is also beneficial to use clear varnish over painted skirting in vulnerable areas to increase their durability.



When all the lengths are cut to size and dry checked, apply sealer, primer, undercoat and the required finish

“If the walls have a bow, then you may need to put force on the skirting so that it conforms to the bow”

A convenient and effective way of attaching skirting boards is to use a strong gap filling grab adhesive. This can be a solvent-based one, or a solvent free version. The solvent free is easier to clean, and is more than adequate for most purposes. Apply a continuous bead of adhesive about 10mm from the top inside edge of the skirting, and another about 30mm up from the bottom edge. Put a further bead between the two and on the join with the next board, and then press the board into place. Use a damp cloth to wipe away any excess adhesive. If the walls have a bow, then you may need to put force on the skirting so that it conforms to the bow. You can do this using a weight or timber pressed against the skirting, and a suitable clamp. If you are replacing the skirting after laying a new floor then protect the flooring with polythene sheet, to avoid marking, and to prevent the gap filling adhesive sticking the bottom of the skirting to the flooring – this is especially important with floating floor coverings.

After the adhesive has cured, use a flexible polymer sealant to fill in any minor visible gaps between the skirting and the wall, and in the joints.



Apply gap-filling adhesive to the rear of each length of skirting in turn



Fix in position by pressing the lengths against the wall, then give a slight side-to-side movement to bed in place



You may find it necessary to hold the skirting in place, especially if the wall is uneven or bowed



Finish the job with a neat seal using polymer sealant ■

Light box



Light fitments

If you are unfamiliar with wiring up a lamp, visit your local hardware store or alternatively, the Internet is a great resource for instruction. Finding the lamp fitments themselves is easy, but always take care when working with electrics and if you are at all unsure, seek assistance. As we mentioned before, it doesn't have to be a mains-powered light, it can be battery-operated.

Fred and **Julie Byrne** brighten a room with this light box project

What can we say about light boxes? They are just so handy and really versatile; they can be placed anywhere to instantly create an effect, whether it is to brighten up a dark corner or to create a soft ambience. They're great for adding a touch of fun to a child's room or can be used to accentuate natural wood with a modern design to enhance your living space.

To enable total portability for tabletop use inside or out, you can use battery-operated LED lights – especially pleasant at this time of the year when dinning 'al fresco', with the added convenience of not having to worry about candles blowing out on a breezy evening. Or of course for a more permanent fixture a traditional electric 25W bulb can be fitted. As always, the size can be governed by the size of your wood or the particular space you have to fill.

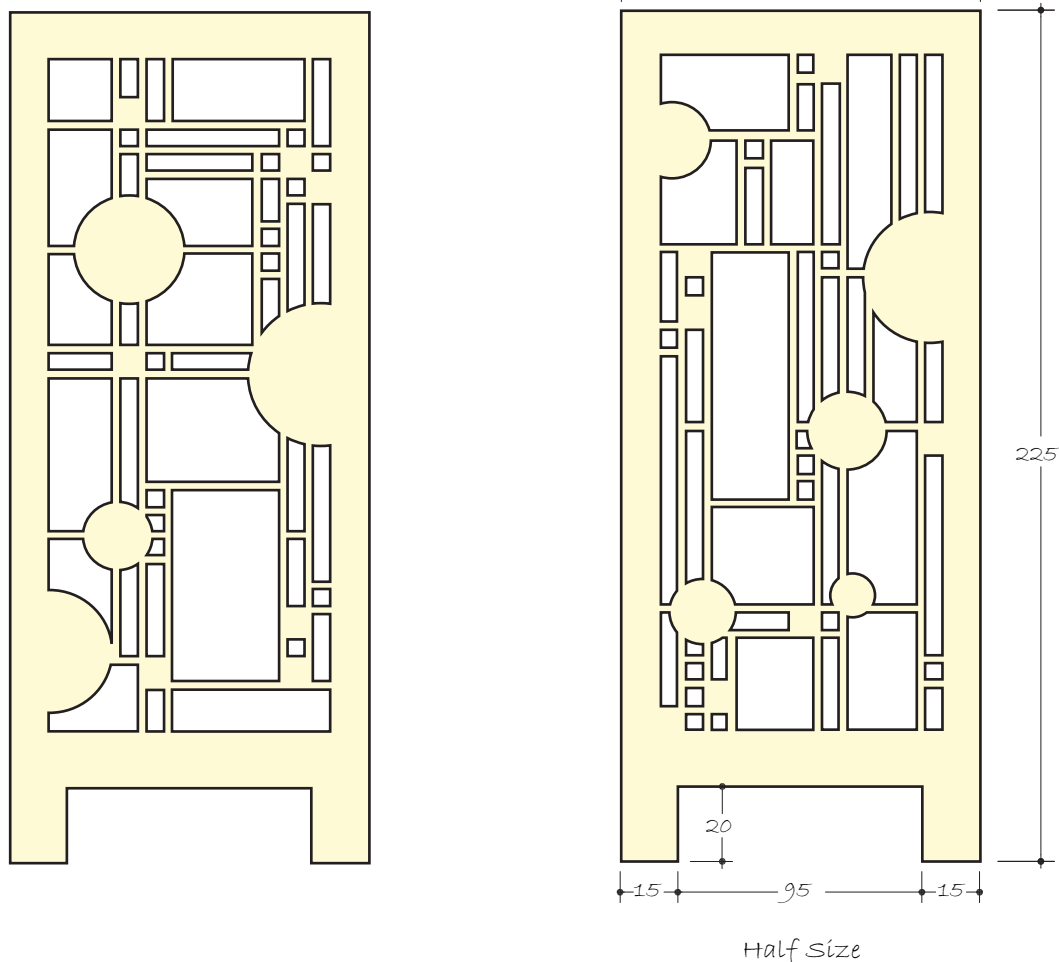
We hope you enjoy making our light box and it inspires you to go on to design and make your own – we'd love to see some of your designs!

Getting started

First choose and cut to size your wood – we used 6mm tulipwood (*Liriodendron tulipifera*) for the four panels, measuring 290mm high x 150mm thick x 6mm thick – this was approximately 30mm wider than the pattern; the 15mm scrap wood cut from each side can then be used to make the support batons.

What you need

- Scrollsaw – No.5 reverse tooth blade
- Patterns
- Pillar drill – 1.5mm drill bit
- Abrasives – 180, 240, 320 grits
- Glue – Wood, Stick/spray
- Masking tape
- Rubber bands
- Clamps
- Handmade paper
- Light bulb & fitment or battery-operated light
- Finish of your choice



1 Prepare the panels by sanding the surface, going through the grades of paper; starting with 120 grit and working through to 320 grit. Enlarge the patterns to the required size and then make one copy of each.

2 Attach the blade to the scrollsaw and then set the saw to cut at 45° – a simple triangular protractor is useful for double-checking the degree, as you cannot always rely on the angle markings set out on the machine.

3 To mitre the panels, carefully cut along one side of the pattern, then turn the panel around to cut down the other side, checking first that you are cutting the mitre the correct way.

4 With the scrollsaw still set at 45° , use the waste strips cut from the panel sides to cut the eight inner support battens; four of these will be placed around the top and the other four at the bottom to support the light fitment. Mitre one end of the batten and then use the panel to measure and mark the distance to the other end...



1



2



3



4

5 ...then mitre cut the baton to length and continue in this way until all eight batons are cut.

6 Once all the mitres are cut, return the blade to its usual 90° position and again use a protractor or engineer's square to check the angle.

7 Next, stack the panels in two pairs and secure each stack with masking tape, covering the whole surface. Align the patterns so you have an equal space down each side and then using the glue stick or spray adhesive, attach the patterns on the top of the tape. The tape also makes removing the pattern a lot easier when the time comes.

8 Using a 1.5mm drill bit, drill all the blade entry – pilot – holes.

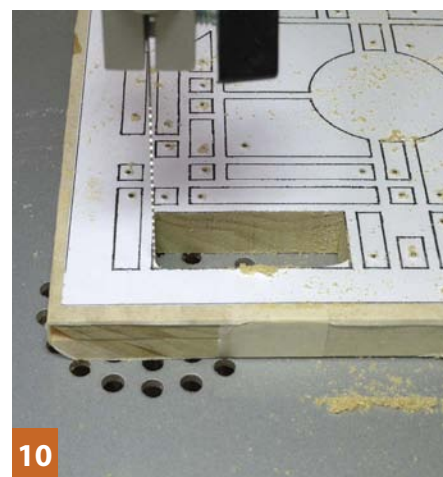
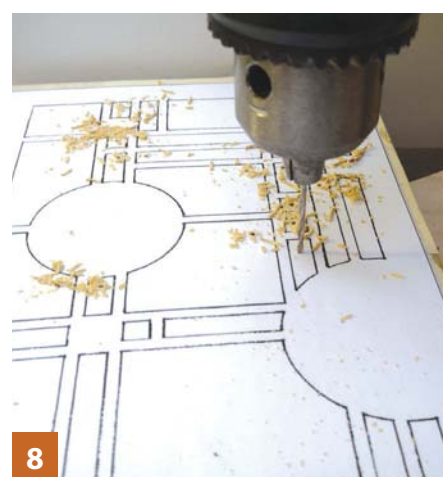
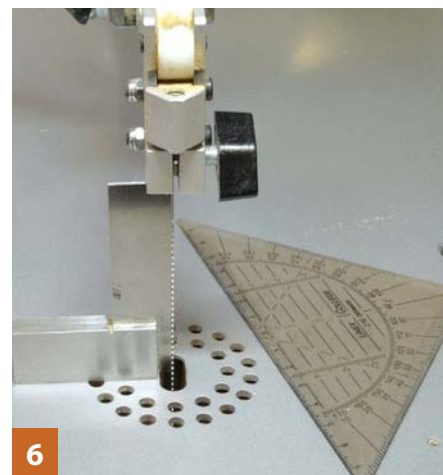
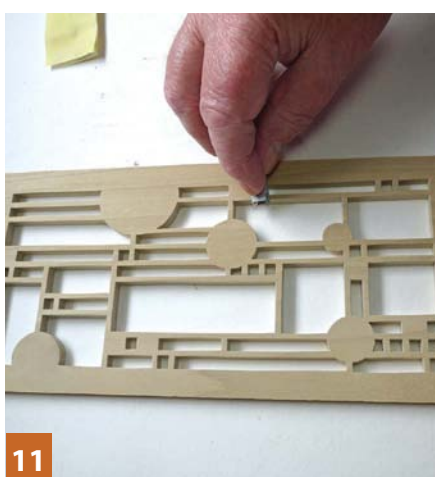
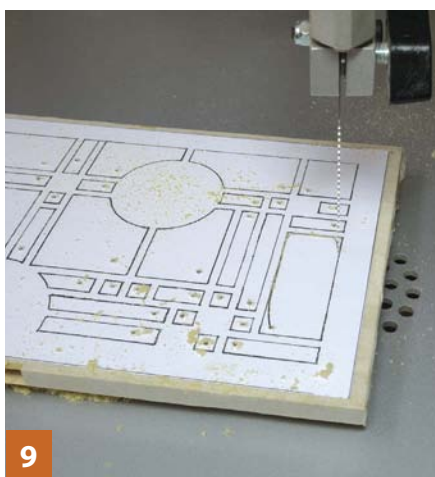
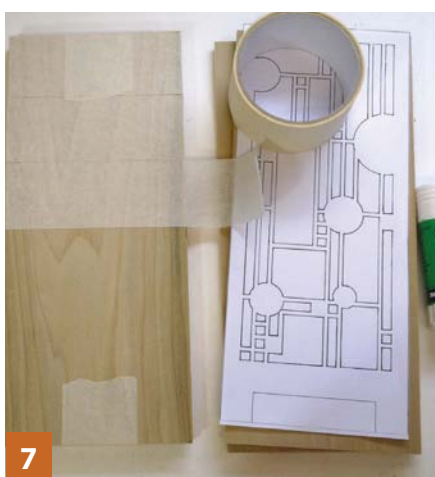
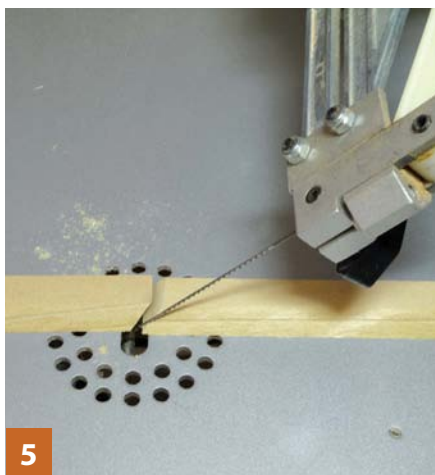
9 Make a start on the interior cuts by threading the blade through a pilot hole and then cut along into the first corner. Back the blade up just enough to make the turn, then continue to the next corner until you are back where you started.

10 Remove the waste material and square up the corners. Continue in this way until all the inner pieces of the pattern are removed. Nearly there!

“Apply a finish of your choice, taking care not to apply finish to the parts that are to be glued”

11 Remove the patterns and masking tape. Lightly round over the edges and remove any burr from the underside with a fine 240 or 320 grit sandpaper.

12 You can now apply a finish of your choice to the panels, taking care not to apply any finish to the parts that are to be glued, i.e. the mitres and reverse side of the panels. You now need to allow the finish to dry between each coat and lightly nib, following the manufacturer's recommendations.



13 Next, measure and cut the handmade paper to size and then apply the glue sparingly around the inner edges and larger sections within the panel. Start at the top and work your way down before the glue dries.

14 Once the paper has dried, apply glue along both mitred edges of the panels, spread out evenly with an old artist's brush and then bring the panels together. Secure with tape, rubber bands or clamps and then leave to dry.

"Cut out the support cross member and the small square that will add depth to the cross member"

15 Meanwhile cut and remove the unwanted mitred sections from along the lengths of the batons, then using a set of four batons – supported by a square – measure to length then cut out the support cross member and the small square that will add depth to the cross member when glued together. Next, position and mark the width of the cross member onto two of the batons.

16 Tape the two baton pieces together and then cut out the lap joint, checking to make sure that the cross member fits snugly within the batons.

17 Glue and clamp the two pieces of the cross member together, then dry mark the centre and drill a hole all the way through. The size is determined by the diameter of your light fitment.

18 Next, glue and clamp the support batons in place; one set around the inside of the top, the other around the bottom, making sure that the cut out lap joint is facing towards the top

You can now attach the light fitment to the support cross member before adding an on/off switch to the cable. Fit a bulb of no more than 25W power. ■



13



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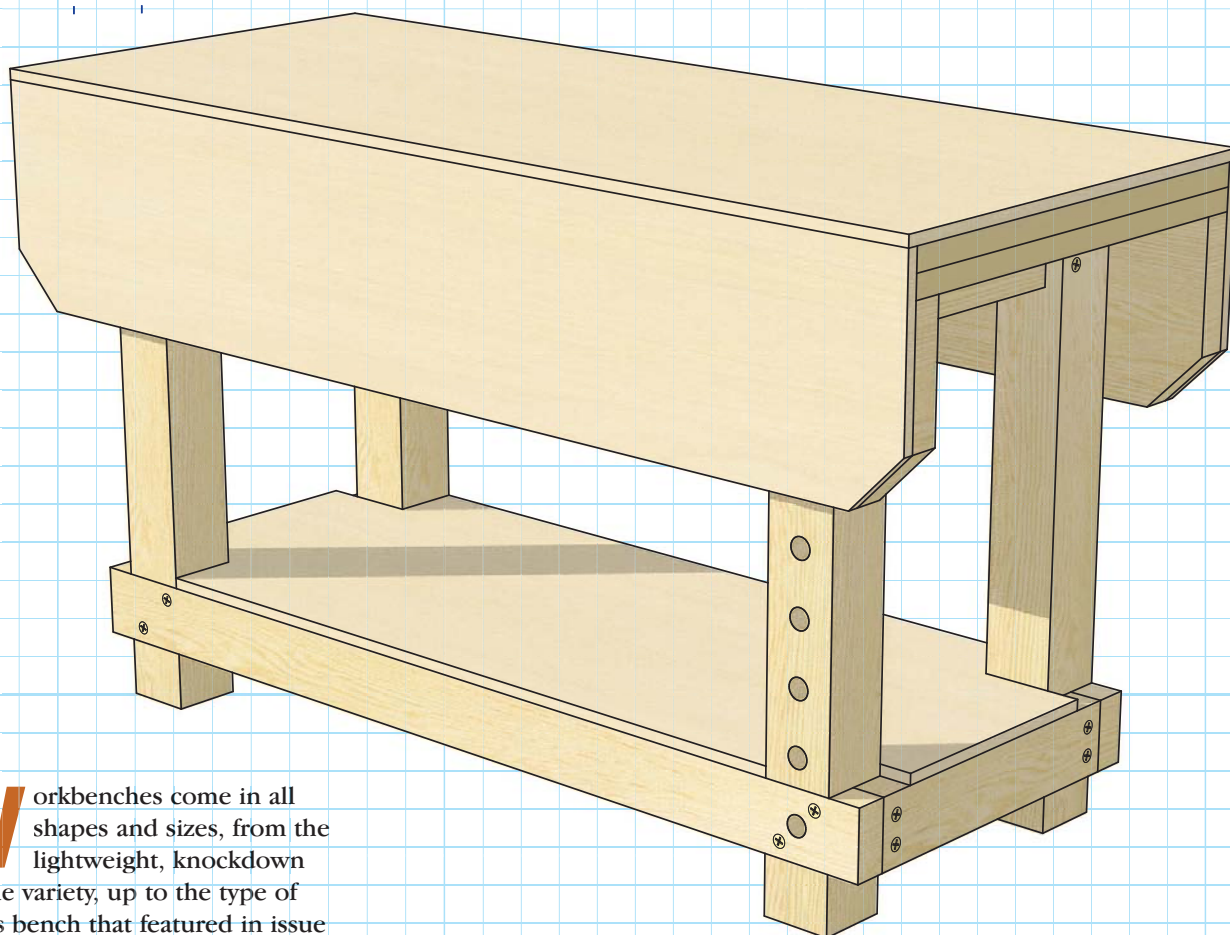
PLANS

4

YOU

Workbench

Simon Rodway has designed a rock solid workbench that's built to last



Workbenches come in all shapes and sizes, from the lightweight, knockdown portable variety, up to the type of joiner's bench that featured in issue 206 of our sister magazine, *Furniture & Cabinetmaking*, which would require a small crane to move. This bench is located somewhere between those two types. The double layer of 30mm MDF in the top, as well as the 40mm timber apron along the sides helps to give a solidity and weight which is a real advantage for much bench work.

Construction techniques focus on strength and simplicity, and the joints used here are simple housings and butt joints. Having cut your legs to length, form housings on all four to take the long lower rails, and then at right angles cut out the section for the bridle joint in the top of each leg. Finally, drill the 28mm holes in one leg as shown. Fix the long rails to each pair of legs, allowing a 45mm projection either end for the cross rails, which should then be screwed between the two pairs to form the

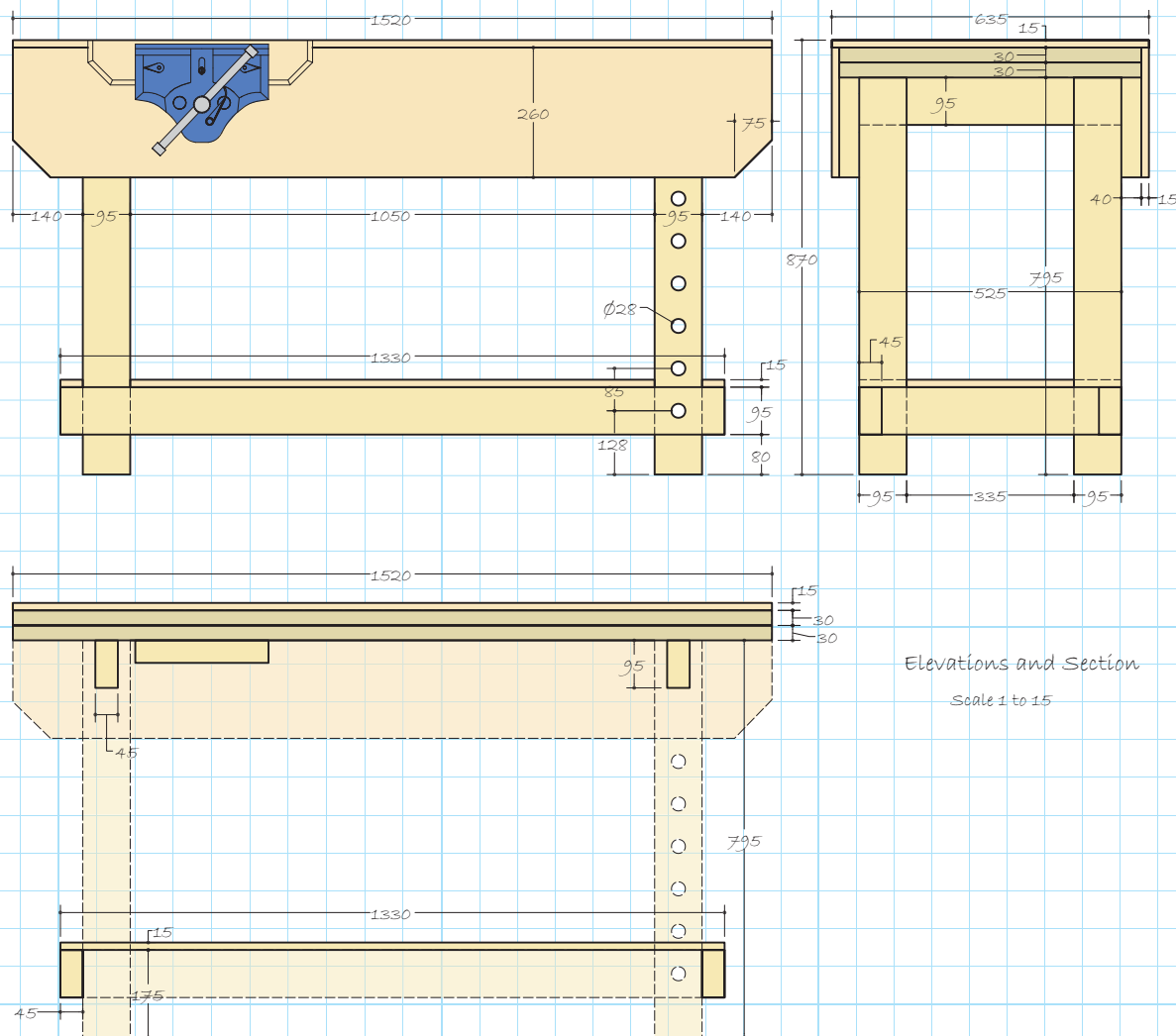
basis of your workbench frame. Drill through one long rail from the inside of the leg with the peg holes in to complete the bottom hole.

It's probably easier to fit the plywood shelf at this point, which forms the dual purpose of additional bracing to the lower part of the frame,

as well as a really practical storage surface for tools and bits and pieces. Mark out the cutouts on each corner and remove with a jigsaw, to allow it to drop down between the legs, and then finish the bracing of the frame by adding the top rails through their bridle joints and the long apron along

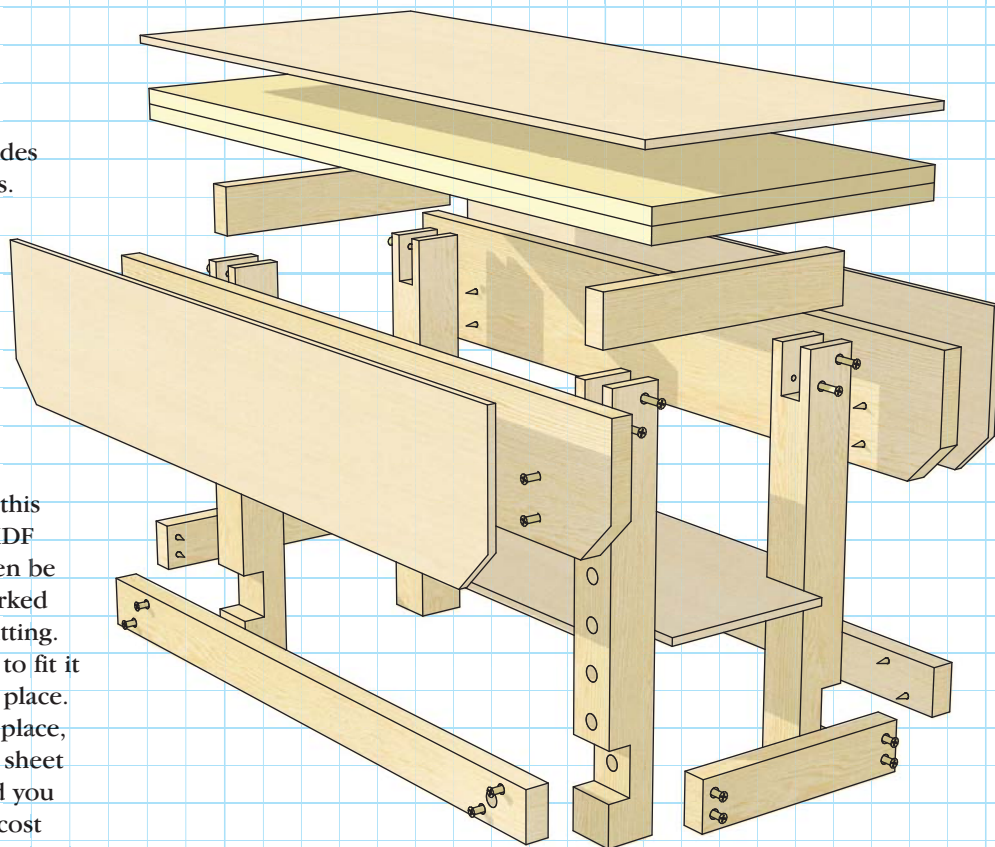
Cutting list

Top	1	@	1,520 x 635 x 15mm
Top	2	@	1,520 x 605 x 30mm
Side panels	2	@	1,520 x 260 x 15mm
Side braces	2	@	1,520 x 200 x 40mm
Legs	4	@	795 x 95 x 95mm
Shelf	1	@	1,330 x 525 x 15mm
Top rails	2	@	525 x 95 x 45mm
Bottom rails	2	@	1,330 x 95 x 45mm
Bottom rails	2	@	435 x 95 x 45mm



each side, screwed to the leg sides and finished flush with the tops.

The trickiest part of workbench construction comes with the fitting of the vice. My advice here is to leave the fixing of the top until you have marked up and fitted any mounting blocks that might be needed, and established the location of your vice properly. The top, in this case a double layer of 30mm MDF sheet screwed together, can then be turned over, and the apron marked out and cut to allow the final fitting. This is much easier than trying to fit it in one go with the top fixed in place. Before finally fixing the vice in place, cut and fit the 15mm ply cover sheet to the top and apron sides, and you have a solid and relatively low cost workbench which will give many years of service. ■



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Meat tenderiser

Mark Baker brings you another ingenious turned item for your kitchen

Here is a nice little project for the kitchen. Meat tenderisers come in all shapes and sizes. In truth, people many don't often use them any more and just cook a steak or escalope straight from the pack or butcher, but there are times – and also certain cuts of meat – where a good old bashing makes your meat so much more tender.

This is a spindle grain project – the grain runs along the axis of the wood – and the big thing to remember is to get the head shape and holding section proportions right, so you don't catch your knuckles on the board on which the meat sits and is

being bashed. If you think about this project, you can make a smaller-scale version and use it as a honey dipper. Whatever you do, you need to choose a close-grained hardwood so you get no fractious sections, and the design means there are no hard edges and sharp edges to fracture off. Sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), maple (*Acer campestre*) and fruitwoods are ideal timbers for this but the wood must be blemish free. I do not apply a finish to this type of work but of course you can. I find a food-safe oil or a salad oil such as sunflower oil will work well for this. Have fun.

What you need

- 19mm spindle roughing gouge
- 10mm spindle gouge
- 19mm skew chisel
- 10mm beading/parting tool
- Scroll/geared chuck
- Abrasives down to 250 grit
- Revolving centre and a drive spur





1 Mount the work between centres and use a spindle roughing gouge to clean up the wood until it is a nice even cylinder. A typical speed range to work at for this is about 1,200rpm for the rough shaping and 1,500-800rpm for the fine refinishing cuts. But work at a speed that you are comfortable with – if in doubt, slow things down.



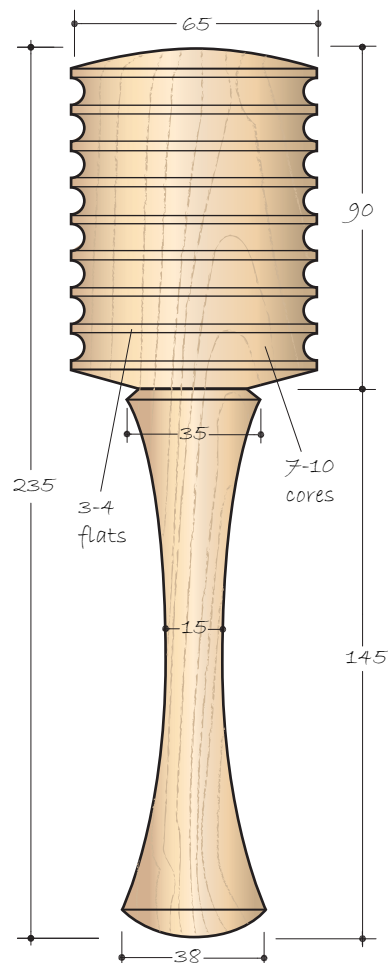
2 I prefer to hold a project in a chuck. With this project you do not have to if you cut your work almost to length, but I find the chuck hold affords you a bit more security for holding and is therefore somewhat safer. So assuming you will do likewise, use the parting tool to cut a spigot on the tailstock end of the work to suit your chuck. Once cut, remove the work from the lathe and fix the spigot in the chuck, lock everything down securely, bring up the tailstock at the other end and secure that in place.



3 Now mark the length of the head and the hand on the work. Use a parting tool to cut just shy of the finish depth for the handle section that meets the head.

4 The wood used was slightly oversized, so a spindle roughing gouge was used to reduce the diameter of the head section.

5 The next step is to take a spindle gouge and create the top section curvature of the head section of the tenderiser. Where the revolving centre enters the wood make cuts to create a little stub. This should be of such a size that when you eventually remove it. Don't make the stub too small or it might fracture – about 13mm wide is about right.



6 Once cut, use the spindle gouge to shape the lower section of the head where you get the handle meeting the head.

7 Again, using the spindle gouge, cut a series of coves leaving about 3-4mm flat in between each cove so there aren't any sharp or fractious areas that will break. Remember, when cutting coves cut from the high point down to the lowest part of the cove. Have the gouge pointing in the direction of the cut and the cut occurring on the lower wing at all times. So, you need to work from both sides to do this – never cut uphill or you will get a catch and torn grain. Repeat the cuts until you have completed the whole row of them. Try to make them all even in width and depth. If you struggle with a gouge, use a shaped scraper – the finish will not be as clean and more sanding is required later, but you will be able to just push the scraper in very gently to create the shape that is required.

8 Once the coves are cut, use a combination of the spindle roughing gouge and the spindle gouge to refine the shape of the handle. Stop the lathe regularly to check that the shape you create is comfortable in the hand.

9 The spindle gouge is used just to dome over the end of the handle section, but do not cut all the way through – leave a stub of about 13mm or so. We will cut this off later.

10 Now sand the piece all over starting at about 120 grit, working down to 240 or even 320 grit to get a nice silky finish on the work. After sanding, you can apply a finish if you so choose.

11 If you need to, use either the spindle gouge or skew chisel just to refine the end of the head and then sand if required, before removing the item from the lathe and then...

12 ...cutting off the end waste on the handle section and also the stub left on the head. Once removed, sand the sections round and there you have a nice finished meat tenderiser or masher. ■



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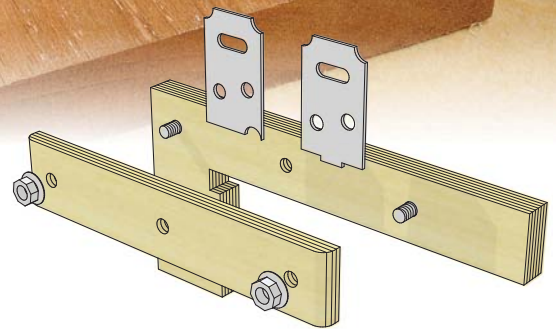
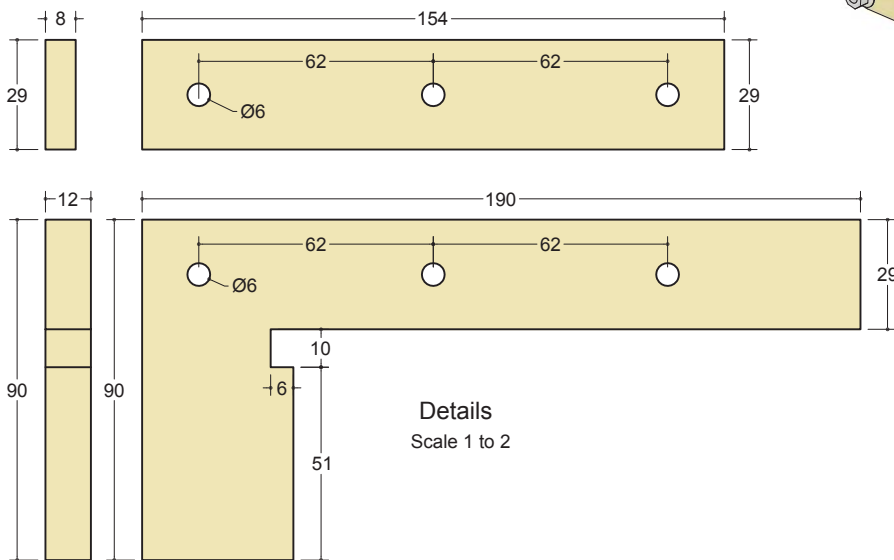
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Make a scratchstock

This month **The Editor** demonstrates how easy it is to make a somewhat forgotten hand tool – the scratchstock

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

PROJECT HANDBUILT – MAKE YOUR OWN SCRATCHSTOCK



Before electric routers came along, there were all sorts of moulding planes and other tools for shaping wood such as spokeshaves and the one I'm going to show you now; the humble scratchstock. It is so-called I suppose because its scraping action 'scratches' the wood. It still has a use even now and is actually rather handy for certain tasks, namely creating shallow slots for inlay stringing or banding, for creating an edge bead on the meeting edge of a door, or for 'reeding' chair legs. The key thing is that it isn't being asked to remove too much in one pass, as it is worked along the wood in a series of scraping motions that gradually shape the wood.

1 The simplest design creates an L-shaped body with the short leg acting as a fence against the side of the workpiece.

2 Next, cut the shape from a piece of birch ply; this has strength due to the plies and it is also a pleasant material to work with.



3 Note how the L-piece has a notch out so the fence side doesn't interfere with the path of the cutter if you are working along the edge. A sharp chisel is used to chop out the notch cleanly using the chisel board shown in 'Plans For You' last month.

4 The scratchstock body has its edges cleaned up with a block plane so it doesn't have any roughness.

5 Now cut the ply strip that will hold the blade in place. If you are using the same thickness of ply, it needs to be made thinner by accurately hand planing it down by several plies.

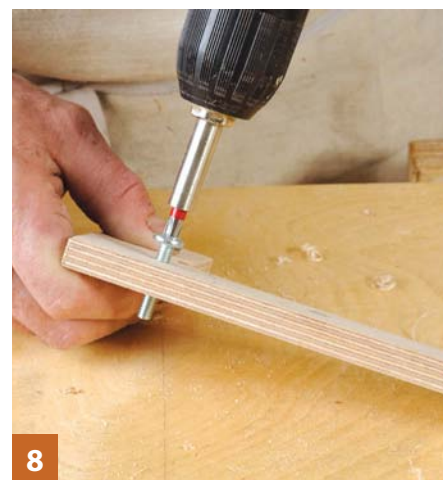
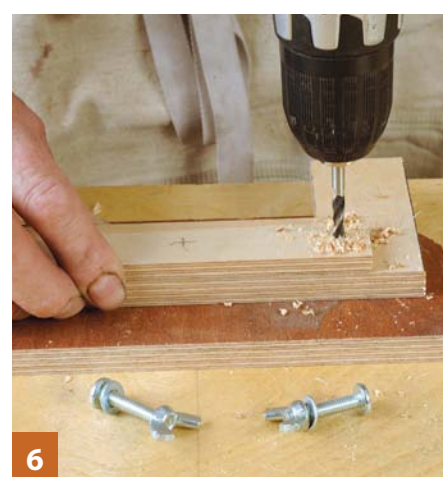
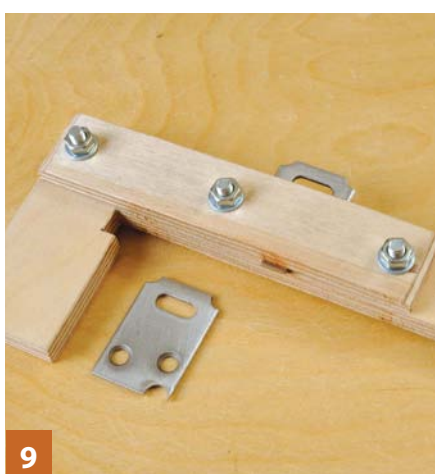
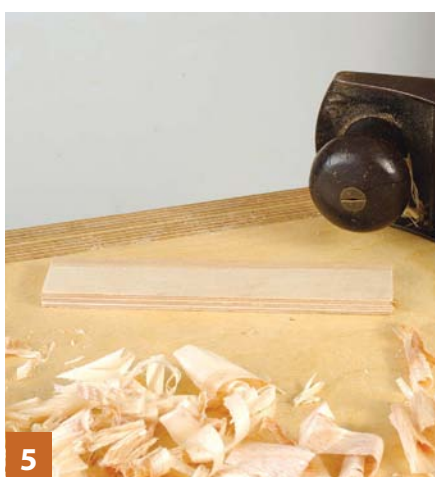
6 Clamp the two pieces together and drill through into a sacrificial board so the exit holes aren't ragged. If you have three holes you can move one bolt along so whatever width or position of cutter it is held securely. Select bolts of the right length to go through both pieces of ply plus blade thickness and an allowance for either nuts or wing nuts.

7 It is now time to take the arrises off with a block plane; this will make it more comfortable to use. Do the same to the ply clamping strip but only on the outer face.

8 If the holes in the body of the scratchstock body are small enough then the bolts can cut their way in to it so they are a tight fit, whereas the clamping strip needs looser holes.

9 The blades are made from any suitable pieces of mild steel, in this case wall hanging plates, hence the holes. The one below is for making an edge bead while the one fitted is for creating a slot for inlay banding. Note the extra hole I decided to drill so the edge bead cutter would sit to the outer edge of the scratchstock body.

10 Here are the two cutters I made in close-up detail. You can see that the edges are filed clean and square and the faces are then flattened on abrasive paper. You can create any profile you want, though. In use the scratchstock can be drawn towards you and pushed away as well and the profile starts to form quite quickly. Have a go at making one yourself! ■



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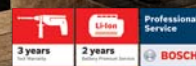
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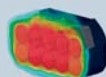
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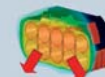
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Bahco will be demonstrating the revolutionary hand saw system as well as their excellent range of hand tools, levels and storage options.

Wera; stand WL5

The leading name for screwdrivers, bits and accessories. Your chance to test out the Impaktor impact-proof screwdriver bits and see the Zyclops range of sockets and Joker ratchet spanners.

Metabo; stand WC3

Metabo power tools and woodworking machinery will be demonstrating their mitre saws and folding leg stands as well as their impressive 18V LTX high torque cordless drills. Check out the full range of lithium-ion tools at the show and keep an eye out for the launch of the huge 5.2Ah 18V lithium-ion batteries.

Monument tools; stand WR9

Experts in the plumbing range of hand tools and accessories, the Monument name is famous for its quality.

Wagner; stand WR7

Hand-held paint spraying technology from one of the biggest names in the industry. Wagner have a huge range of products to suit the domestic or industrial user and will be giving great live demonstrations all day.

Karcher; stand WR8

This company is best known for their pressure washers and vacuums. Karcher will have a great range of deals over the weekend for both domestic and industrial sectors.

Toolbank; stand WL4

Knipex pliers, Kunys gloves and pouches, Gorilla Glue, the amazing FrogTape and a host of other brands will be available at the best prices around.

Flex; stand WC4

Flex will be demonstrating the latest giraffe drywall sanders in addition to their impressive stone cutting and finishing equipment. Don't miss the impressive demonstrations from this German manufacturer, especially the metal tube polishing masterclass on Sunday at 3pm.

Roughneck; stand WL6

Roughneck produce an ever growing range of hand tools and specialise in wrecking bars, hammers and axes. See the full range and grab a great deal.

Stabila; stand WL7

The most famous name in the world for spirit levels, this company will be demonstrating their full range of levels and laser levels.

Estwing; stand WL8

See the biggest range of Estwing products around at Toolshow2013 - this is the place to invest in the best hammers around.

Marshalltown; stand WL9

Marshalltown are famous for their quality range of bricklaying and plastering tools. This year, they will be showing over double the range for so don't miss out.

Milwaukee; stand WL10

The American power tool specialists will be promoting the huge M12 and M18 range of cordless tools with great deals over the weekend.

Hitachi; stand WL11

Great deals on mains and cordless kits from the Japanese experts.

Trend; stand WL12

Trend will be exhibiting their full range of routers, jigs and accessories as well as holding various classes on subjects such as dovetail jigs. Their impressive range of cutters and saw blades will be available at the show as well as an opportunity to see the range of router tables and new CNC machine.

Makita; stand WR10

One of the biggest names in the business will be giving demonstrations of their impressive range of power tools and garden equipment. Makita have one of the most comprehensive ranges of cordless equipment around and the more you buy, the more you'll save!

Mirka; stand WR9

A must-see for the show is the amazing new sander from abrasive specialists Mirka. Check out the great Abranet range of abrasives for hand and power tool use.

DMT stand WR13

Diamond sharpening tools from one of the biggest names in the business. With this company, you can always be sure of some great demonstrations and top deals.

Connell of York; stand WR13

Connell produce a beautiful range of high quality British-made fine leather tool holders and pouches - a real treat!

LED lenser; stand WR13

LED torches of the highest quality - a dazzling array and the very best prices on offer.

Leica & Tradesurvey; stand S1

Leica are famous for their laser measuring technology and Tradesurvey for their great value crossline levels. Ongoing demonstrations all day, not to be missed.

Scruffs; stand S2

Modern, innovative safety footwear from Scruffs - a great selection and great deals to be had on the complete range.

Bosch; stand S3

See the latest equipment from this major player in the industry. With an excellent array of mains and cordless power tools in addition to their growing range of woodworking machinery, their stand is a must-see with great show only deals. Don't miss out on their bench-top woodworking masterclass featuring the amazing glide mitre saw.

Charnwood; stand S4

Charnwood range of woodworking machinery is ideal for the small to medium workshop; check out the special package deals available over the weekend.

Dremel; stand S5

Dremel are the compact rotary tool experts with accessories for nearly every application. This company continue to innovate and will be running demonstrations all day.

Freud; Stand S6

Famous for their 'red' coated saw blades the Freud team will have some great deals over the weekend.

GMC - Guild of Master Craftsmen; stand S7

With a huge range of magazines and books for the woodworking fraternity, GMC Editors will be on hand to answer any questions. Look out for a great offer on subscriptions.

Triton; stand S8

With a range of attachments and innovations for power tools, Triton will be running demonstrations throughout the day.

Kreg; stand S9

The pocket hole jig experts have a huge range of solutions for creating the perfect connection!

Lyte; stand S10

The ladder, steps and tower experts will be on hand with some show stopping deals and innovative products.

Toughbuilt; stand E3

A new exhibitor for the 2013 show, Toughbuilt have a range of innovative hand tools, sawhorses and a revolutionary tool pouch and storage system.

Rems; stand ER5

The Rems specialists will be on hand to offer great deals and demonstrations on their comprehensive range of threading, cutting, freezing and press fit options for all your plumbing and pipe work needs.

Panasonic; stand ER4

Panasonic only produce cordless power tools and are famous for their long runtime Li-ion batteries. Visit the stand for some great deals across their new 14.4 - 18V and 28V range.

Draper; stand EL10

For some great deals on power tools as well as their Kapro levels, the Draper stand is a must see at Toolshow2013.

Beta; stand EL9

Beta produce some of the finest toolboxes around; don't miss out on a deal on these and their huge range of hand tools.

CT1; stand EL8

The original 'snag list eliminator' CT1 is the amazing adhesive sealant that even works under water. You can be sure to see some amazing demonstrations throughout the day.

Repair Care; stand EL7

Repair Care produce a high quality timber repair product unique to them. This two-part system is approved for English Heritage work due to its amazing characteristics and can be moulded, sanded, stained and machined, just like wood.

Festool; stand EC3

One of the most innovative brands around, do not miss out on the various pitchside masterclasses. Speak to the Festool experts on the stand and grab a great deal along the way.

Snickers; stand EC2

Workwear giants Snickers will have some great package deals over the weekend. See a huge range of workwear from one of the biggest names in the industry.

Hultafors; stand EC1

The Swedish hand tool company who own Fisco tapes and Snickers continues to grow in the UK. This year, the stand will feature many of the finest tools around and show only deals.

Husqvarna; stand EL6

Famed for their range of petrol construction products Husqvarna are always at the forefront of technology with the new Low vibration disc cutter, oil alert systems and Cut'n'break technology.

Teng, Zekler & Guide; stand ER3

Teng produce some of the finest quality sockets and spanners as well as a wide selection of quality storage systems. Zekler have a huge range of safety eyewear and Guide produce a range of gloves unmatched in the industry.

Simpson strongtie; stand EL6

The Quickdrive range of collated screws is unrivalled and using the innovative attachment, you can turn any mains screwdriver into a collated system in seconds.

Access Cameras; stand EL4

Compact inspection cameras for hard-to-reach areas, drain cameras and thermal imaging. The experts in their field will be holding demonstrations all day.

CMT; stand EL3

The orange brand is back - this year promoting its huge sawblade range with a number of great deals across the range.

Vantainer; Stand EL2

Portable storage system, compatible with the Systainer range and available in a range of sizes and colour combinations.

Wacker Neuson; stand ER1

Famed for their 'Wacker' plates, this company produces construction equipment of the highest quality. Check out the new rebar tie-ing tool.

Stanley; stand E2

The Stanley name has always been up there with the best for your entire hand tool and storage requirements. Get your hands on the beautifully crafted Sweetheart range of planes and chisels. Visit their stand to see the latest products and grab the latest deals.

Dewalt; stand E1

From cutting edge chopsaws to the brand new range of lithium-ion designed cordless drills, DeWalt are well equipped to meet the demands either on site or in the workshop. Great demonstrations are always guaranteed from the DeWalt team with offers across the range. Don't miss the new 18V nail gun demonstrations.

TIMETABLE

	SATURDAY	SUNDAY
11.00	trend TREND – PITCHSIDE (WEST STAND EXIT A) Router Jig masterclass featuring hinge, lock and worktop jigs.	FESTOOL FESTOOL STAND (EAST STAND - EC3) Domino jointer.
11.30		trend TREND – PITCHSIDE (WEST STAND EXIT A) Dovetail jig Masterclass featuring trends dovetail routing system.
12.00	RECORD POWER RECORD STAND (WEST STAND - W1) Bandsaw guide and set up.	
12.30	FESTOOL FESTOOL – PITCHSIDE (EAST STAND EXIT E) Plunge saw masterclass featuring the ts55/75 and huge range of accessories.	DEWALT DEWALT STAND (EAST STAND - E1) 18v nail gun focus.
13.00		FESTOOL FESTOOL – PITCHSIDE (EAST STAND EXIT E) Kapex and cms system masterclass.
13.30		
14.00	BOSCH BOSCH – PITCHSIDE (SOUTH STAND EXIT G) Bench top masterclasses featuring the unique glide mitre saw and range of portable workshop machinery.	FLEX FLEX STAND (WEST STAND - WC4) Metal polishing for tubes.
14.30		BOSCH BOSCH – PITCHSIDE (SOUTH STAND EXIT G) Bench top masterclasses featuring the unique glide mitre saw and range of portable workshop machinery.
15.00	FESTOOL FESTOOL STAND (EAST STAND - EC3) Kapex mitre saw masterclass.	mafell MAFELL STAND (WEST STAND - WR12) Jigsaw demonstration.
15.30	trend TREND – PITCHSIDE (WEST STAND EXIT A) Router table masterclass.	
16.00	DEWALT DEWALT STAND (EAST STAND - E1) 18v nail gun focus.	



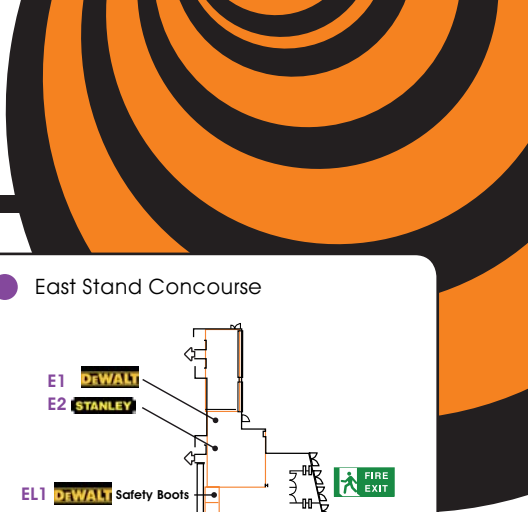
PITCH-SIDE MASTERCLASS



STAND MASTERCLASS

East Stand Concourse

The diagram illustrates the layout of the East Stand Concourse, showing three levels: E1 (DeWALT), E2 (STANLEY), and EL1 (DeWALT Safety Boots). The diagram includes a staircase, a fire exit sign, and a fire alarm pull station.



The full address for the venue is:
The American Express Community stadium,
Village Way, Brighton, BN1 9BL



By Rail/Bus

The nearest railway station is Falmer, which is situated right by the stadium. Falmer station is adjacent to the ground. It's three stops from Brighton central station on the line to Lewes and Seaford. Alternatively, you can avoid Brighton completely by getting a train to Lewes and changing there for Falmer. There are four trains an hour in either direction'. Brighton & Hove Bus No 25 (Route and timetable on the Brighton & Hove Bus Company website) which shows bus stops) operates a regular service (every 12 minutes) up to the stadium from Central Brighton, as do Bus Numbers 28 & 29.

Brighton, as do bus numbers 28 & 29.



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WELCOME TO TOOLSHOW2013

brought to you by PR Industrial tools

We're pleased to be back again this year at the award winning American Express Community Stadium in Brighton, to host one of the biggest tool shows of the year.

Last year's show was a great success and gave us the perfect platform to grow on. This year, the show doubles in size as we take over three sides of the Amex stadium and have filled it full of the finest tools available at the best prices possible - these deals are limited for this weekend only so don't miss out!

The popular pitchside masterclasses are back again this year with Festool, Trend and Bosch focusing on specific elements of their ranges and giving you the opportunity to see in detail some of the more specialist tools and machinery available. In addition, there are demonstrations throughout the show from all the big names - check out the details on the Timetable page.

Demonstrators

This year we welcome back Mark Baker, Editor of both *Woodturning* and *Woodcarving* magazines, who will be demonstrating turning techniques. Last year Mark produced some beautiful items at the show and will be fielding questions throughout the day.

In addition we have the world renowned Peter Benson demonstrating carving techniques and Mark Raby showing us his wood staining and polishing skills. Lisa Raby will also be in attendance demonstrating pyrography.



Exhibitors

We have many new exhibitors this year including Robert Sorby, Hitachi power tools, Karcher, Empire levels and DMT sharpening tools. Check out the floor plan on pages 78 and 79 for full details and listings.

Facilities

There are improved catering facilities this year which can be accessed via the stairs or lift which is located in the south concourse area. This new area has plenty of seating and offers fantastic views across the stadium. They will be serving a great selection of hot and cold food and drinks all day. In addition, the east and west exhibition areas will have hot and cold drinks will be available from one of our kiosks shown on the floor plan. If you need any assistance during the show then please contact a member of staff who will be happy to help.

We hope you enjoy the show!

Julian Royston
PR Industrial LTD



A little bit about us...

PR Industrial opened in 2010 to provide the construction industry with a one-stop shop for all tools, fixings, hire and repairs. They rapidly expanded to become the biggest independent company of its kind in Sussex as they moved into work wear and woodworking supplies and now boast one of the biggest selections of tools available in the country from their 7,500 sq ft. 'super' trade counter in Hove, Sussex.

Toolshow info...

Parking is free: and is located directly in front of the entrance. Stadium stewards will be assisting with parking arrangements and will help you should you need to load heavy items.

Entrance is free: the new entrance to Toolshow2013 is in the south stand.

Catering: overlooking the stadium, located above the south exhibition space accessed via the stairs or lift - look for the '123' doors ; hot and cold drinks are also available in the east and west exhibition spaces

Disables access: all exhibition areas are accessible for wheelchairs, to access the east and west areas there are specially designated wheelchair access points that avoid the stairs. A member of staff will be available at these points should you need any assistance. Disabled parking is available near the entrance; just speak to a stadium steward upon your arrival who will be happy to assist you.

Fire exits: these are located at each end of the east west and south exhibition spaces and are well sign posted.

The Amex Community Stadium is a no smoking venue; this includes the pitch-side demonstration areas.



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TOOLSHOW 2013

SHOW GUIDE 20th & 21st July

Sat 9.30am-5.30pm

Sun 10am-4pm



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