

Your easy guide to fitting out a workshop

# WOODWORKING Plans & Projects



The UK's essential workshop project & technical manual

Issue 84 September 2013

## The perfect finish

New Series!

Our comprehensive  
step-by-step guide  
starts here

### FEATURES

Art Nouveau Style  
Tools of Yesteryear



### PROJECTS

Garden Store  
Collector's Chest  
Stacking Storage  
Routed Inlaid Clock  
Kitchen Knife Block  
Pallet Wood Ukulele  
Marquetry Tissue-Box Cover

# FASTTRACK™ PROMOTION

## SHARPEN CHISELS QUICKLY

**Portable hand operated honing system giving razor fine edges to chisels every time.**

- Quick change sharpening angles 25° for primary and 30° for secondary.
- Unique lateral sharpening action, gives superb finished edge.
- Quick change magnetic lock diamond sharpening stones.
- Easy to use with no set up time required.
- Ideal for chisels and plane irons.

### Includes:

- Preparation Stone 220 Grit
- Finishing Stone 450 Grit
- Cleaning Block

## INCLUDES FREE DIGITAL ANGLE RULE

**200mm rule that calculates angles quickly and accurately.**

- Digital display for angles.
- Rule locking function.
- Measuring range from 000.0° to 360.0° with an accuracy of 0.3°.
- With metric and imperial scale.
- Easy operation with Auto-shut off.

**Only available at your nearest Trend Routing Centre visit [www.trend-uk.com](http://www.trend-uk.com)**

**trend**®  
routing technology

Follow us on:



**AVAILABLE AT TREND  
ROUTING CENTRES  
AROUND THE UK.**

Phone 01923 249911 for your free 2013  
Routing Catalogue and details of your nearest stockist.  
web: [www.trend-uk.com](http://www.trend-uk.com) | email: [enquiry@trendm.co.uk](mailto:enquiry@trendm.co.uk)



# The end of summer... not the world

**H**ello everyone, welcome to September's issue of *Woodworking Plans & Projects*. It is slightly alarming to realise that we are heading into the ninth month of 2013 and from now on in, it is 'tumble-home' to the end of the year! Where has it gone, I ask myself? The weather, that perennial topic of conversation we Brits most easily indulge in, has been less than sparkling and we have been told to expect unstable weather for another decade – then we might just get some decent hot summers, but guess what? Yes, there will then be droughts too. We can't have it how we like it, unfortunately, and anyone who saw the BBC2 series 'Orbit' some months ago will appreciate how complex our global weather patterns are and why they do indeed change and go in cycles. I don't buy global warming as a theory, not wholly at least. After all, carbon levels in the atmosphere are falling and scientists now claim unstable hurricane weather is likely to increase with the consequent drop in pollution levels. Who do you really want to believe? There were plenty of doom merchants who predicted that the turn of the millennium would spell the end of the world, especially as computers could not recognise the year change – the Y2K problem. It didn't happen, nuclear missiles didn't launch, jet planes didn't fall out of the sky, but many IT experts benefitted from bolstering companies' computers systems against this doomsday scenario. Scientists are a fantastic breed, searching for solutions to problems, discovering the unknown and then often explaining these wonders to us through the medium of TV documentary. The United Kingdom is blessed with a vast bevy of scientific experts and we should be glad for that. However, I have decided recently that we need to have a regular look at the state of our forests, timber and all the pests and diseases that are attacking them – and also some of the solutions that the scientific and research community



are coming up with, because, as usual, it isn't all doom and gloom. So in the Noticeboard pages we take a look each month at one of these topics. Often they are slightly out of sync with national news because we work on a longer publishing lead-time, but they are all relevant nevertheless, as these are long-term issues that should concern us all. I'm sure that all our readers would want, just like me, to see happy, healthy woodland environments in which nature can thrive and we can still continue to enjoy it. The whole human race has stewardship of this planet and we musn't just shrug our shoulders and say it's someone else's problem...

**Anthony Bailey, Editor**  
Email: [anthonyb@thegmcgroup.com](mailto:anthonyb@thegmcgroup.com)

**EDITOR**  
Anthony Bailey Email: [anthonyb@thegmcgroup.com](mailto:anthonyb@thegmcgroup.com)

**DEPUTY EDITOR**  
Simon Frost

**SENIOR DESIGNER**  
Jan Morgan

**STUDIO MANAGER**  
Oliver Prentice

**SENIOR EDITORIAL ADMINISTRATOR**  
Karen Scott

**ILLUSTRATOR**  
Simon Rodway ([www.linemine.com](http://www.linemine.com))

**CHIEF PHOTOGRAPHER**  
Anthony Bailey

**GROUP EDITOR, WOODWORKING**  
Mark Baker

**GROUP ADVERTISING MANAGER, WOODWORKING**  
Rhona Bolger  
Tel: 01273 402 821 Email: [rhonab@thegmcgroup.com](mailto:rhonab@thegmcgroup.com)

**PRODUCTION MANAGER**  
Jim Bulley

**PRODUCTION CONTROLLERS**  
Clare Disano and Rebecca Braisby  
Email: [repro@thegmcgroup.com](mailto:repro@thegmcgroup.com)

**PUBLISHER**  
Jonathan Grogan

**ADVERTISING MANAGER**  
Dominique Langham

**ADVERTISING SALES EXECUTIVE**  
Karolina Walega  
Email: [karolina.walega@thegmcgroup.com](mailto:karolina.walega@thegmcgroup.com)

**CIRCULATION MANAGER**  
Tony Loveridge

**MARKETING**  
Anne Guillot

**SUBSCRIPTIONS**  
Helen Johnston  
Tel: 01273 488 005 Fax 01273 478 606  
Email: [helenj@thegmcgroup.com](mailto:helenj@thegmcgroup.com)

**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	£47.40	£59.25	£66.36
24 issues:	£94.80	£118.50	£132.72

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](mailto:pubs@thegmcgroup.com)  
Web: [www.thegmcgroup.com](http://www.thegmcgroup.com)

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. Views and comments expressed by individuals in the magazine do not necessarily represent those of the publishers and no legal responsibility can be accepted for the results of the use by readers of information or advice of whatever kind given in this publication, either in editorial or advertisements. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission of the Guild of Master Craftsmen Publications Ltd.



# This month in WOODWORKING Plans & Projects



New  
finishing  
series – p65



9

58



## Woodwork on the web

To find more great projects, tests and techniques like these, visit our fantastic website at: [www.woodworkersinstitute.com](http://www.woodworkersinstitute.com)



## PROJECTS

### 9 Marquetry tissue-box holder

Amber Bailey shows that even the most rudimentary object can be a thing of real beauty

### 15 Garden store

Peter Brett makes a much-needed replacement for a timeworn garden store

### 28 RouterCentric – Inlaid clock

The Editor had trouble keeping time... but hopefully not any more!

### 35 Collector's chest

Jim Hooker's glorious silks chest, inspired by the Arts & Crafts movement

### 58 Knife block

Jim Robinson has learnt that if you've already got the knives, you won't find a block to put them in for sale!

### 62 Plans 4 You – Stacking storage

A quick and simple project from Simon Rodway for storing your bits and bobs

### 70 Pallet wood ukulele

Chris Gleason makes a darn-tootin' humdinger of a uke entirely from recycled pallet wood

## TECHNIQUES

### 43 Workshop Notes – A bench revamp

A few tips from the Editor to tailor your bench to your needs

### 52 DIY Solutions – Fitting out a workshop

James Hatter steps inside the workshop he showed you how to build last month to get it ready for work!

### 65 NEW Finishing series!

Mark Baker and Anthony Bailey introduce a new series, where we'll impart our collective skills in finishing to give your work the perfect sheen

## FEATURES

### 20 Making the Guimard chair

Patrick Morris tells the story behind his incredible student project

### 24 Book reviews

Our pick of the best woody titles out there

### 80 Tools of Yesteryear

Anthony Bailey digs out some vintage firmer chisels





## KIT & TOOLS

### 42 Five of the best – Random orbital sanders

We run through some of the best ROS machines out there at the moment

### 45 Hot Stuff

Our monthly selection of the best in tools, gadgets and gizmos available in the world of woodwork

### 47 Craftsman's Corner

A close look at the Einhell TH-SM 2131 Dual saw and Zapkut's vertical panel saws

## REGULARS

### 1 From the Editor

Anthony Bailey introduces you to this month's issue of WPP

### 4 Noticeboard

We let you know about upcoming woodworking events and news from the world of wood

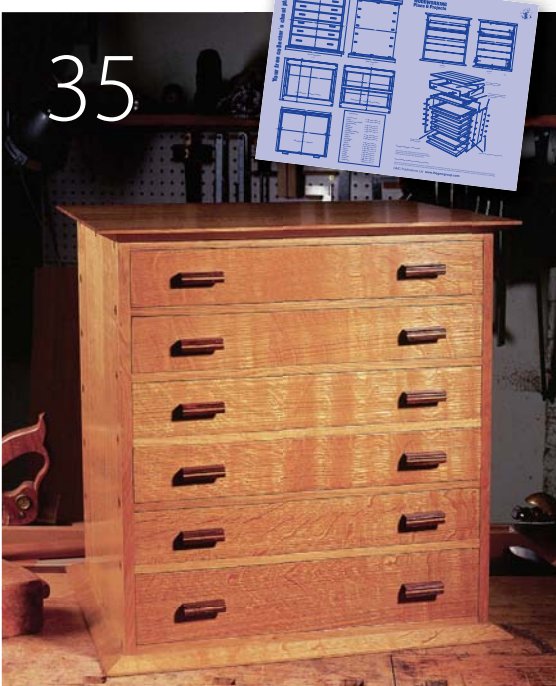
### 79 Next issue

## COMPETITIONS

### 50 Bahco pullsaw giveaway

### 51 Triton Woodworker of the Year

and Young Woodworker of the Year 2013



**OVER 5000 TOOLS**

**SILVERLINEC**

**Planer 3mm**  
124986

**£40.52**  
inc VAT

**£5.08**  
inc VAT

**Carving Chisels Set 6pce** 250234

**Keyhole Saw**  
868570

**£5.90**  
inc VAT

**£7.01**  
inc VAT

**One-Handed Clamp** 633536

**£1.98**  
inc VAT

**Nail Punch Set 3pce** 412456

**£44.88**  
inc VAT

**Jointer Plane No. 7** 238104

**£1.00**  
inc VAT

**Cabinet Screwdriver Slotted (6 x 38mm)** SD114

f b+ g+

ANDROID APP ON Google play Available on the App Store

**NEW catalogue OUT NOW!**

Get your **FREE COPY** and find your nearest stockist

**silverlinetools.com**

Prices correct at time of print. Images not to scale. Colours may vary.





### DETAILS

**When:** 24–26 August, 2013

**Where:** Westonbirt Arboretum, Tetbury, Gloucestershire, GL8 8QS

**Contact:** The Forestry Commission

**Tel:** 0117 906 6000

**Web:** [www.forestry.gov.uk](http://www.forestry.gov.uk)

## TREEFEST 2013

TreeFest at Westonbirt is the National Arboretum's signature summer event that incorporates camping, woodcraft demonstrations, exhibitors, family activities and local live music. The result is a festival that truly celebrates all that our trees and nature inspire. You can expect to see traditional woodcraft and woodland skills, falconry, axe carving and racing and delicious food producers will also entertain.

The popular tree carving element of the Festival of the Tree continues at TreeFest, with carving taking place across the Bank Holiday weekend.

# Noticeboard

All the latest events and news from the world of woodworking...

## Stock Gaylard Oak Fair 2013

A day for those inspired by the countryside, timber, conservation, crafts and delicious local produce. The Adams Axemen will once again demonstrate their daring axe- and saw-wielding skills, and there will be demonstrations of many woodworking and other crafts such as chainsaw carving, pole-lathe turning and green timber building, among many more. There's loads more going on for all the family, and the Stock Gaylard Oak Fair takes great pride in providing many free activities for children of all ages, from scarecrow making to interactive falconry displays, making it a very special family day out. Check the website below for more details.

### DETAILS

**When:** 24 August, 2013

**Where:** Stock Gaylard, Sturminster Newton, Dorset, DT10 2BG

**Tickets:** Adults £7.65, Children £2.70, Family (2 adults & 3 children) £18

**Contact:** Stock Gaylard

**Tel:** 01963 235 11

**Web:** [www.stockgaylard.com](http://www.stockgaylard.com)

**Email:** [office@stockgaylard.com](mailto:office@stockgaylard.com)



PHOTOGRAPH COURTESY OF POSITIVE PR



PHOTOGRAPH BY HARRY KINGMAN

## Wild about Wood

Watch chainsaw sculpting, be inspired by demonstrations of furniture making, admire the intricacies of willow weaving, or have a go at tree climbing. Watch the ancient skill of heavy-horse logging, or take the family along to the Discovery Zone and get involved in a whole range of activities and workshops including pond dipping, shelter building, arboretum art and bushcraft.

Enjoy delicious local food and drink. Try your hand at archery, coracle making, watercolour painting or papermaking, or just relax and listen to some traditional English music. Take a short taster tour of the arboretum, explore the 120-acre woodland garden at your own pace, or just relish the tranquility and beauty of this very special place, tucked away in the Howardian Hills.

**When:** 14–15 September, 2013

**Where:** The Yorkshire Arboretum, Castle Howard, York, YO60 7BY

**Contact:** Wild About Wood

**Tel:** 01653 648 598

**Web:** [www.wildaboutwood.org](http://www.wildaboutwood.org)



## Wood news:

# Big Tree Plant funding scheme

One last call for funding applications!...



PHOTOGRAPHS COURTESY OF THE FORESTRY COMMISSION



The Big Tree Plant is a campaign to encourage people and communities to plant more trees in England's towns, cities and neighbourhoods. Launched by Defra and the Forestry Commission in 2010, The Big Tree Plant is supported by a number of partner organisations including The Tree Council, Trees for Cities and Groundwork and will see a million new trees planted by 2015. The Big Tree Plant has so far seen over 475,000 trees planted across the country, with funding already allocated to 152 groups that will be planting more than 965,000 trees.

You can get involved in tree planting in your area in lots of different ways. You could volunteer at a tree planting event, or plant a tree in your community space or garden. You can get involved in The Big Tree Plant by joining an existing local tree group and helping them with their tree planting activities. If there aren't any groups or projects near you, you could set up your own. To find local groups, visit [www.defra.gov.uk/bigtreeplant](http://www.defra.gov.uk/bigtreeplant).

## Funding

A £4m funding scheme is supporting community groups to plant trees in towns, cities and residential areas throughout England. The funding is for community and civic groups, or other non-profit organisations to establish community-led tree planting projects in areas that would benefit most.

The trees must be planted in streets or in green places that are open to all to visit or where local people will benefit from them. Whoever owns the land must give permission and support to the project, and there must be a plan to care for trees after they are planted.

Groups working in areas where more trees would help to improve residents' quality of life are strongly encouraged to apply for the funding.

To apply for The Big Tree Plant funding you need to download the application form, fill it in with the details of your scheme and return it to the address given on the form.

The fund is open for applications now and the final deadline is 30 August, 2013. To find the new application form and guidance notes go to the website below.

[www.forestry.gov.uk/england-bigtreeplant](http://www.forestry.gov.uk/england-bigtreeplant)



## BENTLEY WEALD WOODFAIR

WoodFair is Bentley's biggest annual event and brings together the entire wood industry. It's an established event with a high standard of exhibits, demonstrations, seminars and activities, all within or related to the woodland and timber industry.

There will be loads of demonstrations, exhibitors and stalls, ranging from traditional woodland crafts, educational activities, trade exhibits and forestry demonstrations to products and timber for sale – a wide range of activities for everyone to enjoy!

**When:** 20–22 September, 2013

**Where:** Bentley Wildfowl and Motor Museum, Halland, near Lewes, East Sussex, BN8 5AF

**Contact:** Bentley Wildfowl and Motor Museum

**Tel:** 01825 840 573

**Web:** [www.bentley.org.uk](http://www.bentley.org.uk)



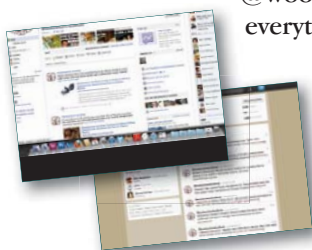
PHOTOGRAPH COURTESY OF BENTLEY WILDFOWL & MOTOR MUSEUM

## Social media & competitions

If you're not already familiar with our Facebook and Twitter pages, then do take the time to have a look and follow us. On Facebook, search for 'Woodworkers Institute' and on Twitter, we're

@woodworkers. You can keep up-to-date with everything that's happening on the website, in terms of new article uploads, the latest press releases, weblogs, as well as a host of special features.

You can use our Facebook and Twitter pages to meet other woodworkers, interact, socialise and get news of regular competitions.



## WOODWORKS!

Woodworks! is the Forest of Marston Vale's annual celebration of British trees, woodlands and wood products. This event, now in its 10th year, brings together growers, arborists, farmers, craftspeople, artists and enthusiasts from across the UK. It showcases new and traditional uses for native wood, demonstrates the renewable nature of wood, conveys the importance of trees to wildlife and offers visitors the chance to see and have a go at a range of traditional wood crafts. Amazing arena displays, children's workshops, storytelling, real ale, local food and an outstanding line-up of live folk and roots music will run throughout the weekend.



PHOTOGRAPH COURTESY OF PAUL GROOM

**When:** 7–8 September, 2013

**Where:** Forest Centre and Millennium Country Park, Marston Mortaine, Bedfordshire, MK43 0PR

**Contact:** Woodworks!

**Tel:** 01234 767 037

**Web:** [www.marstonvale.org/woodworks](http://www.marstonvale.org/woodworks)

## Yandles Autumn Show

This show is always a highlight on the woodworking events calendar. Thousands of visitors attend this show, coming from all corners of the UK to enjoy the informal and friendly atmosphere that is created within the surroundings of this historic timberyard. The usual working site is transformed with marquees which host a vast array of leading craftspeople. Live woodworking demonstrations will keep you entertained, with new techniques to learn, useful advice on tools and plenty of handy tips.

The sawmill itself is converted for use by international manufacturers, traders and publishers displaying the latest new product lines as well as the usual sale and discounted timber.



PHOTOGRAPH BY GMC/MARK BAKER

### DETAILS

**When:** 6–7 September, 2013

**Where:** Yandle & Son Ltd, Hurst Works, Hurst, Martock, Somerset, TA12 6JU

**Contact:** Yandles

**Tel:** 01935 822 207

**Web:** [www.yandles.co.uk](http://www.yandles.co.uk)



**The Innovation Continues...**



**Rip-Cut™**  
KMA2675

- Simplifies process of ripping down large plywood & MDF panels
- Attaches to almost any circular saw
- Cuts accurately from 1/8" to 24" wide

**Kreg Jig® HD**  
KJHD

- For use with minimum 1/2" materials
- Optimised for larger, outdoor projects

**Shelf Pin Jig**  
KMA3200

- Hardened steel drill guides
- Removable, dual-position fence
- Standard 32mm hole spacing



Find your nearest stockist  
**kregtool.eu**

**You can make it with**



**SEE THE LATEST NEW TOOLS  
AT WORKCENTRE CENTRAL**  
[www.workcentrecentral.co.uk](http://www.workcentrecentral.co.uk)

Get your free catalogue  
E-mail [paul@workcentrecentral.co.uk](mailto:paul@workcentrecentral.co.uk)

**It's Coming! It's Coming!**



**AUTUMN WOODWORKING SPECTACULAR**

*On Friday 6<sup>th</sup> September 10am - 5pm  
& Saturday 7<sup>th</sup> September 10am - 4pm*

**MASSIVE SALE**

and special show prices on timber from our self selection centre, machinery, tools, craft accessories etc.

**TOP DEMONSTRATIONS INCLUDING:**

WOODTURNING ♦ CARVING ♦ PYROGRAPHY  
ROUTING ♦ MARQUETRY ♦ MIRROR TAPESTRIES  
TOOL SHARPENING ♦ CHAINSAW SCULPTURING ♦ STICK MAKING  
CRAFT DEMONSTRATIONS

**PLUS MUCH MORE**

See our website: [www.yandles.co.uk](http://www.yandles.co.uk) or for further details please contact us.

Telephone: 01935 822207, or email: [online-info@yandles.co.uk](mailto:online-info@yandles.co.uk)

Yandle & Sons Ltd, Hurst Works, Martock, Somerset TA12 6JU

**A UNIQUE SETTING - UNLIKE ANY OTHER SHOW**

*In the region of 50  
trade stands  
Leading Woodworking  
manufacturers  
Large selection of timber  
Sale in our hobbies and  
interest centre*

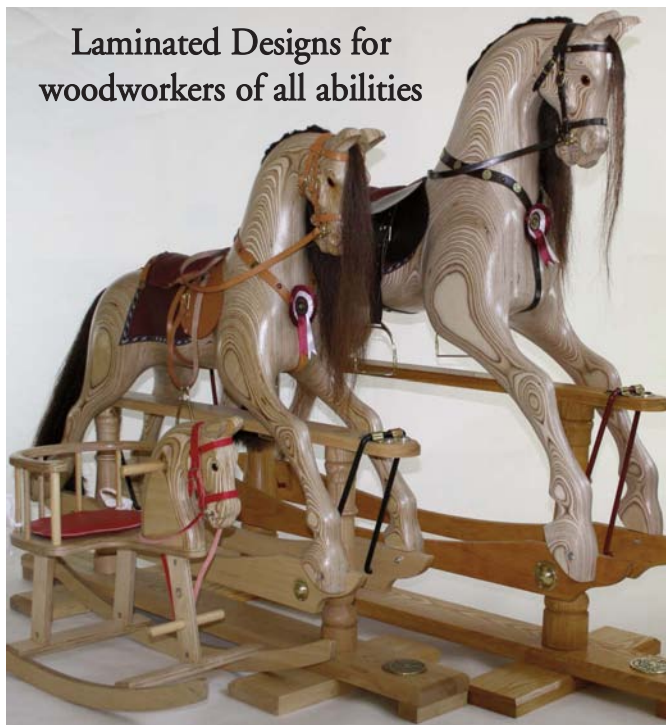
**FREE ENTRY  
AND  
PARKING**



## The Rocking Horse Shop

Designers, Makers & Restorers of  
Excellent Wooden Rocking Horses in  
the best Tradition of English Hand  
Craftmanship since 1976

Laminated Designs for  
woodworkers of all abilities



## You can make a Rocking Horse! 18 Different Designs

All plans contain actual size drawings,  
photos and step by step instructions.  
Also, Books, DVD's & Courses.  
All supported with our high quality  
timber packs and accessories.

**Plans Only £14.99** incl UK P&P

For more details see our website

**[www.rockinghorse.co.uk](http://www.rockinghorse.co.uk)**

For our FREE NEW 2013 catalogue

Call: 0800 7315418

Fangfoss, YORK YO41 5JH



TIMBER MERCHANTS EST 1876

## WENBAN-SMITH

Timber • Sheet Materials • Crittall Windows  
Worktops • Doors • Bespoke Mouldings  
Special Offers & Much More!

01903 230311 : Worthing 01273 472495 : Lewes

01403 250552 : Horsham

E: [sales@wenbans.com](mailto:sales@wenbans.com)

**[www.wenbans.com](http://www.wenbans.com)**

Quality & Service for over 135 Years



**Woodworking Plans & Projects**  
can help your company generate  
sales, create awareness and  
deliver cost-effective promotion  
throughout the year.

Contact Karolina on **01273 402828**  
or [karolina.walega@thegmcgroup.com](mailto:karolina.walega@thegmcgroup.com)

## MUSCLE CHUCK™



The Musclechuck™ is a finely balanced, and accurate replacement collet that firmly grips the largest bit shank without damage. A simple half turn of the Allen key allows a ten second bit change without the frustration of dropped bits, barked knuckles and searching for spanners. Extra collet depth gives full depth of cut to small bits when used in jigs and router tables, and when used in combination with WoodRat's Plungebar, you will find you have total control of your router.

Made to the demanding standards of the US aviation industry  
Distributed by WoodRat Ltd 01458 832744 [www.woodrat.com](http://www.woodrat.com)





# Marquetry: Tissue-box holder



**Amber Bailey** shows that even the most rudimentary object can be a thing of beauty...

No matter how much packaging design has changed over the years, a cardboard tissue box will never look quite right set against the backdrop of a boudoir or living room. As William Morris once said; "Have nothing in your house that you do not know to be useful, or believe to be beautiful." And why not apply

this to the humble tissue box? It is not uncommon to use a fabric cover as a disguise, but maybe it's time to start looking at making one out of wood. The juxtaposition of marquetry, being a high-quality decorative arts technique, on such a commonplace object really harks back to the ethos of the Arts & Crafts movement and all that Morris stood for. Or maybe it just looks rather lovely.

This wooden tissue-box holder is veneered with a mixture of marquetry and parquetry. Marquetry is a design of veneers in the shape of either a picture or flowing form, whilst parquetry involves the repetition of a geometric pattern.

Details of the 'window method' cutting technique used in this project can be found in my workshop sign project, pages 65-69 in issue 80 of *WPP*, which can also be found on the Woodworkers Institute website.



The tissue-box holder is veneered with a mixture of marquetry and parquetry



## Safety

- The 'window method' used in this project for cutting the veneers involves a scalpel. It is important to always cut at an angle away from yourself to avoid the blade slipping and causing a nasty accident!
- Contact adhesive gives off incredibly strong fumes, so when gluing up the marquetry, always work in a well-ventilated area.



## You will need

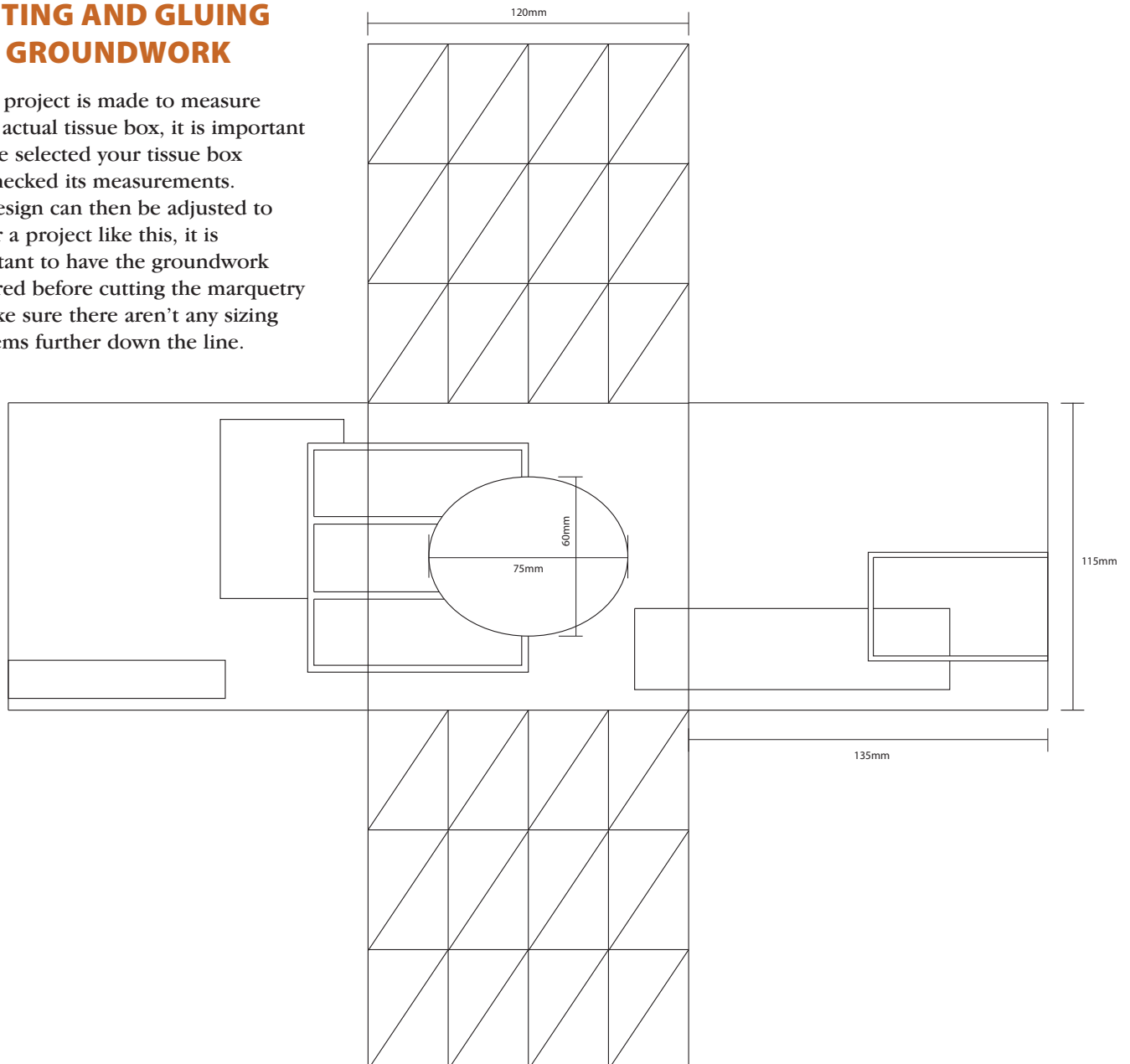
- No less than five photocopies of the paper template
- Eight varieties of 'knife cut' veneer – preferably two or three natural veneers for the background and five dyed or exotic veneers for the detail
- Veneer tape
- A scalpel with 10A blade
- Cutting mat
- Veneer hammer
- Carbon paper
- Technical drawing pencil
- Bandsaw or coping saw
- Contact adhesive
- MDF or plywood – approximately 5mm thick – 395mm x 240mm
- Sandpaper and sanding block
- Oxalic acid



- Distilled water
- Special Pale shellac and isopropyl alcohol
- Polishing mop
- Fine wire wool
- Light brown wax
- Mutton cloth

## CUTTING AND GLUING THE GROUNDWORK

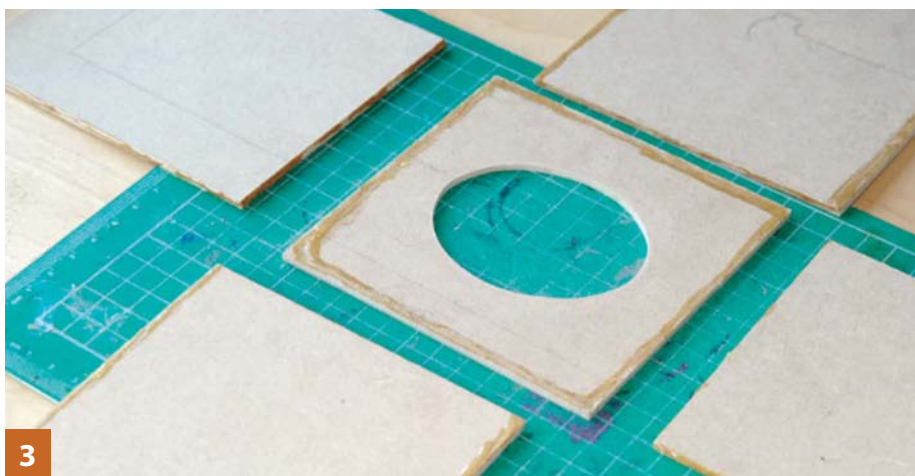
As the project is made to measure for an actual tissue box, it is important to have selected your tissue box and checked its measurements. The design can then be adjusted to fit. For a project like this, it is important to have the groundwork prepared before cutting the marquetry to make sure there aren't any sizing problems further down the line.



**1** Using either MDF or plywood, place the paper template of each section onto your chosen groundwork with a sheet of carbon paper in between. Draw around the outside edges of the design using a technical drawing pencil to precisely mark out the sections onto the wood. Make sure you have your actual tissue box on hand to check the fit of each component. These can then be cut out with either a bandsaw or a coping saw. Smooth the edges using sandpaper and a scalpel. It is particularly important to make sure that all the bottom edges are straight and even for when the pieces finally go together.



**2** To cut out the centre of the tissue-box top, drill a hole into the centre of the waste wood, thread the coping saw blade through the hole and saw the excess out. This can then be smoothed down with sandpaper and a scalpel.



**3** To glue the groundwork together, take all the side sections. Glue along the four edges of two and just inside the edge of the others. Fit all the pieces together and secure with either clamps or masking tape while the adhesive sets. Make sure you check all the inside angles. Glue around the rim of the box and attach the top piece. Both contact adhesive and PVA are suitable to use.

**4** The groundwork glued and assembled.



## CUTTING THE SIDES – PARQUETRY

**5-6** To create the opposite sides of the tissue box using parquetry, take two veneers, one preferably a natural or conventional wood and the other dyed or more exotic. As the lines in the parquetry are straight, I would suggest using a ruler along with the scalpel. Cutting one side will take up approximately three templates.

The next step is to place the paper template over the chosen veneer of each element and cut out the design. All of the segments should then slot together nicely if you have done this correctly. Work along in rows, cutting the top type of veneer out first and then the bottom type of veneer.





**7** Tape the back of these together using veneer tape.

## CUTTING THE TOP AND SIDES – MARQUETRY

**8-9** For the top and sides you will need a background veneer, which should ideally be a natural wood, and no more than five dyed or exotic veneers for the decoration. As the two other sides and the top are a continuation of the same piece of marquetry, it is important to treat them as one section that can then be divided up afterwards. This way the design will match up over the corners. Start by cutting out the hole in the centre of the tissue box on the background veneer, making sure you check that it matches the groundwork. Continue cutting the rest of the design out of the background veneer, working outwards from the centre.

**10-11** Overlay the cut-out sections of the background veneer onto your chosen exotic or dyed veneers, cutting within the negative space. When the segments are all cut out they should all slot together with a tight fit.

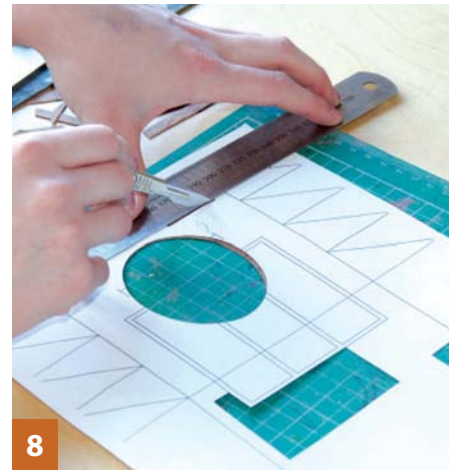
## GLUING UP

**12** The marquetry should all essentially fit together on the box like tiles. Although the traditional adhesive for marquetry would be protein-based, the 'window method' provides a tight fit for the design, eliminating the requirement of a long glue open time. Contact adhesive is ideal for holding the veneers flat and almost instantaneously.

**13** Glue both sides of the groundwork and the back of the side veneers and wait until the adhesive feels tacky, then press them together. Use a veneer hammer to press out any air and excess glue. Repeat this process on the top section.

## SMOOTHING OUT THE SURFACE

**14** The edges of the tissue-box holder may be sharp or rough; either sand or plane a small bevel along these. This may also be required within the edge of the top hole.







15



16



17



18



19



20



21

**15** Not all the veneers will be the same thickness and this will prevent the surface feeling smooth. You need to solve this in a careful manner to prevent pieces of veneer chipping off. Use the scalpel blade pressed almost flat on its side to scrape off layers of the thicker veneers until the pieces all seem on an even level. Sand down the surface with sandpaper wrapped around a block, using a coarse grade of paper. Finish with a finer grade, making sure not to be too rough with the marquetry. Remember always to go with the grain when you are sanding or scraping.

**16** After sanding, the tissue box should look like this.

## ADDING A SURFACE FINISH

**17** After the smoothing process, it is likely that the veneers have picked up a lot of dust and dirt, filling in the grain and gaps in the marquetry. Using a solution of two spatulas of oxalic acid to 100ml of distilled water, clean the surface of the veneers with a soft cotton pad.

**18** Leave for a day, then neutralise with isopropyl alcohol, again with a soft cotton pad. This should make it easy to remove as much of the excess dirt as possible.

**19** To create a glossy finish, use a polishing mop to apply a solution of Special Pale shellac cut at a ratio of 50:50 with isopropyl alcohol. Apply the shellac in one direction and make sure you avoid drips or brush marks. Apply several coats of shellac depending on how glossy you would like the finish.

**20** Leave at least a day for each layer of shellac to harden and then cut back by lightly rubbing fine grade wire wool over it, before applying the next.

**21** When you are happy with the number of shellac layers, apply some light brown wax with a piece of mutton cloth. Leave the polish to harden for a few minutes and then buff up gently using a clean piece of mutton cloth. This should leave your tissue-box holder with a soft and silky surface finish. ■





# 3 YEAR WARRANTY + 3 YEAR SERVICE PLAN

ALL GAS NAILERS COME WITH 3 YEAR WARRANTY PLUS 3 YEAR  
SERVICE PLAN WORTH £495.00 OVER THE 3 YEAR PERIOD

**NEW**

**Second Fix Gas Nailer**  
GF600SE

**LITHIUM-ION**

Nail type	Straight finishing nail
Max length	15 - 64mm
Magazine Capacity	100 nails
Weight	2.2kg



**IMPROVED**

**First Fix Gas Nailer**  
GN900SE

**LITHIUM-ION**

Nail type	Clipped head
Max length	50 - 90mm
Gauge	2.9 - 3.3
Magazine capacity	44
Magazine angle	34°
Net weight	3.5kg



LED Job Light

Quick release nose  
for easy jam clearing

No-Mar Tip



Scan the QR code / [makitauk.com](http://makitauk.com)  
to register for your Makita 3 Year  
Warranty and 3 Year Service Plan.  
Terms and conditions will apply.

**NEW**

**Concrete Nailer**  
GN420CSE





# Garden store

**Peter Brett** makes a replacement for a timeworn garden store



**T**he garden store in my new house was an abomination. It was crumbling from the effects of weather and unfit to store

my few garden tools, which I had to have cluttering my workshop instead. Necessity meant that it had to be replaced as soon as possible.

## Design criteria

With a blank slate and a decent budget, it is tempting to head into 'Grand Designs' territory, but I curtailed my imagination by looking at the space where I wanted the store to be – at the side of the house – and fixed on a tight-ish budget of about £150-£200.

## Materials

**1** Having used it on previous occasions for smaller jobs, I am converted to the use of 'tanalised and regularised' carcassing softwood. This costs much less than prepared softwood, and is planed insofar that the corners are rounded and the surfaces are smooth enough to obviate the splinters usually present in sawn softwood. For the roof and internal panels I decided to use 12mm-thick oriented stranded board – OSB. This is quite weather resistant, cheap-ish, easy to cut by hand and comes in large 8 x 4ft sheets.

Hinges and hardware need to be galvanised or otherwise rustproofed, and they are freely available. The best places, in my experience, tend to be independent shops rather than big DIY sheds because they seem to offer more choice.



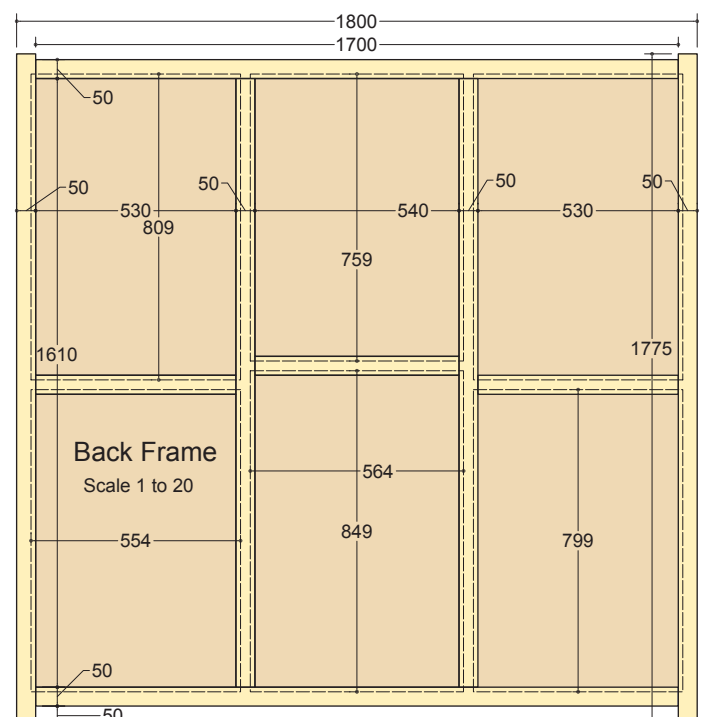
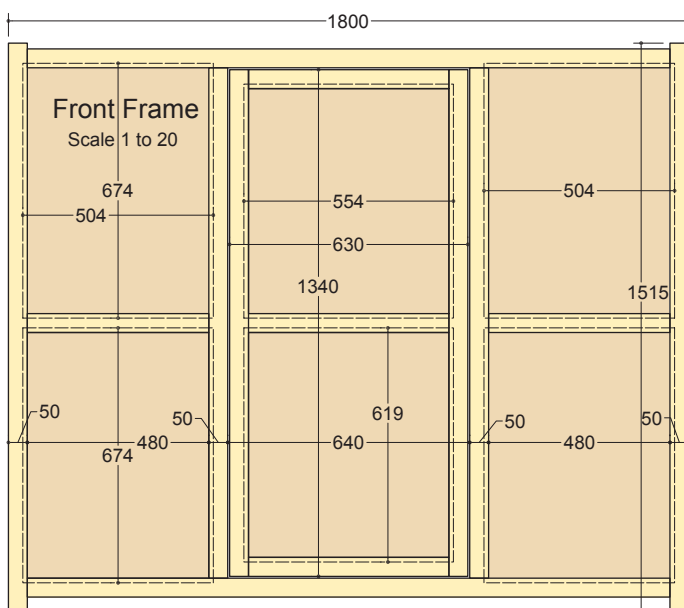
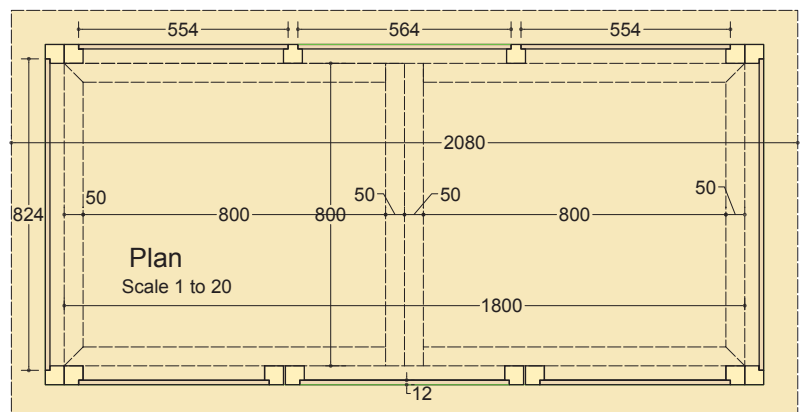
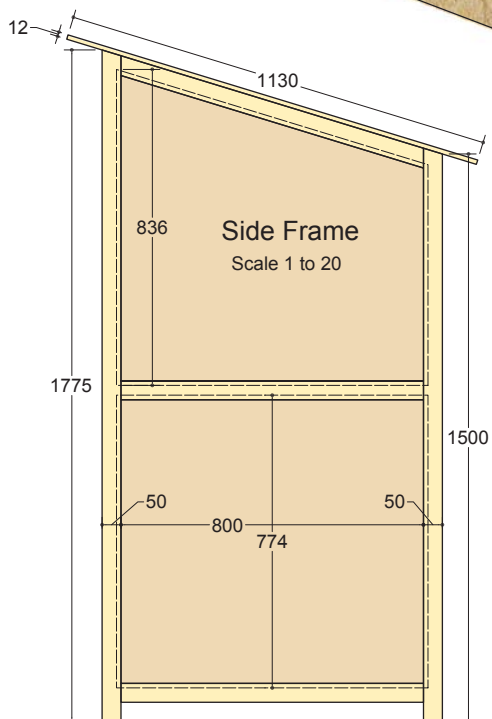
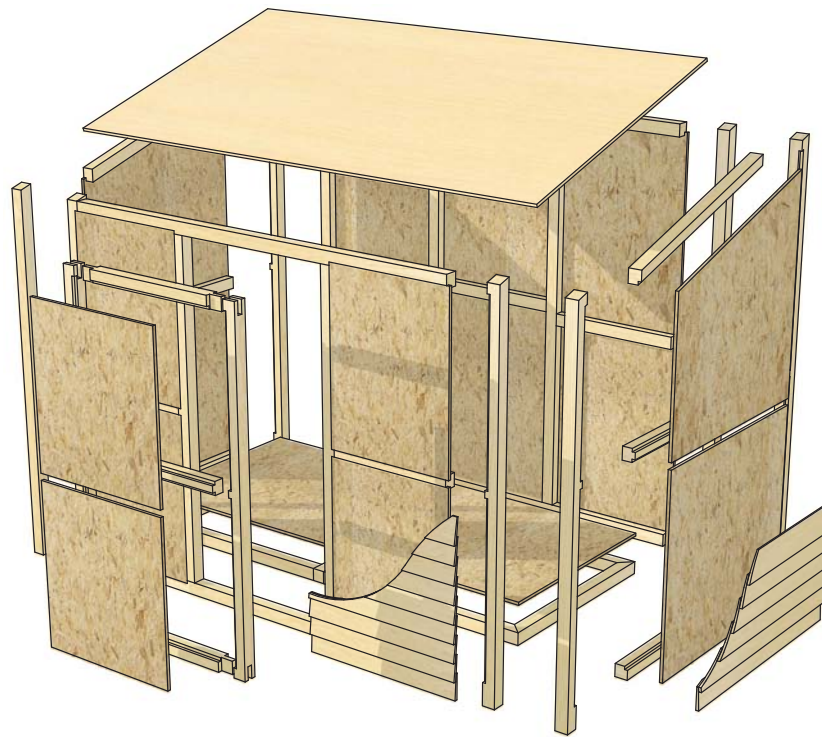
PHOTOGRAPHS BY PETER BRETT



1



The sorry-looking store had to go...





## Framework

**2** The design is based on four frames: front, back and two sides. I decided on basic dimensions for the front and then worked the rest of the sizes from there. A single large door was designed for the middle of the front frame. The supplied drawings show the design more clearly than I can in words.

## Assembling the frames

**3** It really helps to have a powered mitre saw when making this project because it is good to have clean square cuts on the ends. Since all the frame joints are butt joints, it helps to keep them accurate. I used 90mm long screws and a cordless driver for the butt joints.

I cut most pieces to size before I started joining. For example, the front and back rails are all the same length, as are the dividing and reinforcing pieces.

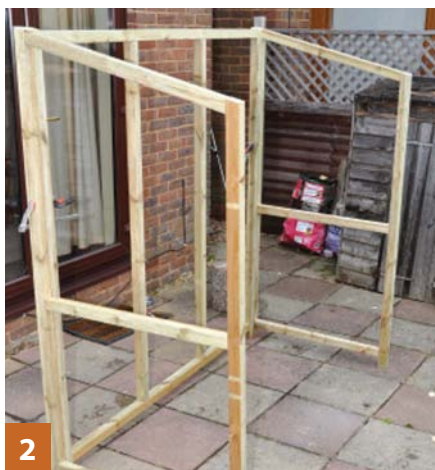
**4** The side frames have an angle cut to accommodate the sloping roof. Since I knew the height of both the front and back frames, I constructed one side frame and marked the angles I needed by laying a batten across and making a pencil mark on each piece. I was then able to cut all four uprights for the side frames with the mitre saw, and also the top rails, since the angle is complementary.

**5** The bottom rail of each frame is raised 50mm from the bottom of each leg so that the floor of the store, which rests on this rail, is above ground level. Make sure this is accurately marked and worked to, since this is going to be your datum point for starting the cladding of the store's frames.

**6** The frames all have reinforcing vertical or horizontal battens. These help considerably in keeping the frames rigid, and also provide extra fixing points for the cladding. If you follow the panel option, you can avoid using angle brackets to reinforce corners, but if you are a belt-and-braces person, you could use an angle bracket in each corner to help keep the frames rigid.

## Options

**7-8** Once all the frames are made, there are some



options to consider. Without the panel option, the frames can be clad with shiplap by lying them flat on a hard surface and nailing the cladding in place. They will still be light enough to be lifted and clamped together with the other frames to complete the walls. However, if the OSB panel option is used, the combined weight of the panels and cladding is enough to make handling them a chore. I therefore chose to clamp and screw all four panelled parts of the store together and then did the cladding.



If you choose this option, you will need to assemble the store in its intended final position, because it will be almost impossible to move otherwise – it is just too heavy.

Once the frames are all screwed squarely together, it is a good idea to fit two or three battens connecting the front and rear frames at floor level. These make the frame even more rigid, and will support the OSB floor as well.

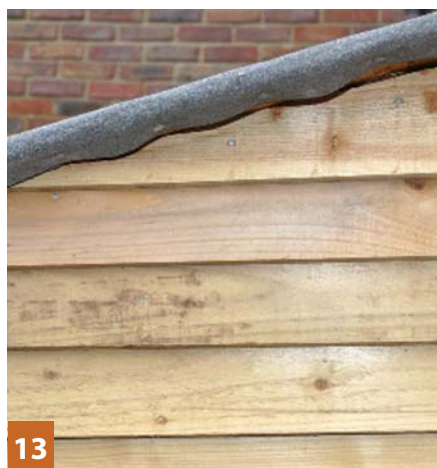
**9** As mentioned before, I wanted to have a better standard of weatherproofing and security on my store, and this entailed inseting panels of OSB into the frames and door. It sounds complicated to do, but isn't really. A bearing-guided rebate cutter fitted to a decent-sized router, set to cut to the thickness of the OSB, is used to cut a rebate in the frame sections. Don't do as I did and accidentally rebate the doorframe as well! Then, as economically as possible, cut the panels out of a sheet of OSB and fit them. I used a small, corded nailer to hold them in place. The disadvantage of the panels is that they add significantly to the weight of the sections, and this may have some bearing on how and where you choose to assemble the whole store. Because I needed to photograph progress for this article, I ended up having to move the completed store into its final position using a couple of hydraulic jacks and the help of an obliging, and very strong, neighbour.

**10** The completed frame with OSB panels in place. It's heavy, but stable and strong.

## Cladding

**11** The shiplap cladding comes in standard size – 900mm long and 19.5mm thick. The supplier worked out what I needed from the dimensions I gave. A safety margin is built in to allow for one or two errors. I used the base piece of the shed as the datum line. This is the same on each of the four panels, so should allow the cladding to match up on each corner when the store is finally assembled.

Galvanised nails are essential for fixing the cladding. Also essential is a marking block for marking the spacing of each piece.



**12** Once the first piece is lined up and fixed, you choose the amount of overlap that looks right. Then, cut a softwood block that is the same length as the measurement from the bottom of the cladding to the bottom of the next piece. This makes it easy to mark the position of the previous piece, but must be used carefully, as incremental errors can easily creep in if just one piece of cladding is inaccurately fixed.

**13** When you come to the angle of the roof you can choose



to fix a cladding piece following the angle of the roofline, or you can do as I did and cut the pieces to fit at an angle. They need to be cut individually, which isn't hard to do, just fiddly.

## The door

**14** The doorframe is made from the same timber as the rest of the frame. I used a bandsaw, with appropriate settings on the fence, to cut a bridle joint for each corner. Accuracy is important, but since the door will expand and contract



a great deal in its outside location, I allowed a clearance of around 5mm all round the frame so that it would fit comfortably into the space allotted in the front frame. A reinforcing stile is used in the middle of the door to help it remain rigid. Again, I used the router to make the rebate to inset OSB panels, and this does help the door to remain rigid. Without the panels it may be necessary to use galvanised angle brackets in the corners. The door is then hung and, using the cladding on each side of it, it should be possible to mark where the cladding should be fixed.

**15** A big, strong galvanised bolt should be fitted at this point. You may want to consider fitting further security measures if you are going to keep more valuable equipment in the store.

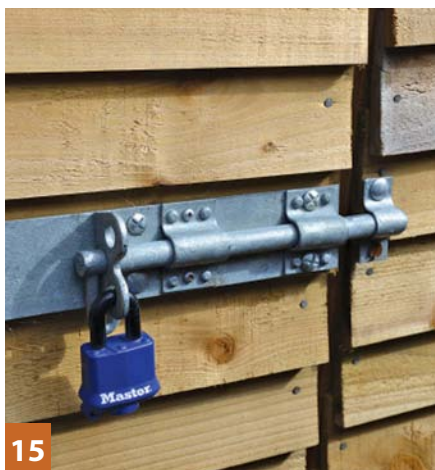
## The roof

**16-19** The roof is made from a single piece of OSB where possible. My budget was a bit stretched, so I had to use some leftover weather and boil proof – WBP – ply to combine with the rest of my OSB. As long as it is the same thickness, any difficulties are minimised. I allowed an overhang of about 80 or 90mm on front, back and sides, but you might allow more for better water run-off.

The last piece to be fixed is a piece of carcassing timber. This timber is as long as the internal measurement at the rear frame of the store. This is fixed across the back of the roof panel and is used to screw through into the top back batten of the frame to fix the roof panel once it has been felted. Shed roofing felt, available from DIY shops, is used for waterproofing the roof. I needed two strips and they were fixed onto the top of the roof using 10mm-long galvanised clout nails. Corner joints are the only difficulty in this process, but clever use of a craft knife will make a neat joint. If the prevailing wind is very strong near you, you might consider fixing 50 x 25mm treated battens facing down the slope of the roof so that the felt will not rip off in stormy conditions.

## The floor

**20** The floor is made of two panels of OSB that sit on the



15



16



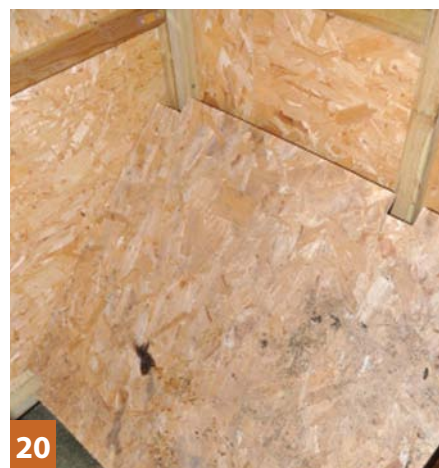
17



18



19



20

top of the bottom rail of the frame. The floor panels have to be measured and cut with some skill so that they fit right up to the edges to make sure that water doesn't get in. The panels are also made to be easily replaceable, because damp from under the store does eventually prevail. You could prolong the floor life by using shed paint on it before it is finally fitted.

## Finishing

Ordinary shed or fence paint is used to provide a weather resistant outer coat to the store. It is a good idea to

make the effort to do this because the whole store will last longer if it is renewed every couple of years.

## Positioning

The best place for this store is up against a fence or wall where the sloping roof will allow for good rain drainage.

You might like to put hooks and shelves in the store for hanging garden tools. My store has exceeded my expectations – most importantly, my workshop space has been much less cluttered! ■



# Making the Guimard chair

**Patrick Morris** shows us how he came to make this spectacular reproduction as his final university project

I first saw a picture of this chair in a book called *1,000 Chairs*. The small picture interested me in every way; it captivated my admiration for the shaping and carving processes and also my affection for Art Nouveau. My feelings at that first moment were that I would love to have the opportunity to reproduce and thus understand that piece in greater detail. I then decided that reproducing this chair for my major project was an opportunity that I could not ignore.

*"Guimard once used the analogy of sap running through trees to communicate his abstract idea"*

PHOTOGRAPHS BY GMC/ANTHONY BAILEY, UNLESS OTHERWISE STATED





Let us introduce Patrick Morris, a carpenter from Ireland who decided to ramp up his career aspirations considerably at Bucks New University. I think you will agree with us that his major graduation project is a far cry from everyday carpentry work in terms of carving skill and the complexity of interpreting a unique design. Currently based at High Wycombe, Buckinghamshire, Patrick has 14 years of experience in woodworking, and has recently completed a BA (Hons) in Furniture Conservation, Restoration and Decorative Arts. This gave him the opportunity to develop projects, such as building this incredible replica of an Art Nouveau Hector Guimard chair,

and to restore pieces from the Georgian and Victorian periods. During his studies, Patrick started work in the high-end furniture industry, alongside chair makers, and at a woodcarving workshop, where he continues to work.

**T**he chair was designed by Hector Guimard. It was originally designed for Maison Coilliot in Lille, France, between 1898 and 1900, but later was also used in Guimard's Castel Henriette in Sevres, Paris, between 1899 and 1900. In order for me to try to understand this abstract design, I thought that it was best for me to try to understand the man behind it. Hector Guimard has been recognised as one of the most important French architect/designers of the Art Nouveau period. Guimard's furniture, like his architectural work, was extremely avant-garde. Guimard fully exploited the expressive potential of carved wood by having it hand shaped and heavily carved in a way that accentuated the organic lines. These organic lines ran throughout the houses he created, which resulted in a unified design. The furniture was an integral part of his buildings.

### Guimard's design

Guimard once used the analogy of sap running through trees to communicate his abstract idea. He said that the flowing of sap through trees is an essential characteristic, like the qualities he wanted to represent in his art. Not something like the flowing of sap in particular, but the 'sap of things' in general. From trying to develop a basic understanding of where Guimard found his inspiration to create these chairs it is possible to see that his 'abstract naturalism' of "rejecting the flower and the leaf, and seizing the stem" clearly flowed throughout these walnut (*Juglans regia*) chairs. The chair's design is

quite abstract but one thing is certain. They are truly organic.

I discovered that the chair was 930mm high, so I printed a picture of the chair in a scale of 1:3. From this single measurement and a photograph I was able to draw in the end view, plan and elevation views. I gave the drawings to an architectural technician who was more familiar with CAD. He took the 1:3 plans and transferred them into AutoCAD. I then printed the CAD drawing on a 1:1 scale. These 1:1 copies were then attached to cardboard and later used as templates. The drawing process was a vital component in the development of this project, as it allowed me to develop a better feel for, and understanding of the chair.

At first I felt confident enough with my plans and templates not to



Patrick made a wise decision to do a basic prototype in tulipwood



One of Guimard's most famous designs was for the Paris Metro stations



Patrick's perfectly carved exposition of the original fluid lines of Guimard's design



The front corner with marked out positions for the carved detail





**Left:** Patrick elected to use standard PVA glue for the joint assembly of the final piece

produce a prototype. As I thought about the possibilities of making mistakes on expensive European walnut, I felt that it would be a wiser option to produce a prototype. Constructing the prototype in tulipwood (*Liriodendron tulipifera*) proved to be a wise decision as I was able to experiment confidently knowing that it was not the final piece. The prototype also allowed me to consult with different people on how the chair should progress. These consultations altered the prototype. The back section of the final walnut chair is wider, thus changing the taper of the front section to the back section. Also, the carvings are much deeper in order to create a better effect.

### Materials and construction

When it came to the wood for the chair I did not have a choice, as it was clear from the pictures that the original chair was constructed from walnut. Also, as the original chair was French and constructed between 1898 and 1900, the walnut would probably have been of a European variety. European walnut for me was quite a nice wood to work with.

At times, especially when it came to the darker heartwood, the grain was

a little unpredictable and tended to be a little bit wild, so some care had to be taken when working on these sections. Once worked with a sharp scratchstock and cabinet scraper, the walnut acquires a silk-like finish.

Beech (*Fagus sylvatica*) dowels were used in the construction of the chair mainly because of the gaps in the front and side rails. A mortise and tenon joint would have been the traditional joint of choice for the front rail, but I felt that this chair was an exception because of the gaps in the rails. If tenons were used they

would have been quite small, so I felt that dowels would offer the same structural qualities as the mortise and tenon in this case. Also it would have been inefficient to make jigs for only one chair, which would have been necessary for the mortise and tenon joints. Dowels offered a more efficient solution. I used PVA glue through the chair's frame. It speeded up the process of assembly as it is quick-drying.

The carving pattern was traced from the templates onto a transparent film using permanent pen. The new



**Right:** The walnut version before colouring and finishing. Note the colour mismatch of the various components at this stage



A selection of Patrick's handmade spokeshaves







Patrick's cutlery drawer at home is rather empty since he started this project! Even a straight razor came in handy

template was then placed on the chair and using carbon paper, transferred the to the wood. Once the pattern was applied to the chair, I could then commence with the carving.

The large spokeshave was used mainly for removing larger quantities of wood and the smaller one used for removing smaller amounts. The small stock scraper was used where unpredictable curved wood was an issue and the large one used where there was unpredictable flat wood.

The shape of the carving tools would generally determine the shape of the wood, with the 'V' tools forming the outlines of the carved sections. The scrapers, some of them home-made, were used to erase the marks left by the carving.

The legs were firstly cut from the front view, and the offcuts that resulted from these were then reattached, so the outline drawn on the side view could be used for the next cut. This is the same machining process that would be used for a cabriole leg.

The under-frame section was cut from 25mm stock. This was the last section of the chair that was fitted. The fitting process was an intricate task as there were angles and housings

to be incorporated. Again, dowels were used on the jointing process of the under-frame section. Once the under frame was attached correctly to the front section, the process of connecting the front section to the back section could commence. Once the cramps were removed the chair could stand as one unified piece, thus allowing me to complete the carving and shaping processes.

Cutting the outline for the back feet differed from the procedure involved in cutting the front legs. The cabriole style of cutting wastes too much timber, and cutting in the cabriole format would result in some sections of the foot being at an incorrect angle on the crest rail. The process that I adopted for cutting the back feet was firstly to cut the side section and then remark the newly cut area to cut the front section.

### Staining

Staining the wood was a necessity, as the rails of the chair were a different colour from the rest of the frame. I used a combination of Van Dyke crystals as water stain followed by coats of a garnet polish first, Special Pale polish and finally waxed with both black and brown wax used selectively to patinate and highlight certain carved areas.

### Upholstery

The webbing that I used for the chair was 75mm Irish linen webbing. As French chairs normally possess wide exposed webbing, one can assume that wide exposed webbing would have been used to upholster the Guimard chair.

The original chair was finished with brown leather, but I found it difficult



Housing the brackets into the rails offered an aesthetically pleasing result, as they felt much lighter

to source brown leather that suited the chair, as it clashed with the brown chair frame. Although green was not the original colour for the chair, I felt that it complemented the walnut frame. I used a French natural shade nail to fix the leather.

This was a really great project for me. Looking back at the objectives that I had at the start of the project, to push my abilities and develop an understanding for the chair stand out for me. This project challenged me and thus it gave me the opportunity to learn and develop in an area I am particularly interested in. ■

[www.patrickmorrisfurniture.com](http://www.patrickmorrisfurniture.com)



The complexity of shaping required a full set of carving tools



A detail showing both front and back legs



# Book reviews

Book  
of the  
Month

Our look at some of the books out there in the world of wood!

## Wood Pallet Projects

by Chris Gleason

If you're a regular reader of *WPP*, you'll probably have noticed that we're rather keen on wood recycling. *Wood Pallet Projects* is one book that will show you how to make a range of items for your home and garden without shelling out on expensive timber, and reusing what would otherwise go to waste. Free pallets are constantly advertised on websites like Gumtree, and often found in builders' skips, or given away by garden centres, hauliers, small industrial units... The list is virtually endless and in every locale the place to find them varies, but they can be found! Chris Gleason has put

**ISBN:** 978-1-56523-544-1  
**Price:** £12.99 (plus P&P)  
**From:** [www.thegmcgroup.com](http://www.thegmcgroup.com)

together a collection of 12 projects in three categories; 'Easy Home Accessories', 'Furniture, Indoors and Out' and 'Fun & Functional Projects'. All are made from 100% pallet wood. It remains up to you whether you leave the finished item in a 'rustic' state, or refinish the wood, as shown in the very smart coffee table project. Some favourites from the book are an entry caddy, incorporating a mirror, shelf and hooks, so you can empty your pockets on your way in and check your barnet on your way out; and a magazine display box – the perfect place to keep your *WPP* collection! As well as the 12 projects outlined in full, there is a whole section dedicated to other completed



projects made from pallet wood to inspire you, as well as an extensive guide to finding and preparing your pallet wood, safety considerations, and the use of tools. To give you a glimpse of what this book offers, we're including one of the projects in this issue of *WPP* – see page 70 to find out how you can make your very own recycled ukulele!

**Simon Frost**

## The Woodland Way

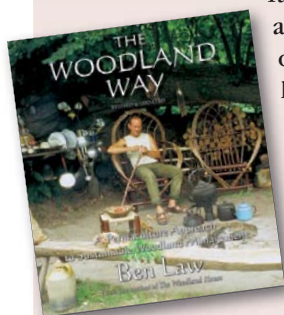
by Ben Law

Ben Law is arguably Britain's greatest living woodsman, and *The Woodland Way* does this title no injustice. Law tells everything you need to know if you're aspiring to be a woodsman yourself. It is not only a guide, it also supplies an in-depth history of the British Woods, all the way up to the 21st century, appealing not only to the budding woodsman, but the passionate historian too. From page 1 to 163, this book provides beautiful pictures of the woods around the UK; and to aid you with certain woodland skills, the book provides step-by-step guides. Ben Law makes it clear that woodland management is both fundamental for the conservation of local wooded areas and forests, and a thrilling and rewarding hobby.

It's a complex subject, so not always an easy read, but a fantastic one for all budding woodsmen, lovers of the countryside and history enthusiasts.

**Cameron Harris**

**ISBN:** 978-1-85623-127-5  
**Price:** £18.95  
**From:** [www.permanentpublications.co.uk](http://www.permanentpublications.co.uk)



## Sculpting the Female Face & Figure in Wood

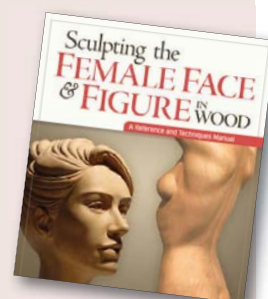
by Ian Norbury

Ian Norbury has gained a reputation as one of the finest wood sculptors and tutors of our time. He has taught all over the world and has had numerous articles and books published.

This book – an amalgamation of two previous works – is an absolute gem. Ian has a unique style in the way that he conveys information. It is unhurried, not cluttered with extraneous matter. Everything is explained in a clear manner with all the detail you need to understand everything that is happening and what should be occurring at any given stage. I spotted things that I had not registered in any major way before. It is a real treat and I only wish it had been available when I first ventured into carving. This is a book that should be used by anyone seeking to learn and improve their skills in these areas.

**Mark Baker**

**ISBN:** 978-1-56523-742-1  
**Price:** £16.99 (plus P&P)  
**From:** [www.thegmcgroup.com](http://www.thegmcgroup.com)





**NEW FROM TOOLTEC**

# CLICK 'N CARVE

**FROM 2D IMAGE  
TO 3D MODEL  
IN MINUTES**

- Works with Wood, ABS, Foam, Modeling Wax, Styrenefoam, Epoxy Tooling Board
- Easy to use software
- Ideal for the commercial, professional, enthusiast and educational sectors.



**All you need to do is CLICK-CONVERT-  
COMMAND-AND-CARVE...**

**Call 01494 523991    [sales@tooltec.co.uk](mailto:sales@tooltec.co.uk)  
Fax 01494 524293    [www.clickNcarve.co.uk](http://www.clickNcarve.co.uk)**



THE UK'S PREMIER BRANDED HAND, POWER TOOLS & MACHINERY EVENT



# 'THE' TOOL SHOW '13

WWW.THETOOLSHOW.COM



**NOW IN OUR 13th YEAR!**

**VISIT STANDS STAFFED BY THE MAJOR BRANDS INCLUDING:**



## 4th-6th OCTOBER 2013

**FRI-SAT 10am – 5pm • SUN 10am – 4pm**

**KEMPTON PARK RACECOURSE • SUNBURY-ON-THAMES • TW16 5AQ**

**D&M TOOLS, TWICKENHAM • 020 8892 3813 • WWW.DM-TOOLS.CO.UK**



# FREE ENTRY FREE PARKING FREE SHOW GUIDE

TRADE  
& DIY  
WELCOME



**Y**ou're invited to join D&M Tools at **'THE' TOOL SHOW '13** at the prestigious Kempton Park Racecourse in Sunbury-on-Thames between Friday 4th to Sunday 6th October 2013. This year's show will continue to build on its success as the largest display of branded tools at a UK exhibition.

## BIG BRANDS, BIG STANDS, LATEST PRODUCTS

All the leading brands are represented, many with huge stands displaying the widest range of products, making this the premier showcase for power tools, hand tools, woodworking machinery, accessories and workwear. Several brands including Festool, Makita and Metabo will be using this opportunity to debut new products from their Autumn 2013 range for the first time at a UK exhibition.

## LIVE DEMONSTRATIONS & FREE MASTERCLASSES

Plenty of live demonstrations and masterclasses each day of the show make this a unique opportunity to see the products in action before you buy. Talk direct to the manufacturers and compare makes and models under one roof.

## EXCLUSIVE SHOW SAVINGS

You can also expect great savings across the show, including our exclusive **TOP 30 'DOWN & DIRTY' DEALS** only available to show visitors, PLUS enter our popular **FREE PRIZE DRAW** with prizes worth **£2500**.

## RELAX & MAKE A DAY OF IT

Visitors to the show have access to the spectacular Panoramic Restaurant & Bar where you can relax and enjoy an excellent value hot meal whilst admiring spectacular views across the racecourse. Alternately grab a quick snack or drink from the catering vans outside or the Costa Coffee bar on the ground floor.

For latest details visit our dedicated show website:  
**WWW.THETOOLSHOW.COM**  
or call D&M Tools on 020 8892 3813



Follow us on Twitter  
@DM\_Tools



Like us on Facebook  
facebook.com/DandMTools



# Inlaid clock

**The Editor** can never keep track of the time, so we suggested he might like to make a clock... now he doesn't have any excuses!

**T**his design is relatively simple but it does require a couple of jigs to do the inlay work. It looks modern and functional, but attractive at the same time. I found a very heavy hard lump of wood which I couldn't identify at first, but it seemed perfect with its streaky grain. The maple (*Acer campestre*) button inserts and box lines would stand out perfectly, so that was what it was to be. I'm rather pleased with the result; it was fun to do and it looks rather smart on my mantelpiece.

This project is possible because there are plenty of quartz battery-operated movements and various hand designs available online and cheap to buy. I chose a long spindle movement to fit in the thick, solid clock case. Two sets of hands are shown to the right; I chose the gold hands for a dark case to contrast, but I pinched the red sweep second hand from the other set! I knew they were too long but the anodised aluminium is very easy to cut to length with scissors. Bear in mind the hands are unprotected and vulnerable. If you are sending this project as a gift, pack the hands separately. Just one AA battery is needed to power the movement.



PHOTOGRAPHS BY GMC/ANTHONY BAILEY



**1** If you are lucky you may have a thick enough block. I planed and glued two pieces face to face. It needs to be cut and planed perfectly square before starting work.



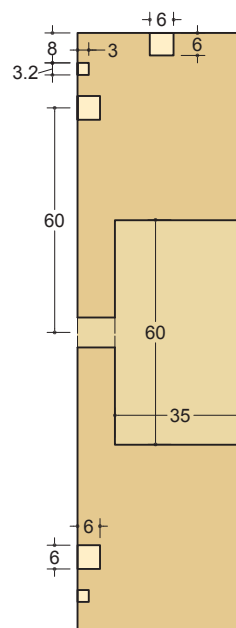
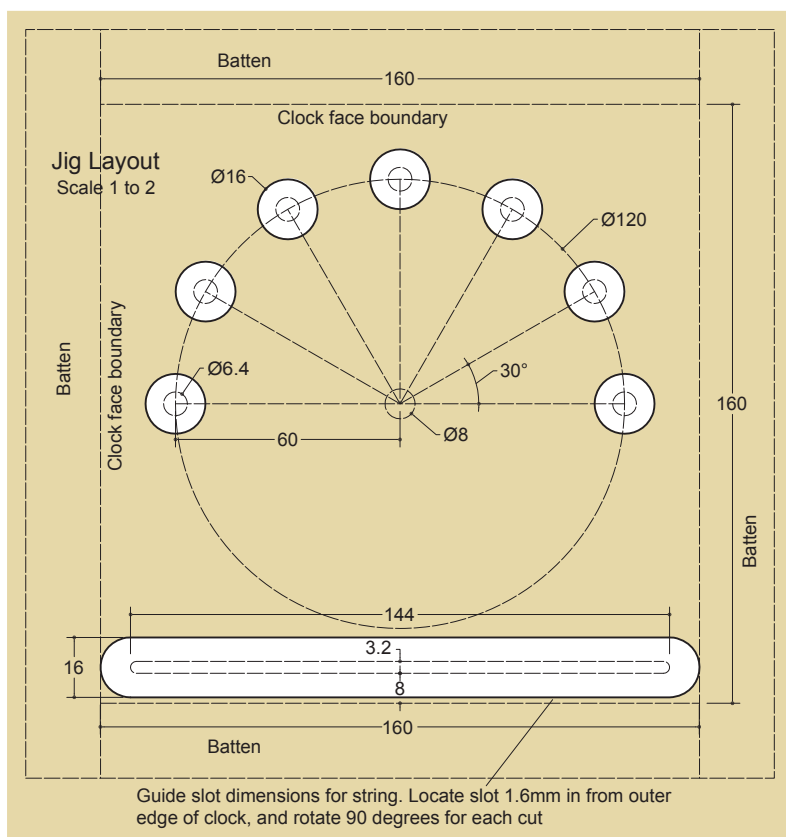
1

**2** I made three simple jigs: one from one face of the block, two from the other, and marked their face and position so I knew which way round was the perfect fit. I only needed two jigs in the end as it transpired. The clingfilm stopped the glue sticking to the block while the fillets were pinned around it. The pins are removed once dry.

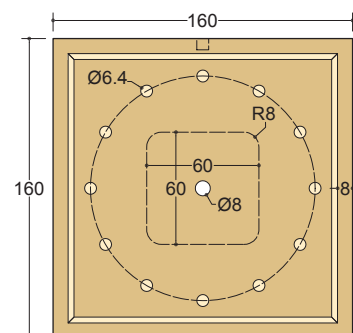


2





Section  
Scale 1 to 2



Front Elevation  
Scale 1 to 4

**3** The first job is to measure the clock mechanism spindle diameter and use a router bit – 8mm in this case – to drill through the dead centre of both jigs with a sacrificial surface underneath.

**4** A deep recess to take the mechanism is needed in the reverse of the clock body. Using the pre-drilled centre hole as a centre guide, mark the hole size plus a guidebush allowance. A little extra space is needed so the mechanism will fit in easily. Use a straight bit and fence to carefully machine out the square in the jig.

**5** The finished hole in the jig, made with a small router. You will need a 1/2in router to make the deep recess. If you have a long shank cutter you can use a small router instead, but make sure you take it carefully.

**6** Before that step, you need to drill right through the centre of the block using the same 8mm straight cutter used earlier. Mark the centre of the block on both sides and stick abrasive paper on the router base so it can't move around when drilling.



3



4



5



6



**7** Proceed to drill, sighting carefully on the centre cross lines. Repeat on the other side and, with luck, one hole should break through perfectly into the other one. I'm glad to say mine were spot on.

**8** Now fit the recess jig made earlier and use a big router and a long straight cutter with the chosen guidebush to machine out the recess. Take this process slowly by not going too deep with each pass.

**9** Extraction is not possible with the guidebush in place, so you will need to stop the router between passes, lift off and vacuum the chippings away. As you go deeper there is more space for the chipping and it is therefore less likely to get jammed in the hole.

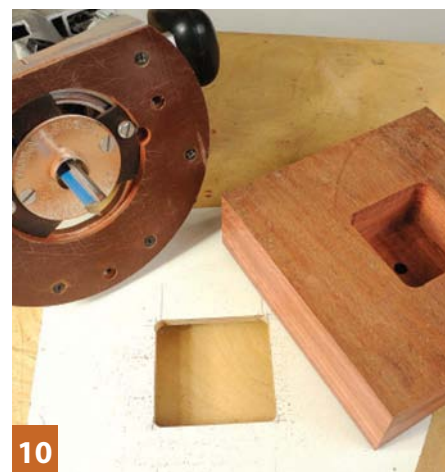
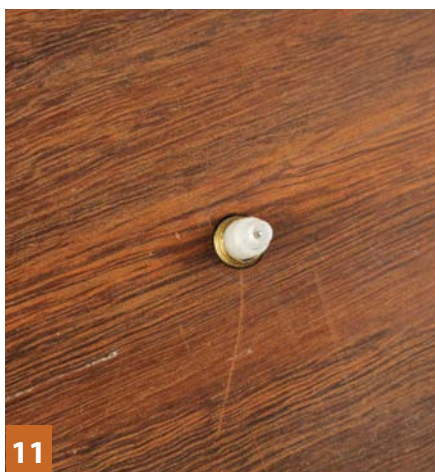
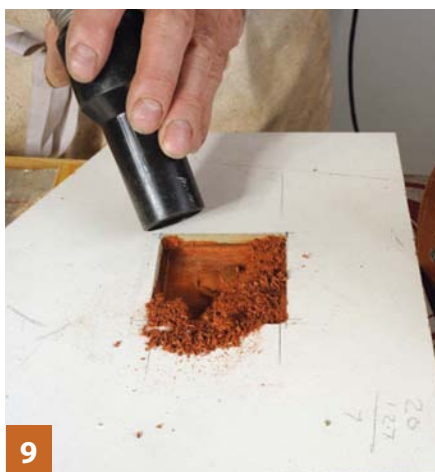
**10** Check the depth as you go, it should be deep enough for the clock spindle thread to protrude slightly. Make sure the sides of the recess are smooth and clean.

**11** The clock spindle should fit neatly through the hole so just enough thread – which the nut and washer will be screwed onto – is visible. Too much, and the clock hands will project too far forward.

**12** The other jig is more critical because the inlaid lines need to be parallel to the sides of the clock and the inlaid buttons exactly spaced apart. My solution was to use a small diameter drill to drill through each corner of the jig, so I knew where the corners were when setting out from the other face of the jig.

**13** Set out the button positions as shown in the drawing. The axes they sit on of course radiate from the centre spindle hole. Drill them out using a 16mm diameter flat bit into a sacrificial block. This size will then match with a 16mm guidebush.

**14** A 16mm router bit and fence combination is used to make the jig inlay slots. Mark around the inlay line shape with the guidebush and cutter allowance. The cutter I used was a 3.2mm straight, because it matched the size of the boxwood (*Buxus sempervirens*) lines I was going to use.







15



16



17



18



19



20



21



22

**15** The finished inlay slots need to meet but not overlap. If the slots stop slightly short it doesn't matter, as the corners need to be chiselled square in any case.

**16** Now use the button holes in the jig to drill for the button markers. A very key point is that you need opposite facing holes to be exactly opposite to each other, especially the horizontal ones, or they won't look level on the finished clock. Having done one half, swap the jig around and do the other half. Don't repeat drill the last one at each end or you will end up with oversized holes.

**17** Now square out the inlay line slots with a sharp chisel. Take care to line a wide enough chisel up with the slot sides so the corners are straight and square.

**18** Cut the lines slightly overlength with a fine tooth saw and then pare down to size.

**19** To make the dowels I used a Veritas dowel jig with a 1/4in insert, which matches the 6.35mm straight cutter that I used to drill the holes. You can use a 1/4in drill through steel plate to create your own dowel plate.

**20** All the lines are glued and taped in place. Then each button hole gets a dab of glue and a short dowel section tapped in firmly. A problem I quickly identified was how to know which way up the clock was sitting. The answer was to fit another button on top!

**21** Carefully trim off any projecting lines and buttons and sand the faces and edges carefully ensuring they stay flat. 'Break' the arrises a tiny fraction to remove any sharpness, using abrasive paper or a small squirrel-tail plane.

**22** Your clock should now be looking quite funky. All it needs is repeat coats of a light, hardening finishing oil. I lost track of how many I did, but I wanted a thin but even shine all over. Once completed, the clock mechanism and the hands can be fitted. I had to trim the hands I used so they fitted the size of the clock face. ■



**NEW STORES**  
CAMBRIDGE NOW OPEN  
CATFORD NOW OPEN  
LUTON NOW OPEN

**Clarke**  
**4" BELT/ 6" DISC SANDER**  
• Dust extraction facility  
• 4" x 36" belt tilts & locks 0-90°  
• 225mm x 160mm table, tilts 0-90°  
• 370w, 230v motor



CS4-6D  
£84.99 EX VAT  
£101.99 INC VAT

**Clarke**  
**6" BELT/ 9" DISC SANDER**  
• Includes stand  
• 1 Hp/ 230v/ 1ph motor



CS6-9C  
£219.99 EX VAT  
£262.99 INC VAT

**WHERE QUALITY COSTS LESS**

# Machine Mart

**NOW 62 SUPERSTORES NATIONWIDE**



**Clarke**  
**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

**Clarke**  
**1" BELT & 5" DISC SANDER**  
• 5" dia. circular sanding disc runs at 2,800rpm  
• 1" x 30" sanding belt operates at 13.5 metres/sec.



CBS1-5  
£59.98 EX VAT  
£71.98 INC VAT

**Clarke CONTRACTOR**  
**RANDOM ORBITAL SANDERS**  
INC 6 DISCS



CROS2  
£49.98 EX VAT  
£59.98 INC VAT

• For fast removal of paint or for fine swirl free finishing  
• 6 x 150mm diameter sanding discs  
• 4000-7000 rpm

**evolution**  
**255mm MULTIPURPOSE TABLE SAW**  
RAGE5



RAGE5  
£279.99 EX VAT  
£335.99 INC VAT

• 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

**Clarke**  
**CIRCULAR SAWS**

**GREAT RANGE IN-STORE**

FROM ONLY  
£54.98 EX VAT  
£65.98 INC VAT



CCS-2

MODEL	MOTOR	MAX CUT	BLADE	EX	INC
				VAT	VAT
FURY	1200w	54/35mm	185/20	£54.98	£65.98
Clarke	1300w	60/45mm	185/20	£64.99	£77.99
CCS-2					
Makita	1200w	66/46mm	190/30	£104.99	£125.99
5704RK					
Rage	1050w	54/35mm	185/20	£89.98	£107.98

**Clarke**  
**RANDOM ORBITAL SANDERS**  
CROS1



CROS1  
£26.99 EX VAT  
£32.99 INC VAT

• For sanding & polishing  
• 125mm diameter sanding discs  
• 4000-11000 rpm

**Clarke CONTRACTOR**  
**BELT SANDER**  
CBS2



CBS2  
£69.98 EX VAT  
£83.98 INC VAT

• Top mounted cable to keep clear of working surface • Two handles for increased control • Input power: 1200w  
• Belt size: 100x610mm  
• Belt speed 480M/min

**Clarke**  
**POWER PLANERS**



CON1020  
£24.99 EX VAT  
£29.99 INC VAT

MODEL	INPUT POWER	DEPTH OF CUT	EX	INC
			VAT	VAT
Clarke CEP1	650w	2mm	£24.99	£29.99
Clarke CON1020	1020w	3mm	£36.99	£44.39
Bosch PHO20-82	680w	2mm	£64.99	£77.99
Bosch GH026-82	710w	2.6mm	£129.98	£155.98

**DEWALT**  
**BANDSAW**



DW876  
£499.00 EX VAT  
£598.80 INC VAT

• Motor size: 1000w  
• Cutting capacities: 200mm cutting height & 315mm throat depth.  
• Table size 500 x 500mm • Blade length: 2215mm • 230v induction motor

**Clarke**  
**ROTARY TOOL KIT**  
CRT40



CRT40  
£26.99 EX VAT  
£32.99 INC VAT

Kit includes:  
• Height adjustable stand with clamp • Rotary tool  
• 1m flexible drive • 40x accessories/consumables

**Clarke**  
**13" MINI WOOD LATHE**  
CWL325V



CWL325V  
£119.98 EX VAT  
£143.98 INC VAT

• Ideal for enthusiasts/hobbyists with small workshops • 325mm distance between centres • 200mm max. turning capacity (dia) • 0.2Hp motor

**Clarke**  
**MULTI FUNCTION TOOL WITH ACCESSORY KIT**



NEW  
£36.99 EX VAT  
£44.39 INC VAT

• Great for sawing, cutting, sanding, polishing, chiselling & much more  
• 230-240v, 250w motor  
• Variable speed 15,000 - 21,000 strokes/min

**Clarke**  
**STATIC PHASE CONVERTERS**



PC60  
£229.00 EX VAT  
£274.00 INC VAT

• For use with bigger woodworking machines inc. saws, planers etc.  
• Variable output power to match HP of motor to be run

MODEL	MAX. MOTOR HP	FUSE	EX	INC
			VAT	VAT
PC20	2Hp	10amps	£229.00	£274.00
PC40	3.5Hp	20amps	£269.00	£322.00
PC60	5.5Hp	32amps	£319.00	£382.00

**Clarke**  
**BISCUIT JOINTERS**  
BJ600



BJ600  
£49.98 EX VAT  
£59.98 INC VAT

• 10,000rpm no load speed  
• 600w motor  
• 16mm max cutting depth  
• 100mm cutting dia.

**Clarke CONTRACTOR**  
**CR2 ROUTER**



CR2 ROUTER  
£109.98 EX VAT  
£131.98 INC VAT

INCLUDES 15 PIECE ROUTER BIT SET WORTH OVER £20 INC VAT

• Powerful heavy duty machine ideal for trade use  
• Variable speed control from 7,400-21,600 rpm • 2100w motor • 0-60mm plunge depth 1800w CR3 Router with 15 Piece Bit Set also available only £89.98 £107.98

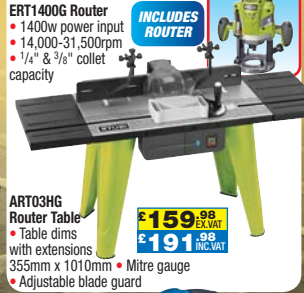
**Clarke**  
**ROUTER TABLE**  
CRT-1



CRT-1  
£54.99 EX VAT  
£65.99 INC VAT

• Converts your router into a stationary router table • Suitable for most routers (up to 155mm dia. Base plate)

**RYOBI**  
**ROUTER & TABLE KIT**



ROUTER & TABLE KIT  
£159.98 EX VAT  
£191.98 INC VAT

• 1400w power input  
• 14,000-31,500rpm  
• 1/4" & 3/8" collet capacity

**Clarke**  
**BOLTLESS SHELVING BENCHES**



FROM ONLY  
£29.98 EX VAT  
£35.98 INC VAT

• Simple fast assembly in minutes using only a hammer

**QUANTITY DISCOUNTS**  
SAVE 10% WHEN YOU BUY ANY 5 PRODUCTS FROM THIS RANGE\*

CHOICE OF 5 COLOURS  
RED, BLUE, BLACK, SILVER & GALVANISED STEEL

MODEL	SHELF DIMS WxDxH(mm)	EX	INC
		VAT	VAT
150kg	800x300x1500	£29.98	£35.98
350kg	900x400x1800	£49.98	£59.98

**Clarke**  
**PLANERS & THICKENERS**  
CPT600



CPT600  
£139.98 EX VAT  
£167.98 INC VAT

• Ideal for DIY & Hobby use • Dual purpose, for both finishing & sizing of timber  
• Max planing width 152mm

MODEL	MOTOR	MAX THICK. CAPACITY	EX	INC
			VAT	VAT
CP-6	1100w		£139.98	£167.98
CPT600	1250w	120mm	£179.98	£215.98
CPT800	1250w	120mm	£199.98	£239.98

**Clarke**  
**WOODWORKING LATHES**  
CWL1000



3 PCE CHISEL SET INCLUDED WITH CWL1000

MODEL	CENTRE TO TURNING CENTRE (mm)	TAP. SPEEDS	EX	INC
			VAT	VAT
CWL1000	1016	350mm	4	£109.98
CWL12D	940	305mm	5	£199.98

FROM ONLY  
£109.98 EX VAT  
£131.98 INC VAT

150 (evenly distributed) Strong 9mm fibreboard shelves PER SHELF

350 (evenly distributed) Strong 12mm fibreboard shelves PER SHELF

SEE CATALOGUE FOR ACCESSORIES



### Clarke MORTISING MACHINE

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

**CHISELS AVAILABLE FROM £6.99 EX VAT £8.39 INC VAT**

MODEL	DEPTH OF CUT	EX. VAT	INC. VAT
Clarke CBM18	95mm	£139.98	£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

## ORDER ONLINE

NOW OVER 13,000 PRODUCTS

INCLUDING NEW **Xtra**

### SPECIALIST PRODUCTS

KITZ schepach Record

[www.machinemart.co.uk](http://www.machinemart.co.uk)

## FREE CATALOGUE

Over **530** PRICE CUTS & NEW PRODUCTS

### Machine Mart

NEW STORES

ORDER ONLINE

Over **530** PRICE CUTS AND NEW PRODUCTS

## GET YOUR FREE COPY NOW!

- INSTORE
- ONLINE
- PHONE

0844 880 1265

### Clarke 12" CONTRACTORS SAW

INDUCTION MOTOR CCS12

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

**FROM ONLY £239.98 EX VAT £286.98 INC VAT**

### Clarke SCROLL SAWS

CSS16V

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	£75.59
CSS16V	120w	400-1700	£84.99	£101.99

### Clarke DUST EXTRACTOR/CHIP COLLECTORS

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

BS1

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

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

### Clarke MITRE SAW STAND - CUTS1

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

**£74.99 EX VAT £89.99 INC VAT**

### Clarke 16" VARIABLE SPEED SCROLL SAW

WITH FLEXI DRIVE AND WORKLAMP

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

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

### Clarke BANDSAWS

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
CBS250					£215.98

### Clarke CORDLESS DRILL/DRIVERS

PSR18

18V • 11.5Ah • 1300W • 11.5mm • 11.5mm • 11.5mm

**FROM ONLY £36.99 EX VAT £44.99 INC VAT**

### 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**

### 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**

### evolution MITRE SAWS

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

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

### Clarke 1000M VARIABLE SPEED WOOD LATHE

CWL1000V

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

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

### 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**

### 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**

### Clarke MITRE SAWS

BT-MS 2112

1800w motor  
6000rpm

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

### VAC KING WET & DRY VACUUM CLEANERS

Earlex

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

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

### BLACK & DECKER POWERFILE

KA900E

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

**£54.99 EX VAT £65.99 INC VAT**

### Clarke WOODWORKING VICES

Record WV7

180mm • 180mm • 180mm

**FROM ONLY £13.49 EX VAT £16.19 INC VAT**

### Clarke 6" BENCH GRINDER WITH SANDING BELT

CBG6SB

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

**£49.98 EX VAT £59.98 INC VAT**

### Clarke 10" SLIDING MITRE SAW

CMS10S2

1800w motor  
6000rpm

**£129.98 EX VAT £155.98 INC VAT**

### Clarke PORTABLE THICKNESSER

CPT250

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**

### Clarke WHETSTONE SHARPENER

CWS200

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

**£109.98 EX VAT £131.98 INC VAT**

### Clarke 6" BENCH GRINDER WITH SANDING BELT

CBG6SB

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

**£49.98 EX VAT £59.98 INC VAT**

## VISIT YOUR LOCAL SUPERSTORE

<p><b>BARNESLEY</b> Pontefract Rd, Barnsley, S71 1EZ</p> <p><b>B'HAM GREAT BARR</b> 4 Birmingham Rd.</p> <p><b>B'HAM HAY MILLS</b> 1152 Coventry Rd, Hay Mills</p> <p><b>BOLTON</b> 1 Thynne St. BL3 6BD</p> <p><b>BURFORD</b> 105-107 Manningham Lane. BD1 3BN</p> <p><b>BRIGHTON</b> 123 Lewes Rd. BN2 3QB</p> <p><b>BRISTOL</b> 1-3 Church Rd, Lawrence Hill. BS5 9JJ</p> <p><b>BURTON UPON TRENT</b> 12a Lichfield St. DE14 3QZ</p> <p><b>CAMBRIDGE</b> 181-183 Histon Road, Cambridge. CB4 3HL</p> <p><b>CARDIFF</b> 44-46 City Rd. CF24 2DN</p> <p><b>CARDLISLE</b> 85 London Rd. CA1 2LG</p> <p><b>CHESTER</b> 43-45 St. James Street. CH1 3EY</p> <p><b>COLCHESTER</b> 4 North Station Rd. CO1 1RE</p> <p><b>COVENTRY</b> Bishop St. CV1 1HT</p> <p><b>CROYDON</b> 423-427 Brighton Rd, Sth Croydon</p> <p><b>DARLINGTON</b> 214 Northgate. DL1 1RB</p> <p><b>DEAL (KENT)</b> 182-186 High St. CT14 6BQ</p> <p><b>DERBY</b> Derwent St. DE1 2ED</p> <p><b>DONCASTER</b> Wheatley Hall Road</p> <p><b>DUNDEE</b> 24-26 Trades Lane. DD1 3ET</p> <p><b>EDINBURGH</b> 163-171 Piersfield Terrace</p>	<p>01226 732297</p> <p>0121 358 7977</p> <p>0121 7713433</p> <p>01204 365799</p> <p>01274 390962</p> <p>01273 915999</p> <p>0117 935 1006</p> <p>01283 564 708</p> <p>01223 322675</p> <p>029 2046 5424</p> <p>01228 591666</p> <p>01244 311258</p> <p>01206 762831</p> <p>024 7622 4227</p> <p>020 8763 0640</p> <p>01325 380 841</p> <p>01304 373 494</p> <p>01332 290 931</p> <p>01302 245 999</p> <p>01382 225 140</p> <p>0131 659 5919</p>	<p><b>GATESHEAD</b> 50 Lobley Hill Rd. NE8 4XA</p> <p><b>GLASGOW</b> 280 Gt Western Rd. G4 9EJ</p> <p><b>GLoucester</b> 221A Barton St. GL1 4HY</p> <p><b>GRIMSBY</b> ELLIS Way, DN32 9BD</p> <p><b>HULL</b> 8-10 Holderness Rd. HU9 1EG</p> <p><b>ILFRD</b> 746-748 Eastern Ave. IG2 7HU</p> <p><b>IPSWICH</b> Unit 1 Ipswich Trade Centre, Commercial Road</p> <p><b>LEEDS</b> 227-229 Kirkstall Rd. LS4 2AS</p> <p><b>LEICESTER</b> 69 Melton Rd. LE4 6PN</p> <p><b>LINCOLN</b> Unit 5, The Pelham Centre, LN5 8HG</p> <p><b>LIVERPOOL</b> 80-88 London Rd. L3 5NF</p> <p><b>LONDON CATFORD</b> 289/291 Southland Lane SE6 3RS</p> <p><b>LONDON</b> 6 Kendal Parade, Edmonton N18</p> <p><b>LONDON</b> 503-507 Lea Bridge Rd. Leyton, E10</p> <p><b>LONDON</b> 100 The Highway, Docklands</p> <p><b>MAIDSTONE</b> 57 Upper Stone St. ME15 6HE</p> <p><b>MANCHESTER ALTRINCHAM</b> 71 Manchester Rd. Altrincham</p> <p><b>MANCHESTER OPENSHAW</b> Unit 5, Tower Mill, Ashton Old Rd</p> <p><b>MANSFIELD</b> 169 Chesterfield Rd. South</p> <p><b>MIDDLEBROUGH</b> Mandale Triangle, Thornaby</p>	<p>0191 493 2520</p> <p>0141 332 9231</p> <p>01452 417 948</p> <p>01472 354435</p> <p>01482 223161</p> <p>0208 518 4286</p> <p>01473 221253</p> <p>0113 231 0400</p> <p>0116 261 0688</p> <p>01522 543 036</p> <p>0151 709 4484</p> <p>0208 695 5684</p> <p>020 8803 0861</p> <p>020 8558 8284</p> <p>020 7488 2129</p> <p>01622 769 572</p> <p>0161 942 666</p> <p>01621 223 876</p> <p>01623 622160</p> <p>01642 677881</p>	<p><b>NORWICH</b> 282a Heigham St. NR2 4LZ</p> <p><b>NOTTINGHAM</b> 211 Lower Parliament St.</p> <p><b>PETERBOROUGH</b> 417 Lincoln Rd. Millfield</p> <p><b>PLYMOUTH</b> 58-64 Embankment Rd. PL4 9HY</p> <p><b>POOLE</b> 137-139 Bournemouth Rd. Parkstone</p> <p><b>PORTSMOUTH</b> 277-283 Copnor Rd. Copnor</p> <p><b>PRESTON</b> 53 Blackpool Rd. PR2 6BU</p> <p><b>SHEFFIELD</b> 453 London Rd. Heeley, S2 4HJ</p> <p><b>SIDCUP</b> 13 Blackfen Parade, Blackfen Rd.</p> <p><b>SOUTHAMPTON</b> 516-518 Portsworld Rd.</p> <p><b>SOUTHEND</b> 1139-1141 London Rd. Leigh on Sea</p> <p><b>STOKE-ON-TRENT</b> 382-396 Waterloo Rd. Hanley</p> <p><b>SUNDERLAND</b> 13-15 Ryhope Rd. Grangeview</p> <p><b>SWANSEA</b> 7 Samlet Rd. Llanamlet, SA7 9AG</p> <p><b>SWINDON</b> 21 Victoria Rd. SN1 3AW</p> <p><b>TWICKENHAM</b> 83-85 Heath Rd. TW1 4AW</p> <p><b>WARRINGTON</b> Unit 3, Hawley's Trade Pk.</p> <p><b>WIGAN</b> 2 Harrison Street, WN5 9AU</p> <p><b>WOLVERHAMPTON</b> Parkfield Rd. Bilston</p> <p><b>WORCESTER</b> 48a Upper Tything. WR1 1JZ</p>	<p>01603 766402</p> <p>0115 956 1811</p> <p>01733 311770</p> <p>01752 264500</p> <p>01202 717913</p> <p>023 9265 4777</p> <p>01772 703263</p> <p>0114 258 0831</p> <p>0208 3042069</p> <p>023 8055 7788</p> <p>01702 483 742</p> <p>01782 287321</p> <p>0191 510 8773</p> <p>01792 792969</p> <p>01793 491781</p> <p>020 8892 9117</p> <p>01925 630 937</p> <p>01942 323 785</p> <p>01902 494186</p> <p>01905 723451</p>
---	---	--	---	--	--



# REAL DEALS FOR YOU .COM

DO YOU USE ANY OF THESE BRANDS?



Coming soon: A major launch featuring ALL of these brands plus many more.

**Visit: [www.realdealsforyou.com](http://www.realdealsforyou.com) to find out more!**

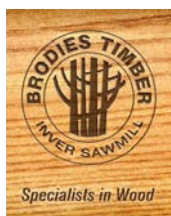
You can also win things like this:



**Weekly competitions in August & September.**

Visit: [www.realdealsforyou.com](http://www.realdealsforyou.com)

Follow us on



Brodie's Timber is a small family run business, grown on the site which was formerly the workshop of the acclaimed furniture maker Jean Burhouse. We are proud to be supplying products for all woodworking needs, from wood turners to joiners, DIY enthusiasts to model makers.

**Our aim is to provide the best quality products and service to our customers,** if you are looking for something we don't appear to have – just ask and we'll endeavour to get it. We pride ourselves on having friendly and approachable staff.

Whether you need advice, a cutting service or simply a pallet of timber delivered, **we will make it our aim to get what you want, when you want it!**

With a fully equipped machine workshop housing a Table Saw, Cross cut saw, Bandsaw, Thicknesser Planer, and Spindle moulder, we are able to provide a range of machining services.

The Old Sawmill, Inver, Dunkeld, Nr Perth, Perthshire, Scotland PH8 0JR  
Tel: **01350 727723** Email: [mail@brodiestimber.co.uk](mailto:mail@brodiestimber.co.uk)



## Door-Oil



### Protect and preserve

The perfect eco-friendly finish for all internal doors and woodwork.

- > Solvent-free, oil and wax based
- > Does not crack, peel or blister
- > Microporous durable finish
- > Highest coverage of any oil on the market



Call or visit the web for stockists.



+44 (0)1296 481 220  
[www.osmouk.com](http://www.osmouk.com)

**osmo**



For  
Pull-out  
Plans  
see P40

PHOTOGRAPHS BY JIM HOOKER, UNLESS OTHERWISE STATED

PHOTOGRAPH BY GMC/ANTHONY BAILEY

# Silky skills

There's more than just a nod to the Arts & Crafts movement in **Jim Hooker's** glorious collector's chest

**T**here comes a time when even the unpaid amateur has to fulfil his promises and deliver. So it was for me with this small chest of drawers. For many years my wife had stored her ever-growing collection of embroidery silks in a variety of plastic boxes, which were neither pretty nor convenient. What was needed was a chest big enough to house the collection, with room for

expansion. The drawers had to take two silk skeins running side-to-side and have enough depth for the skeins not to get caught up when opening and closing the drawers. Dust boards would further protect against one drawer interfering with the contents of another. A deeper bottom drawer was needed to accommodate larger items.



## ARTS & CRAFTS

We are both admirers of the work and principles of the great Arts & Crafts makers, both in terms of design and in the honesty of construction. A desk in the Victoria and Albert Museum provided the inspiration, with its drawer rails through-tenoned and wedged into the carcass sides. The timber would be quartersawn European oak (*Quercus robur*) and it was chosen for its beauty and stability.

All the timber sections would be light, in keeping with the overall scale of the piece. The top and bottom are 15mm thick, the carcass sides 12mm, the drawer rails 9mm and the drawer materials 8mm. I feel that projects are all too often spoilt by timber sections that are too heavy.

### Carcass sides

The carcass sides are made up from narrower boards that have the edges shot with a slight concavity along their length to avoid the possibility of shrinkage causing the joints to open at the ends. The made-up panels are then flattened by hand with a jointer plane, working diagonally, and then along the grain. Careful attention to grain direction at the board selection stage can minimise problems with tearout, but I must admit I tend to go for the most attractive arrangement



**Living dangerously – thin drawer fronts mean very narrow laps for the dovetails**



**Here is a completed drawer. Note the mortised handles, removable divider and flush drawer slips**

of boards and worry about the difficulties of achieving a good surface later on in the process.

I have a Far Eastern style smoothing plane by HNT Gordon of Australia, which is excellent for dealing with really difficult grain in its standard 60° blade angle configuration. If the grain gets really tough, its blade can be reversed, turning it into a very effective 90° scraper plane.

### MORTISE MARKING

After cutting the carcass sides to size and routing the 6mm x 6mm rebates for the oak-faced ply back panel, the mortises are very carefully marked out with a scalpel or marking knife on the show side at 10-15mm. Note the drawer rails are only 9mm thick. A 9mm chisel is used in the mortiser along the centre line of the marked out mortise, leaving a small margin along each side of the mortise.

This enables a sharp chisel to be placed in the knife line to provide a clean edge to the outside of the mortise and the necessary small outward taper required for wedging.



Mortisers are fairly crude tools, and for this reason it is worth stopping short of the knife line on the short sides of the mortises as well, so that the show face of the mortise can be made absolutely crisp with a razor-sharp chisel.

It will be apparent from this lengthy description of the mortising process that, with 20 perfect mortises to cut and wedge, it is a slow, painstaking business. It adds significantly to the making time. This came as no surprise to me because, like most of my pieces, it was started on the Fine Furniture Making course at West Dean College, under the ever helpful and expert guidance of Bernard Allen.

## Approach

Bernard's approach is not to put students off what they want to do, but rather to encourage creativity. He makes the students aware of what that may entail so that they can take an informed decision. As an amateur, I enjoy the luxury of not needing to resolve the often conflicting forces of design and price faced by many professional makers. Therefore, I was able to accept Bernard's pretty accurate prediction that the wedged-through tenons would add around 40% to the time needed to make the carcass.

If through tenons were avoided, the drawer rails and runners could be made up as frames and simply screwed to the carcass sides, with expansion slots at the back. Small wonder that the Arts & Crafts makers largely failed to achieve their dream of a return to a craft tradition based on hand skills and honesty of construction. In reality, only the relatively wealthy could afford their work, despite many of them subsidising it from private incomes.



**Through-tenoned top and bottom drawer and centre rails are unconventional, but are in keeping with the wedged-through tenons**



**A small piece like this may be placed so that it can be seen from all angles, so the back must be as well finished as the front**

## Runners/kickers

The drawer runners/kickers are 20mm wide from 9mm stock, grooved to take the dust boards. Cut the stub tenons 1mm less than the depth of the groove in the rails, and make sure the distance between the shoulders is around 3mm less than the distance between the rails. This allows for differential expansion between the long grain runners and the cross grain carcass sides. I made the dust boards from 4mm oak-faced ply. An indulgence I know!

## Wedges

The only thing remaining to be done before gluing up the carcass is to cut the American black walnut (*Juglans nigra*) wedges for the through tenons and the wedge-shaped recesses in the tenons to take them. These wedges are an important part of the visual impact of the piece, so they must be the right and uniform thickness on the show face. I chose 2mm – any thicker and they will look clumsy. They must also be dead central in the tenon, so once again, very careful marking out and cutting of the recesses is required.

## ASSEMBLY

There are 62 components in this small carcass so assembly needs a dry run, meticulous organisation of components and cramps, a glue with a long open time and, if possible, an extra pair of hands. Definitely not an end of the day or just before lunch job. It is often said that wife-assisted glue ups are a recipe for divorce, but we remained on speaking terms, and after carefully checking for squareness by measuring the diagonals we retreated indoors for lunch and a bottle of wine... Very civilised.

## Drawers

The drawers are conventionally constructed with lapped dovetails at the front and through dovetails at the back. I found two pieces of quartered oak with beautiful medullary rays at WL West & Son's sawmill, near Petworth, West Sussex. They were sufficient for the drawer fronts, but at only 8.5mm thick, they were less than ideal for lapped dovetails: 6mm tails allow only a 2.5mm lap in the front, which is living dangerously. So, the front face needed to be firmly





**5** Rear view with back removed. Unconventionally placed drawer stops are technically incorrect but work well in a piece this small. Slots for screws securing solid cedar drawer bottoms allow seasonal movement

backed-up with scrap timber when cutting these.

The solid cedar of Lebanon (*Cedrus libani*) drawer bottoms are supported in grooved drawer slips and a 3mm deep groove in the drawer fronts. The drawer bottoms are rebated so that their upper surfaces sit flush with the top of the drawer slips. The drawer handles are glued into 20mm x 6mm mortises in the drawer fronts, so these need to be cut before the drawer is assembled. So do the grooves for the removable drawer dividers, if these are required.

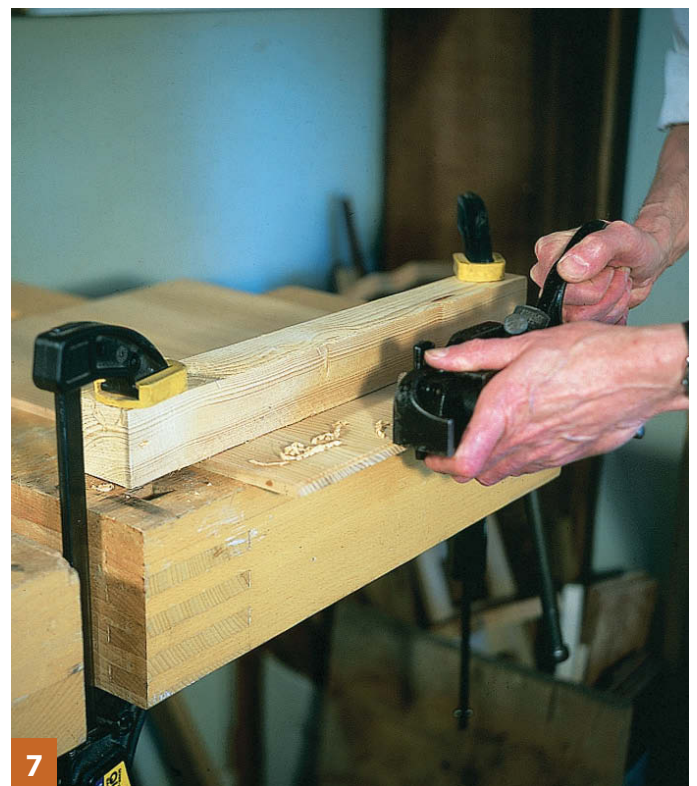
As the drawer backs are 5mm shallower than the drawer fronts, the front divider groove must be stopped 5mm short of the top of the drawer front. The dividers are made from 3mm oak and are simply snapped into their grooves.

### Drawer handles

The drawer handles are made from a laminated strip of American black walnut and oak to echo the wedged-through tenons. However, in the handles black walnut is the primary wood, sandwiching a 2mm oak strip. The profile of the handle strip is formed using multiple passes with chamfer, straight and round-nose cutters in the router, mounted in the WoodRat jig.

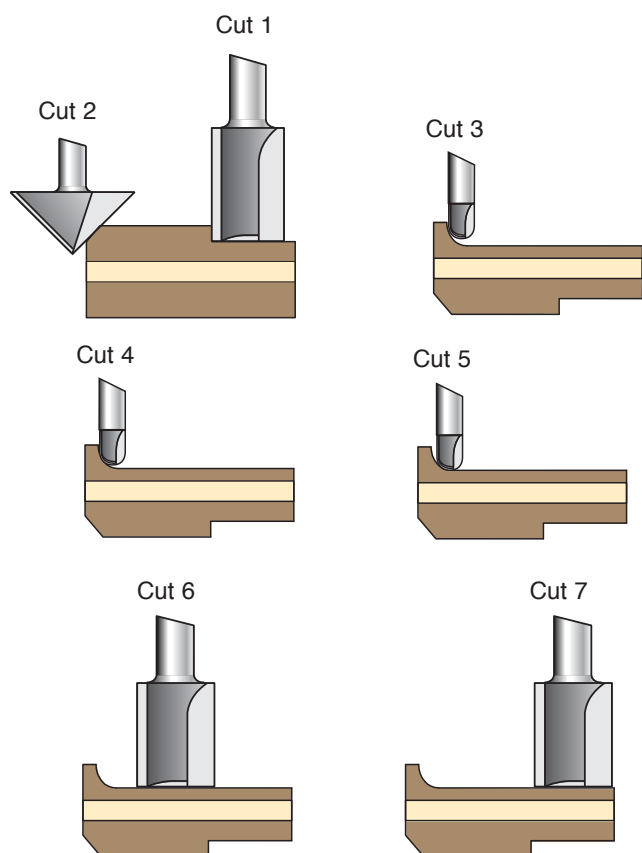


**6** Solid drawer bottoms, in traditional cedar of Lebanon



**7** Planing the fielding on the top





The handle strip cutting sequence

After machining, minor irregularities in the curved profile are smoothed out with a curved scraper. The top face of the handle profile includes a 1mm deep x 9mm wide rebate. This provides a small shoulder for the top face of the tenons in the finished handles, which covers any minor discrepancies in the mortises.

To ensure adequate support for the handle strip, it is essential that cuts are made in the correct sequence as shown in the diagram above. The sequence shown is for overhead routing as in the WoodRat jig, and should, of course, be reversed if a conventional router table is to be used instead.

### Top and bottom panels

The top and bottom panels are made up from narrower boards in the same manner as the side panels. The wide all-round 25° chamfer was found by experimenting with different angles to see what looked the most satisfying. Note the chamfer stops 3mm short of the carcass.

The panels are glued on to the carcass with the aid of convexly curved softwood cauls so that, when cramps are applied, pressure is

distributed over the whole of the panel to rail surface.

### Fitting the drawers

The all-important process of fitting the drawers was carried out using the methods clearly described in Alan Peters' excellent book, *Cabinetmaking: The Professional Approach*.

Drawer stops are normally fitted to the top faces of the front rails where their setting will be unaffected by any seasonal variation between the drawer length and the width of the carcass sides. In this case, the underside of the drawer bottom is only about 3mm clear of the bottom edge of the drawers, making conventional positioning impractical. To get around this they are glued and screwed to the carcass sides at the back. Despite potential problems with differential seasonal movement between the carcass and drawer sides, this works well. This is partly because of the small size of the chest, but also because the front faces of the drawers are set slightly back from the carcass face to provide shadow lines, so small seasonal variations in their size go unnoticed.



The set for making the drawer handle strips on the WoodRat

The last job before finishing is to fit the ply back with brass screws, taking care, of course, to align all the slots.

### Finishing

Finishing is a very personal matter so I gave the client some oak samples finished with pre-catalysed lacquer, polyurethane varnish and Danish oil. She chose the oil finish. I applied four coats, the last applied with 1,000 grade wet-and-dry paper. When dry, a thin coat of wax polish was applied and buffed to sheen.

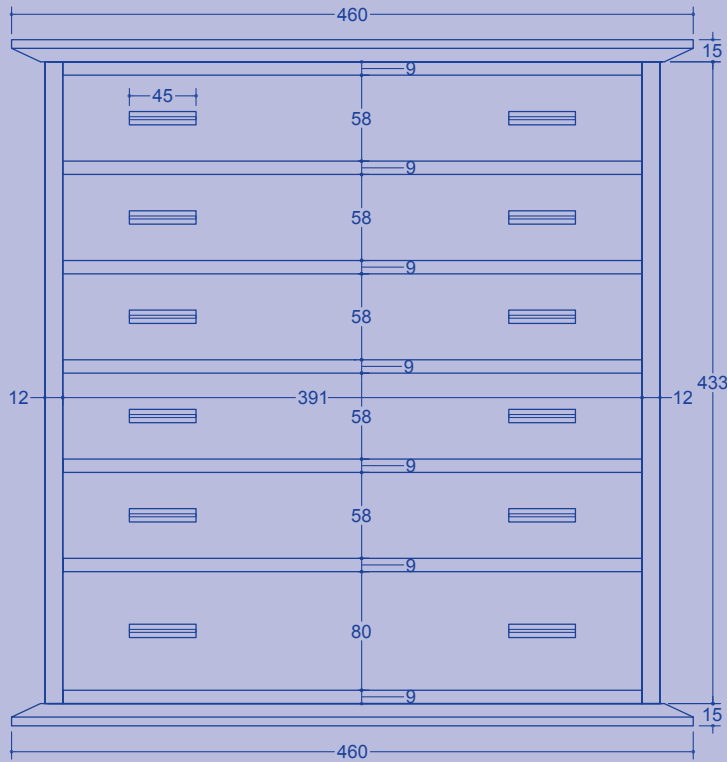
Many amateurs aspiring to produce fine furniture will be familiar with comments about making family heirlooms. In this case that may prove to be right. Not, I hasten to say, because of any intrinsic merit of the piece, but because of the provenance of some of the oak that it was made from. The tree from which it was cut has provided the timber for a historically very significant project.

I am unable to share the detail with you because my supplier has insisted I do not tell anyone until he is dead. Until then it will have to remain a secret between myself and the piece of paper in the bottom of the chest which tells all. ■

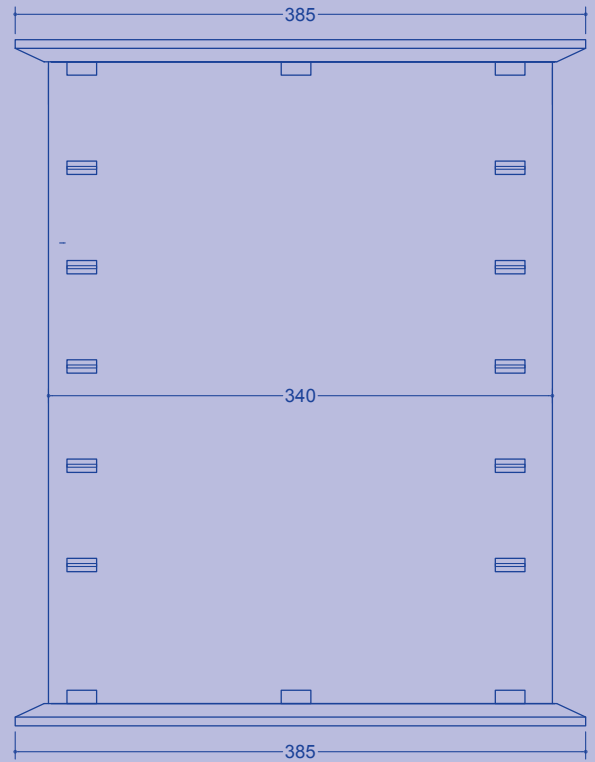




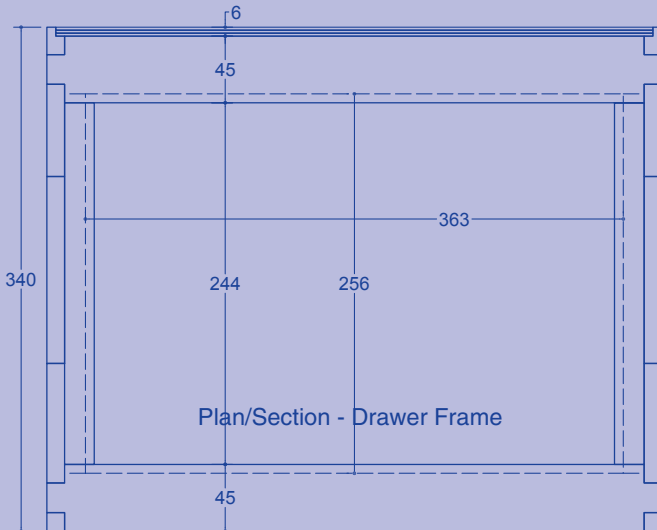
# Your free collector's chest plan



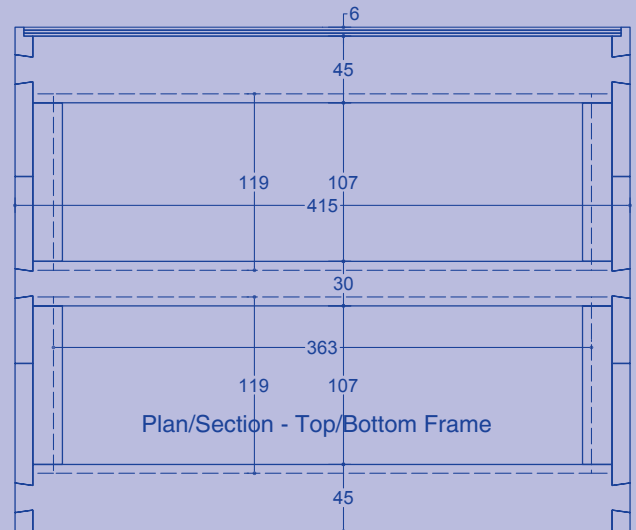
Front Elevation  
1 : 5



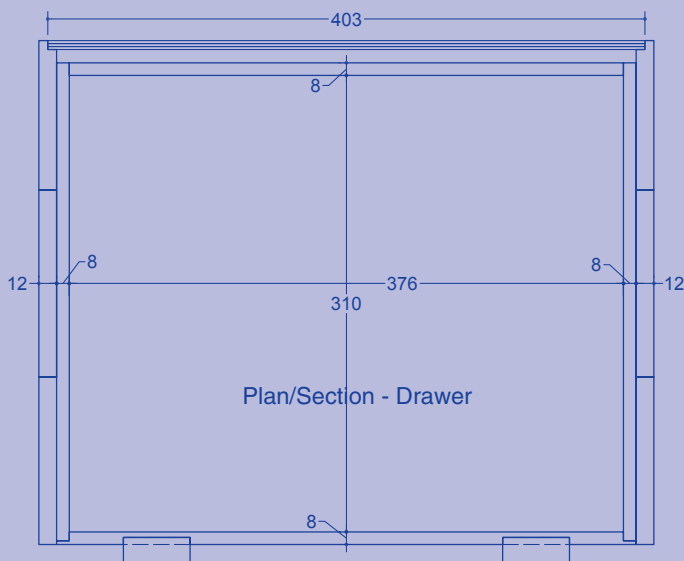
Side Elevation  
1 : 5



Plan/Section - Drawer Frame



Plan/Section - Top/Bottom Frame

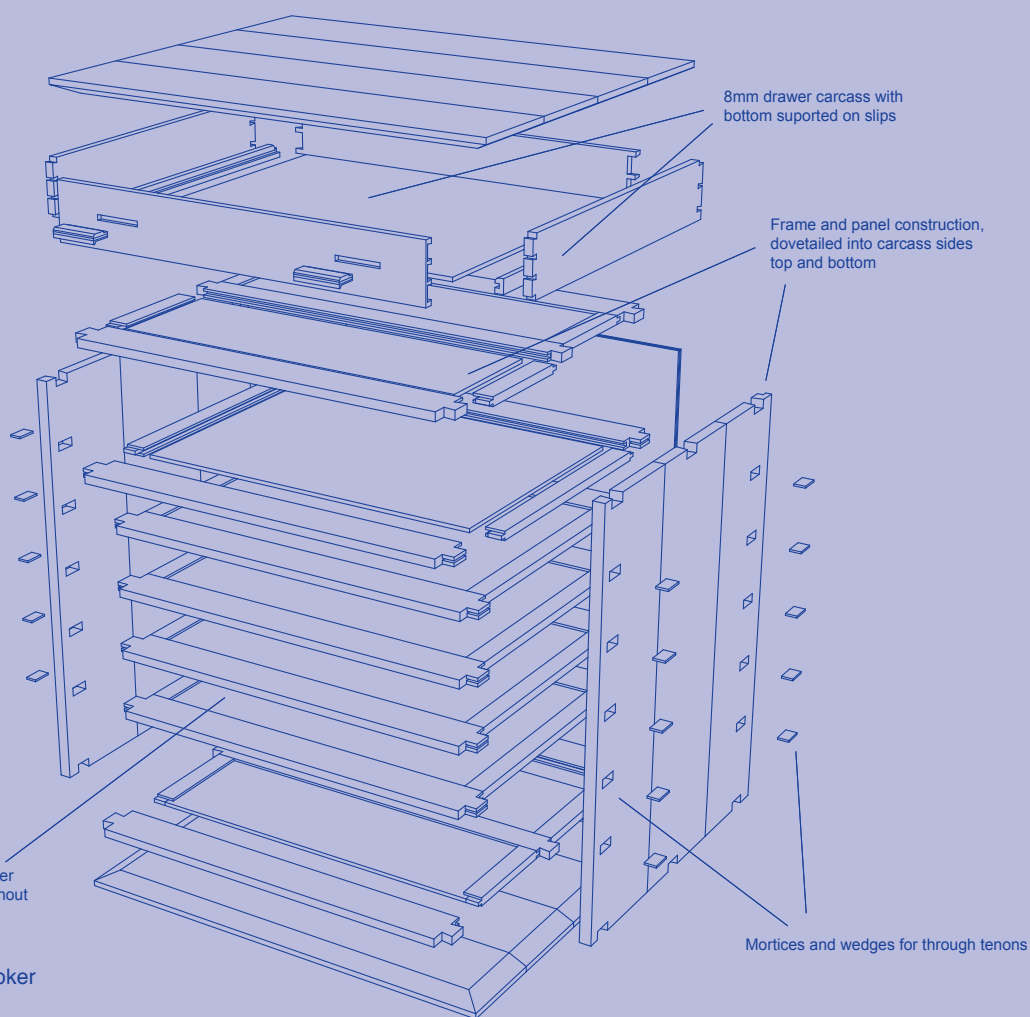


Plan/Section - Drawer

## Cutting List

TOP/BOTTOM	2 @ 460 x 385 x 15
SIDES	2 @ 433 x 340 x 12
TOP/BOTTOM FRAME	
FRONT/BACK	4 @ 415 x 45 x 9
SIDES	8 @ 119 x 20 x 9
MUNTINS	2 @ 415 x 30 x 9
PANELS	4 @ 363 x 119 x 4
DRAWER FRAMES	
FRONT/BACK	10 @ 415 x 45 x 9
SIDES	10 @ 256 x 20 x 9
PANELS	5 @ 363 x 256 x 4
DRAWERS	
FRONTS	5 @ 391 x 58 x 8
SIDES	10 @ 323 x 58 x 8
BACKS	5 @ 391 x 49 x 8
BOTTOMS	5 @ 366 x 320 x 4
SLIPS	10 @ 317 x 12 x 12
FRONT	1 @ 391 x 80 x 8
SIDES	2 @ 323 x 80 x 8
BACK	1 @ 391 x 71 x 8
BOTTOM	1 @ 366 x 320 x 4
SLIPS	2 @ 317 x 12 x 12
HANDLES	12 @ 45 x 20 x 7





Items made using LineMine plans are for personal use.  
Designs may not be reproduced for commercial purposes  
without the prior consent of the copyright owner.

No part of this design may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission of the publisher and copyright owner. The author and publisher can accept no legal responsibility for any consequences arising from the application of information, advice or instructions given on the design.



# Five of the best: Random orbital sanders

A selection of the best ROS machines hand-picked by WPP

**F**or the quickest and most effective way to sand flat surfaces, you can't beat a random orbital sander. They come in 125mm and 150mm diameter versions and power ratings to suit these sizes. The orbit size can vary too, depending on whether it is going to be used for general or fine finishing work. However, a lot depends on the grades of abrasive fitted and universal hook-and-loop attachment makes grit changing very fast as you work towards a decent finish. All the prices shown are RRP including VAT, but always shop around!...

## Einhell BT-RS 420 E

The Einhell has plenty of power but is less weighty than the other sanders featured here. It has rubber overmoulding for comfort, a positive on-off switch, single speed and a bayonet-fit dust bag. Like all the other sanders on test, it features hook-and-loop disc attachment. More suitable for finish sanding.

### The Numbers:

**Model:** BT-RS 420 E

**Input power:** 420 watts

**No load speed:** 6,000-13,000rpm

**Pad dia:** 125mm

**Orbit size:** 2.0mm

**Weight:** 2kg

**RRP:** £29.99 (inc. VAT)

**Where to buy:** [www.einhelltools.co.uk](http://www.einhelltools.co.uk)



## Draper 480w 230v

A heavy machine with plenty of power. It features a disc-shaped front knob, variable speed control and an on-lock, hook-and-loop disc fastening and a quick-release dust bag.

### The Numbers:

**Model:** 480w 230v. Stock No.28026

**Input power:** 480 watts

**No load speed:** 5,000-12,000rpm

**Orbits per min:** 10,000-24,000opm

**Pad dia:** 125mm

**Orbit size:** 2.5mm

**Weight:** 2.6kg

**RRP:** £64.79 (inc. VAT)

**Where to buy:** [www.drapertools.com](http://www.drapertools.com)



## Hitachi SV 13YA

For a professional machine this is quite lightweight, with less power to match, but it is intended as a finishing sander. It comes with rubber overmould and jungle livery. It has a slide front switch, variable speed, push-on dust bag and comes in 110v and 240v options supplied in a tough blowmould case.

### The Numbers:

**Model:** SV 13YA

**Input power:** 230 watts

**No load speed:** 7,000-12,000rpm

**Pad dia:** 125mm

**Orbit size:** 3.2mm

**Weight:** 1.4kg

**RRP:** £99.00 (inc. VAT)

**Where to buy:** [www.hitachi-powertools.co.uk](http://www.hitachi-powertools.co.uk)



## DeWalt D26410

A heavy-duty professional model with rubber overmould, detachable front grip and push-button changeover between coarse and fine orbit patterns. The bayonet-fit, internally-sprung dust bag can be exchanged for a tray holding a disposable bag for safer working. Good for working in a trade environment.

### The Numbers:

**Model:** D26410

**Input power:** 400 watts

**No load speed:** 4,000-10,000rpm

**Orbits per min:** 8,000-20,000opm

**Pad dia:** 150mm

**Orbit size:** 3mm or 6mm

**Weight:** 2.7kg

**RRP:** £231.60 (inc. VAT)

**Where to buy:** [www.dewalt.co.uk](http://www.dewalt.co.uk)

## Black & Decker KA198

This is a compact, lower wattage domestic power tool with plenty of rubber overmould and a rubber-booted, twin button on-off switch. Unusually in this price range it has both a dust bag and an interchangeable extraction pipe. It takes 125mm hook-and-loop abrasives with enlarged extraction holes in the pad.

### The Numbers:

**Model:** KA198

**Input power:** 260 watts

**No load speed:** 13,000rpm

**Orbits per min:** 26,000opm

**Pad dia:** 125mm

**Orbit size:** 3mm

**Weight:** 2.1kg

**RRP:** £44.99 (inc. VAT)

**Where to buy:** [www.blackanddecker.co.uk](http://www.blackanddecker.co.uk)





# Workshop notes

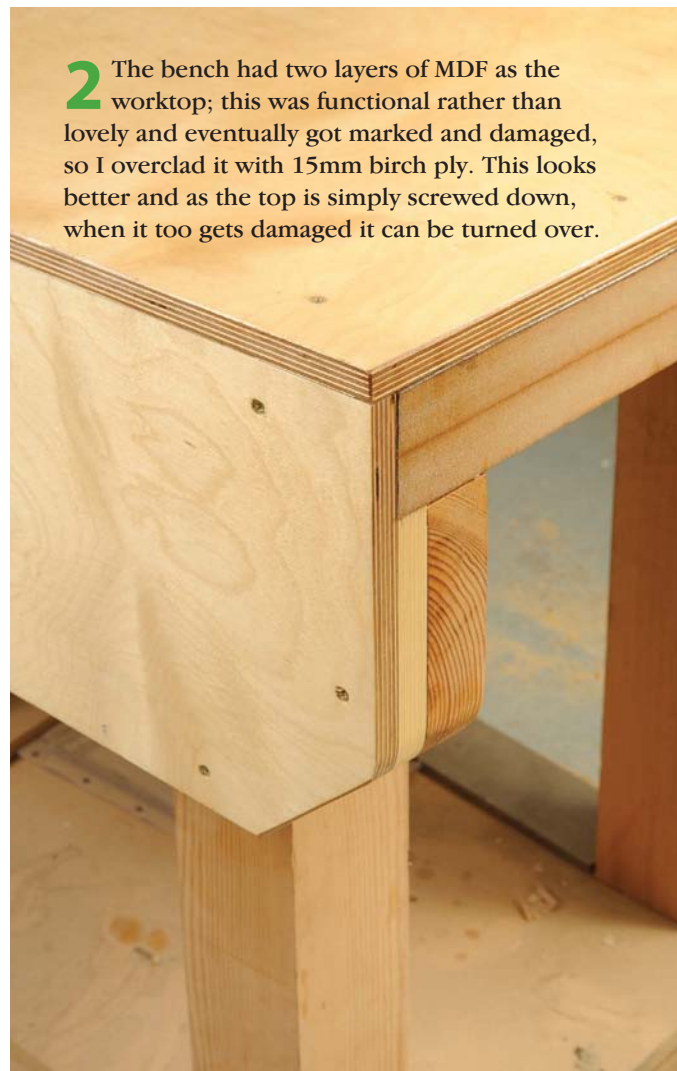
## A bench revamp



A few tips from **The Editor** to tailor your bench to your needs

In WPP 82 we showed you a heavy duty workbench in 'Plans for You'. It happens to be based on the bench I use in the *Woodworking Plans & Projects* workshop corner. It was originally made by the previous editor of *Furniture & Cabinetmaking* magazine, Michael Huntley. It was tall like him, so I cut the legs down as I am a bit shorter.

**1** Benches can be any height that suits you or the work you are engaged in. There is no set height, but, for example, you may need a slightly lower bench for working with power tools than you do when using hand tools. You must also protect your back from leaning over too far. If a bench is too low, you can make socket blocks to lift the legs up.



**2** The bench had two layers of MDF as the worktop; this was functional rather than lovely and eventually got marked and damaged, so I overclad it with 15mm birch ply. This looks better and as the top is simply screwed down, when it too gets damaged it can be turned over.



**3** I wanted a tough, slightly golden finish to the very neutral colour birch so I chose Chestnut Hard Wax Oil. This is built up in a number of layers, after sanding first of course. It needs enough time to harden off before recoating, but it seems pretty impervious to marking once set.



**4** The bench has a Record 52 1/2 E vice fitted to it. Unfortunately, the vice seemed to be slightly skewed and I could not easily get it dead parallel to the bench facing. A quick solution was to pack the movable jaw with slips of veneer to make the jaws close evenly.



**5** A last change, which I recently made, was to chamfer the movable jaw and the bench dog socket so it was easier to use the vice for awkward shaping operations.

At some point I will reinstate the vice dog and fit bench dogs in the top, I'll keep you posted!... ■



# HITACHI

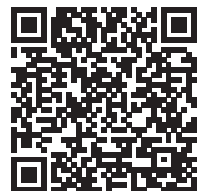
Inspire the Next

**3** HITACHI  
**YEAR**  
LITHIUM-ION TOOL  
**WARRANTY\***  
NOW INCLUDES 4.0Ah BATTERIES

\*Terms & conditions apply

Now more than ever, you need tools you can rely on.

Hitachi Power Tools offer an extended warranty on selected Li-Ion cordless tools when registered within 4 weeks of purchase.  
Simply visit [www.hitachi-powertools.co.uk](http://www.hitachi-powertools.co.uk) and complete the registration form supplied.





# Hot Stuff

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

Prices correct at time of printing and inclusive of 20% VAT. Photographs and information courtesy of the manufacturers



£179.99

## Dremel Ultimate DIY toolkit

Dremel have launched this Ultimate DIY toolkit for every job you can think of around the house and garden, containing a top-of-the-range cordless Dremel 8200 multi-tool and a whopping collection of 65 accessories, including EZ SpeedClic for quick keyless accessory changes; five attachments - the Detailer's Grip, Shaping Platform, Cutting Guide, Line & Circle Cutter and Comfort Guard; two batteries, and it's all packed into a high-quality aluminium carry case. Enough of a treat to bring a smile to the face of any DIY-er, hobbyist or self-employed handyman. To find out more about what's in this expansive kit, visit the Dremel website.

**CONTACT:** Dremel

**WEB:** [www.dremel-direct.com](http://www.dremel-direct.com)

## Tormek 40th anniversary T-7 sharpener

Tormek have released a special edition T-7 sharpener to celebrate the 40th anniversary of the first Tormek machine. The anniversary model has several distinct features, including Tormek's rotating base, which allows a user to instantly rotate the machine 180° in order to change the sharpening direction, or to switch between sharpening and honing.

**CONTACT:** BriMarc

**WEB:** [www.brimarc.com](http://www.brimarc.com)



£489.95



£159.95

## Axminster Evolution SK114 woodturning chuck

The Evolution SK114 features a super-slim stainless steel body with newly designed longer accessory mounting jaws. These low profile jaws offer a greater contact area within the slide ways of the chuck, minimising vibration during use. The ultra-compact design keeps the workpiece as close as possible to the headstock of your lathe to lessen the load on the bearings and prevent unwanted vibration during heavy stock removal.

**CONTACT:** Axminster

**WEB:** [www.axminster.co.uk](http://www.axminster.co.uk)

## Liogier Bastard rasp

Noel Liogier has recently completed the development of the most aggressive hand-stitched rasp available. Hand-stitched with an ultra-coarse grain tooth pattern, the 350mm length rasp is a No.3 grain. The Bastard rasp is intended for very fast stock removal. It is extremely capable in handling wild grains, burrs etc, but also for general fast removal where a plane may struggle. The Bastard rasp is available now and comes complete with a versatile handle assembly, with replacement blades available.

**CONTACT:** Liogier

**WEB:** [www.hand-stitched-rasp-riffler.com](http://www.hand-stitched-rasp-riffler.com)



£60



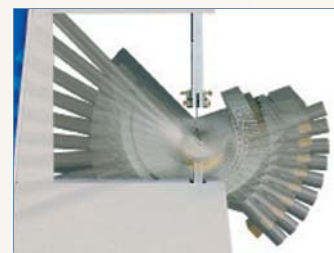
When the first Basato 5 (now Basa 5.0) bandsaw was introduced it achieved the "Best Machine of the Year" award in Germany. On test in the UK, Good Woodworking magazine stated "So is the Basato 5 the ultimate bandsaw? It's not far off. This is a serious professional machine." Today, with the introduction of the new Basa 4.0, there is a scheppach Basa bandsaw for every professional woodworker plus two economic "workshop" models. Ask for a demonstration and prove to yourself why scheppach Basa professional bandsaws are the ultimate in bandsawing perfection.



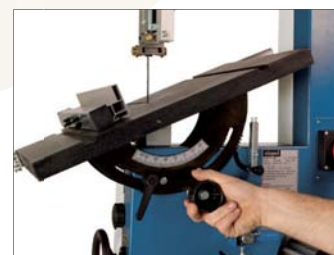
Basa 7.0 Professional

Basa 5.0 Professional

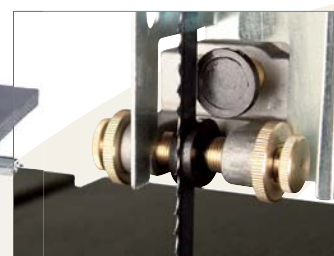
Basa 4.0 Professional



Exceptional +/- tilt adjustment



Single handed table adjustment



Triple T&B precision roller guides



Basato 3 h vario Workshop

**Deutsche Qualitätsprodukte seit 1927**



Model	Description	Power	Price Exc VAT (Prices valid from 1st April 2013.)	Price Inc VAT (Prices valid from 1st April 2013.)
<b>Basato 3h workshop</b>	Cutting Capacity: 306mm wide x 250mm deep	0,8 kW (1,1 hp) - 240v 0,7 kW (1,0 hp) - 415v	<b>£415.83</b>	<b>£499.00</b>
<b>Basato 4 workshop</b> (Not illustrated)	Cutting Capacity: 375mm wide x 250mm deep	1,5 kW (2,04 hp) - 240v 1,5 kW (2,04 hp) - 415v	<b>£665.83</b>	<b>£799.00</b>
<b>Basa 4.0 professional</b>	Cutting Capacity: 375mm wide x 250mm deep	1,5 kW (2,04 hp) - 240v 1,5 kW (2,04 hp) - 415v	<b>£1,125.00</b>	<b>£1,350.00</b>
<b>Basa 5.0 professional</b>	Cutting Capacity: 457mm wide x 305mm deep	2,8 kW (3,8 hp) - 240v 3,6 kW (4,9 hp) - 415v	<b>£1,662.50</b>	<b>£1,995.00</b>
<b>Basa 7.0 professional</b>	Cutting Capacity: 600mm wide x 400mm deep	2,8 kW (3,8 hp) - 240v 3,8 kW (5,2 hp) - 415v	<b>£2,850.00</b>	<b>£3,420.00</b>

Scheppach Workshop Basato 3h vario & Basato 4 (not illustrated) are manufactured under strict quality control by scheppach engineers and quality control inspectors resident in China. They carry the same guarantee as German made machines. Scheppach machines have been sold & serviced by NMA in the UK since 1972. Go online & see what users say about NMA unprecedented after sales service.



# Craftsman's corner

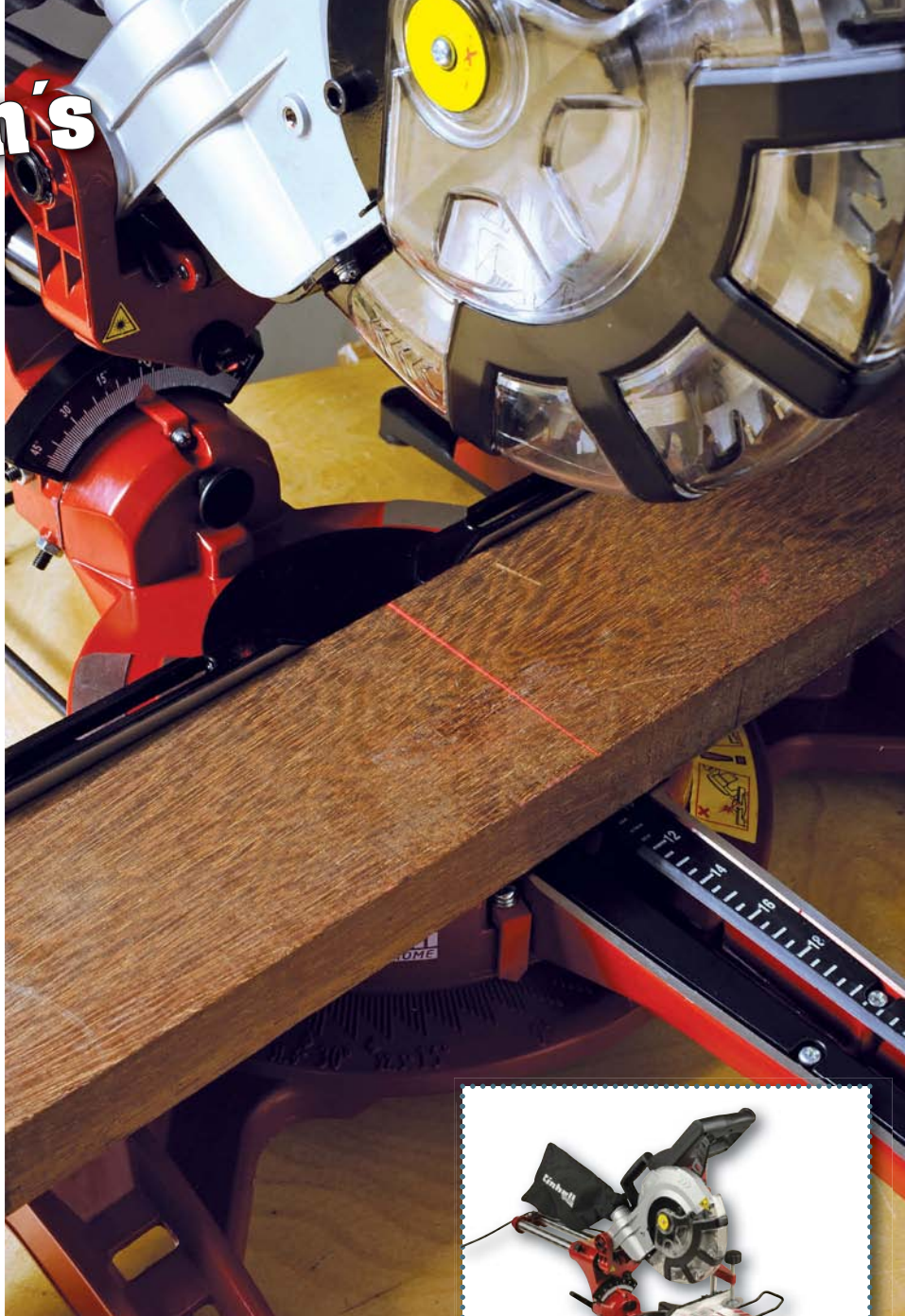
## Easy does it

**The Editor** gets his hands on the Einhell TH-SM2131 Dual saw

**T**here are times when you need a very lightweight, compact, portable site compound mitre saw, and the TH-SM2131 Dual might just be right for you. It features a 210mm diameter TCT blade and 48 teeth for a good cut finish. It is capable of a 310 x 62mm maximum crosscut capacity at 90° and 210 x 62mm at 45°. It has a carefully milled aluminium table and fence, and the scale is click-stopped at the most useful setting, running past 45° at both ends of the scale for those out-of-square mitre situations. When bevelling, there is a sprung stop that limits the head tilt to the left, but when it is pulled, the head can be tilted over to the right instead. The switch and safety lock paddle are very easy to operate and the motor, unusually, is mounted at an angle, so it doesn't project to the side. To change the blades, the user undoes the centre of the blade guard to access the blade bolt, using the spindle lock on the other side at the same time.



The spring lock pin allows the saw head to move to the right



There is a flip-out rear anti-tilt support and a workpiece clamp. Lastly, it has a laser cutting guide.

This machine is small enough to chuck in your boot and it won't give you back strain, yet it has a good cutting capacity. Einhell make an auto switching extractor that will team with this saw.



A flip-out anti-tilt frame



### THE NUMBERS

**Manufacturer:** Einhell UK

**Model:** TH-SM2131 Dual

**Motor input:** 1,800W max.

**Blade type:** 210 x 30mm bore, 48 tooth TCT

**Cut capacity:** 310 x 62mm at 90°/210 x 62mm at 45°

**Compound cut:** 210 x 36mm (left) /210 x 20mm (right)

**Weight:** 11kg

**Price:** £149.99 (inc VAT)

### WHERE TO BUY

[www.einhelltools.co.uk](http://www.einhelltools.co.uk)



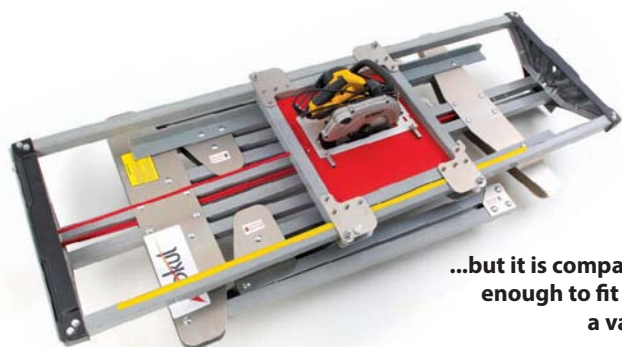
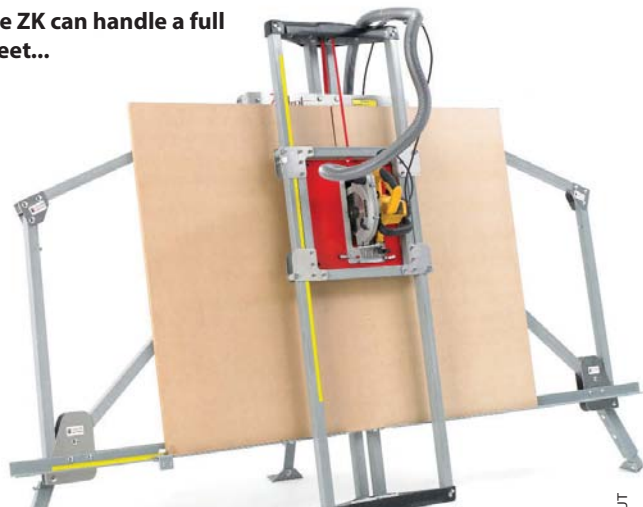
PHOTOGRAPHS BY GMC/ANTHONY BAILEY



# Craftsman's corner



The ZK can handle a full sheet...



PHOTOGRAPHS COURTESY OF ZAPKUT

...but it is compact enough to fit in a van

## Zapkut vertical panel saws

Board cutting made easy

Cutting man-made boards such as MDF or MFC can present a problem if you are looking for speed, accuracy, working safely and the right capital outlay. You have to make choices. A circular saw and guide rail are the most basic

combination, working precariously on sawhorses. At the upper end of the market there are various high-priced options, both tablesaws with board cutting sliding tables and the rather more compact vertical panel saws. Sitting slap in the middle cost-wise are the two Zapkut models built in the UK. They are both cost-conscious models with features specific to each and are available with several different options.

### ZAPKUT ZK

This machine is available in two versions to suit either 8 x 4ft or 10 x 5ft maximum panel sizes. All Zapkuts accept standard portable saws, which can be easily fitted into place.

The ZK has a square mounting plate



With the router fitted, it is possible to perform bevelling with the ZK



The panel is turned when converting to rip cuts

so you can lift it out and turn it 90° to go from rip to crosscut or vice versa. The beauty of the ZK model is that, unlike other vertical panel saws, it can be folded for compact storage and easily transported in a van from site to site. The whole assembly operation takes place in a couple of minutes and you are ready for action. The saw head runs on a vertical frame restrained by a tough bungee cord running over rollers.

The height is set by means of a stick-on scale and locked by a knob once adjusted for cutting. To rip cut, the board is fed under the static saw





The ZM is designed for workshops



A new router head gives added versatility

head, so a non-plunge or plunge-and-lock saw is needed. It features a 'quick-stop' for length cutting and a mid-height support for smaller panel sizes. An extraction hose can be fitted via a series of Terry clips that lead the hose out to the rear.

## ZAPKUT ZM

The ZM is a bigger beast, intended for workshop use, although it is still movable if required. It can cope with boards up to 10 x 7ft and has a 'quick-stop' and mid-height supports for cutting smaller panels. On this model, the saw head slides up and down a column using roller bearings and a bungee restraint. The column moves



A lock pin allows changing from cross-cut to rip cut



The scale pointer can be zeroed

sideways for rip cutting using bearings for smooth motion so the board being cut is static, unlike the ZK model on which it has to be pushed through. In common with all vertical units, it doesn't have a big footprint and can be placed against a wall. The saw-mounting system consists of a rotating mounting plate and a lock knob to change from rip to crosscut. Scales are provided for accurate cut setting and an extraction hose can be fitted and fed off out of the operator's way. There are three capacity options to suit your likely requirements. It comes as standard with a high-quality plunge saw, which can be easily removed for use as a portable saw on the bench. ■



The ZM uses a portable standard saw



Repeat rip cuts are made with this scale

## THE NUMBERS

### ZAPKUT ZK

#### ZK8

**Capacity:** 8 x 4ft max.

**Size open:** 2,800mm L x 700mm D x 1,900mm H

**Size closed:** 760mm L x 230mm D x 1,00mm H

**Weight:** 31.5kg (minus mid-height support)

**Sawblade:** 184-190mm dia. accepted

**Price:** £1,137.60

#### ZK10

**Capacity:** 10 x 5ft max.

**Size open:** 3,600mm L x 770mm D x 2,300mm H

**Size closed:** 760mm L x 230mm D x 2,300mm H

**Weight:** 36kg (minus mid-height support)

**Sawblade:** 184-190mm dia. accepted

**Price:** £1,374

### ZAPKUT ZM

#### ZM12

**Capacity:** 2,500 x 1,250mm

**Depth of cut:** 38mm

**Size:** 3,100mm L x 700mm D x 1,914mm H

**Sawblade:** 160mm

**Price:** £2,994

#### ZM16

**Capacity:** 2,500 x 1,250mm

**Depth of cut:** 38mm

**Size:** 3,600mm L x 750mm D x 2,205mm H

**Sawblade:** 165mm

**Price:** £3,594

#### ZM21

**Capacity:** 3,100 x 1,600mm

**Depth of cut:** 38mm

**Size:** 3,600mm L x 800mm D x 2,645mm H

**Sawblade:** 165mm

**Price:** £4,554

Prices inc VAT, but not delivery  
(sawblade options also available)

## WHERE TO BUY

[www.zapkut.co.uk](http://www.zapkut.co.uk)





# WIN!

## WPP GIVEAWAY: 1 ONE OF 10 BAHCO PULLSAWS

The Bahco super sharp pullsaw is suitable for cutting a variety of materials and is incredibly versatile. We have 10 to give away, each worth over £30. Good luck!



PHOTOGRAPH COURTESY OF BAHCO

**A**ll good woodworkers know someone they can always rely on for the best possible work: themselves! However, to achieve their best results, they also know they need the right tools for the job. Tools that, even with repeated use, will always deliver the highest performance that woodworkers demand.

The company whose founder invented the adjustable wrench has been manufacturing tools within Europe ever since. Its internationally-renowned hand tool brand, Bahco, is the preferred choice of thousands of trade professionals.

We've teamed up with Bahco to offer readers a chance to win one of 10 brilliant Bahco pullsaws, each worth more than £30.

The pull action allows for a thin blade – 0.50mm – creating a minimum of removal –

kerf 0.75mm – and so requiring less force.

Extra-fine hard-point JT toothing on one side of the blade is perfect for fine, angled and cross cuts in wood as well as in other materials, such as plastic tubes.

On the other side of the blade a progressive rip cut toothing of a coarser type is designed to perform brilliantly when cutting along the wood fibres.

The flexibility of the blade enables excellent cuts close to another surface, while the saw's two component plastic handle ensures a comfortable and safe grip.

Further information about Bahco tools – there are 12,000 in the range – can be found here: [www.bahco.com](http://www.bahco.com). Or to find your nearest stockist, call the Bahco customer service centre on 01709 731 731.

Good luck!

### How to enter

Send your details on a postcard with the title 'WPP Bahco Giveaway' to WPP Reader Giveaway, 86 High Street, Lewes, East Sussex BN7 1XN. The closing date for the competition is 5 September, 2013

The competitions are 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 Publications, 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.

## GO AHEAD, GLUE ALL POWERFUL BONDING SOLUTION

### ELMER'S GLUE-ALL®

Elmer's Glue-All is the perfect choice for all kinds of repairs. Versatile, easy to clean up and non-toxic, Glue-All delivers a solid bond every time.

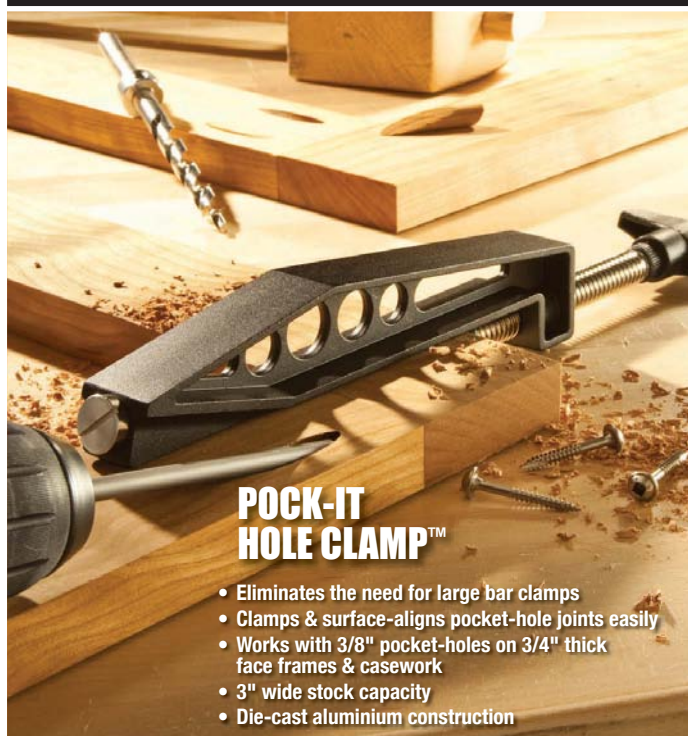


Find your nearest stockist  
**elmersglue.eu**

Available on the  
App Store



## A woodworker's best friend



### POCK-IT HOLE CLAMP™

- Eliminates the need for large bar clamps
- Clamps & surface-aligns pocket-hole joints easily
- Works with 3/8" pocket-holes on 3/4" thick face frames & casework
- 3" wide stock capacity
- Die-cast aluminium construction



Find your nearest stockist  
**benchdog.eu**



# 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

OVER  
£5,000  
WORTH OF  
PRIZES  
TO BE WON

**G**MC Publications in conjunction with Triton Precision Power Tools 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 – see photographic requirements & guidelines on the Woodworkers Institute website – 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. 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!

### Judges

The entries will be judged by *Furniture & Cabinetmaking* editor Derek Jones, sister title *Woodworking Plans & Projects* editor Anthony Bailey, plus two Triton-nominated judges, who will decide the winners from a shortlist of six in each category. Good luck!

#### 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 winning piece by Luke Miller, Triton Woodworker of the Year 2011, a table made from ironwood, 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](http://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





# Fitting out a workshop



Last issue, **James Hatter** showed you how to build your own workshop... now he steps inside to get it ready for work!

**W**e had a look at building two different styles of workshop last month; this time we look at fitting out the second version. This example will illustrate the design and techniques used. These would also apply to an existing building or area that you have decided would be suitable as a workshop. There are many different interests within the hobby of woodwork, and each individual may have other interests that require facilities that could be included.

An important aspect of any workshop is to have organised storage so that tools and materials can be

accessed quickly and safely. This is normally achieved by using drawers, cupboards and shelving. These also afford protection and safekeeping of any tools and materials you store in connection with the hobby that may prove a hazard. A workbench or work surface, depending on your need, is also a priority.

For a workshop with a limited space, it is worth considering making use of mobile units; these are essentially mobile cupboards or drawer units with a tool mounted on the top. These provide a stable base unit that gives added storage facilities.

## Design considerations

Look at the range of tools, stock and associated items that you want in your workshop. Include space for any items you hope to add to your collection in the future. Next, draw a plan of your workshop and decide how the items would be best stored and located. Keep in mind the need for access, especially to items most used. Also decide on the type and size, including working height, you want your work surface. You can make use of the top of storage units as a work surface, or may prefer a separate bench.

Look also at ways you will need to attach the various units to the workshop walls. Shelving can be used to store tools and stock items. Tools stored in drawers or cupboards have added protection; however, for



## DRAWER & CUPBOARD UNITS

Drawers are an excellent way of housing a range of hand tools, small power tools and stock. The size and depth can be chosen to make maximum use of the available space. Additionally, a sliding tray can be included at the top of the drawer to house smaller items. This can be made using a 6mm plywood bottom and pine sides. The tray sits on battens attached to the sides of the drawer.

Drawers can be simply made using plywood, and the sides joined using jointing biscuits. The drawers can be held within a plywood carcass, or timber frames made, spaced and fixed the drawer's width apart using cross members.

Drawer runners normally associated with kitchen drawers are effective, fairly standard bottom-fitting drawer runners that allow the drawer to almost fully open and are sufficient for most purposes. If, however, you require extended opening, a type allowing this is also available. The drawer runners are supplied in pairs, and each pair has two parts; one is attached to the inside of the unit frame and the other to the bottom or side of the drawer.



many of the materials and tools used frequently, shelving gives quick access.

My approach was to build a drawer unit along one wall of the workshop, with a work surface above. Additional storage is created using a shelf unit and shelving, and machines such as the pillar drill, mitre saw, router table, bandsaw, and benchsaw are mounted on mobile units that also serve to house the items appropriate for the machine, with any additional available space used for other items.

It is advisable to put a protective coat of varnish on the inner surfaces of drawers and units, and varnish or paint on the outer surfaces; as well as being decorative, this will help to keep them clean. A work surface is likely to get a few knocks, so use three coats of a tough water-based floor varnish to take the punishment.



**The frames are attached at the required drawer length using cross members. The whole assembly is attached to the walls for built-in units**



**An alternative to using frames is to use a plywood or MDF carcass, with one part of the drawer runners attached to each side. This method can be used for static or mobile units**



**Drawers can be made by cutting 12mm thick plywood sides and using biscuits to join them**



**Cramp the drawer frame, run a bead of adhesive around its bottom edge, then position a 9mm drawer bottom**



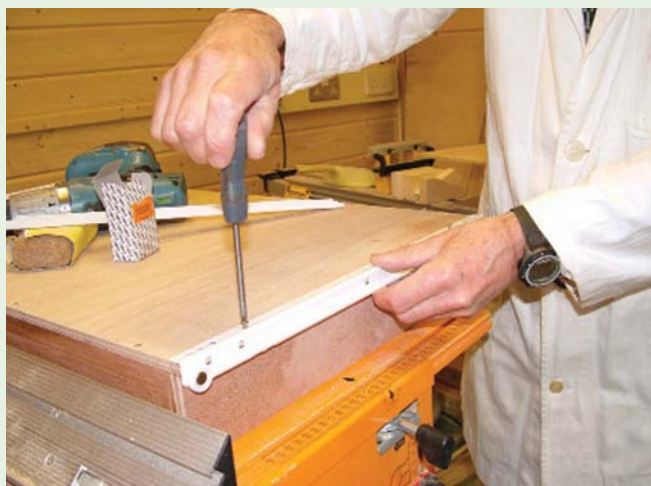
**Screw the bottom to the drawer frame, ensuring that the resulting drawer is square**



**Attach the bottom drawer runner component in place on the frame**



## DRAWER &amp; CUPBOARD UNITS



Fix the corresponding drawer runner component to the bottom of each drawer



Continue to attach the drawer runners using a temporary ply spacer



An alternative ball-bearing drawer runner type allows full opening



Check that all the drawers fit and run smoothly



False fronts can be added. Ensure adequate spacing by using 2mm spacers. Use screws through the holes that will be used for the handles



Check that all the drawers open and close and maintain the correct spacing. Then, use the screws to attach the handle and the drawer front to the false front



Sliding trays make best use of some of the drawers



Fully extending drawer runners allow better access to contents



With more bulky items, cupboards may be a better way of storage. A simple cupboard door can be made from a panel of 18mm plywood and attached to a plywood carcass using either single crank hinges or flush hinges. The door can be held shut using magnetic catches.

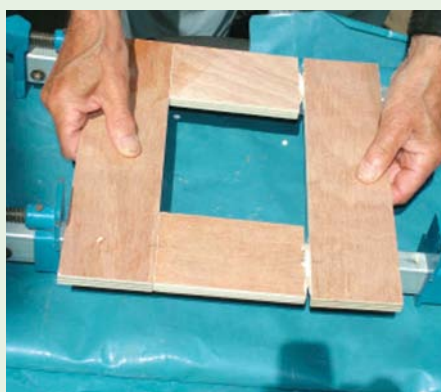
For a lighter door you could use MDF or plywood rails and stiles, and a thin plywood panel.



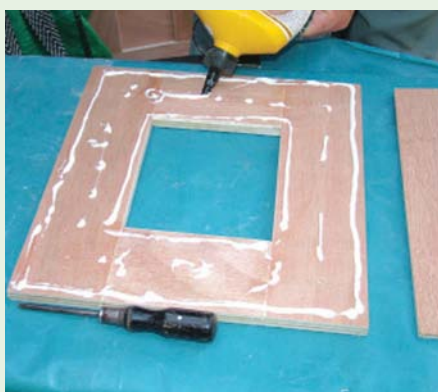
A simple door can be made from a panel of MDF or plywood



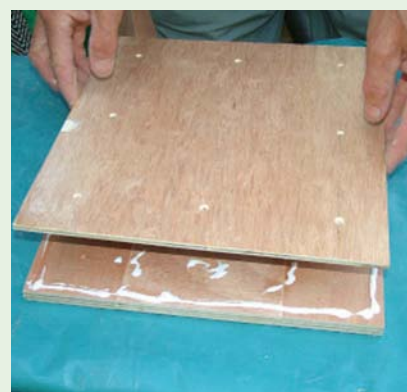
You can use a mixture of drawers and cupboards for greater versatility. This unit provides easy access to a range of abrasives and sanders



For larger doors, weight can be reduced by making a simple panel door. This consists of making a frame using 12mm ply or MDF with jointing biscuits



Cut a panel of 6mm plywood to the size of the frame. Apply adhesive to the inside of the frame



Attach the plywood panel to the frame and use screws to secure



The door is attached to the carcass using flush hinges. Simple handles can be made by sticking spacers to a handle bar



Cranked hinges provide a secure fitting – especially useful when used with MDF



Magnetic catches provide an easy, effective closing mechanism



## WORK SURFACES & BENCHES

The work surface chosen needs to reflect your main interests. If you are seriously into handmade joints and extensive use of hand tools, then a substantial workbench with a joiner's vice and a construction capable of the accompanying loads will be required.

With restricted space – or where a full-sized bench is not required – a portable workmate incorporates a vice for holding workpieces. For assembly of larger items, I use two workmates supporting a large MDF board to provide a large working area. In the example shown, a plywood panel is attached to the top of the drawer unit to give a general working area.



**The top of the unit is capped with 18mm plywood to form a work surface**



**The 18mm plywood panel is attached to the top of the unit using screws. A pine edging is attached to the front, and three coats of water-based clear floor varnish are applied**

## SHELVING CONSIDERATIONS



**A simple shelving unit can be made using lengths of plywood attached with biscuits, screws and adhesive**



**Adding a backing will greatly strengthen the assembly**



**The unit is screwed to the wall**



**This unit is used to stock screws and various other items in a series of plastic drawer packs**

Shelving can be built as a unit to screw to the wall, and this method is a good choice for housing screws, nails, and other – mainly smaller – items. For shelves capable of storing larger, heavier items a more sturdy and well-braced arrangement is required. Shelving can be made using lengths of 18mm or thicker plywood, with a batten for wall support and a front edging, making use of brackets for support. The brackets can be purchased or made using a batten and a plywood triangle. It is also beneficial to tie the assembly to the ceiling where feasible.



**For larger shelves, an effective bracket can be made using a pine 'L' and braced using a plywood triangle**



**Even greater support is achieved by attaching shelves to braces that are themselves attached to the ceiling members**



## MOBILE UNITS

For most home workshops space is very limited, with little room for all the machines to be individually sited. One solution is to mount the machines onto mobile drawers or cupboards. This method has been found to be very effective, and has provided good access to a range of machines, which can take centre stage as required. The supporting mobile base unit can be made using plywood or MDF, and must be capable of withstanding the weight of the machine and stresses applied while in use.

Manufacturers often supply stands, sometimes with a mobility feature for their machines. However, these do not

generally have a storage facility, or a means of customising a working height for your personal safety and comfortable use.

Even fairly heavy duty machines can be mounted on mobile units, provided the base unit is adequately reinforced to take the load and has a good footprint for stable use. The machine must have a secure attachment to the base unit, and the castor choice must be appropriate.

### Castors

All the units can be made mobile by the use of castors. The front ones are swivel types with a brake. The rear ones can be fixed types, but for maximum manoeuvrability in a small space,

swivel types can be used. Various suppliers offer a range of castors; an example from one supplier states 50mm rubber-wheeled types have a maximum load of 40kg, while the 75mm types will allow up to 70kg. 80mm polypropylene types will allow 100Kg. A wind-down stay will give added stability in use.



Even heavy-duty machines can be mounted in this way; this bandsaw weighs 69kg, so the mobile unit must have a sufficient footprint for stability



Fitting castors to the base of the mobile unit



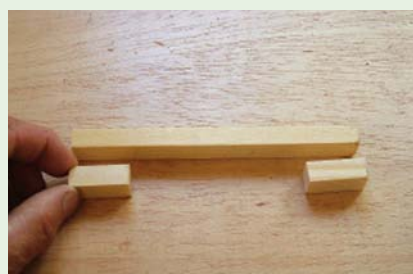
This bench saw unit incorporates a cupboard below to store associated items, as well as a pull-out tray to collect dust that falls through the saw



This sliding chop saw is mounted on a mobile drawer unit, incorporating removable extension tables

## HANDLES

You are likely to need a stock of handles or knobs for the drawers and cupboards. Handles can be purchased, or you can make your own. A simple method is to glue spacer blocks to either end of a handle bar. You will need to mark and pilot drill the holes for the attaching screws at the bottom of the spacers; these must match the pre-drilled holes in the false front. Attach the handles using screws through the drawer front and false front.



Simple handles can be made with just a bar and two spacers



Attach to the drawer or door with screws that extend through to the bar

### Further information

Consider adding locks to cupboards and drawers containing hazardous items, and only give workshop access to children under supervision.

The timber and plywood used in projects can be obtained from a variety of outlets. It is generally most economical to buy whole sheets of the plywood, and plan your cutting to get the most out of each sheet.

As well as the different fixings and opening lengths of drawer runners, they also have different weight limits. The ones used in this example were 450mm long bottom-fix types, with a maximum limit of 40kg.

The varnishes and paints used in this project were all water-based products, which are quick-drying and low odour. They are best applied with an artificial bristle brush or a small roller. ■



# Knife block



Where do you buy a knife block if you've already got the knives?...

**Jim Robinson** decided to save himself the trouble and make one

**W**e have just replaced our ceramic hob, and rather than risk our heavier knives dropping from the magnet holder, we decided we needed a knife block. After a fruitless search to purchase a knife block without a set of knives, I decided to make one from short ends and offcuts. I used oak (*Quercus robur*) for the simple reason that I am in the process of making a set of chairs and I have plenty of offcuts.

*"When completed, you have the satisfaction of knowing your knives will fit"*

## Construction

The block is made up in several layers, rather like a club sandwich. The number of layers depends upon the thickness of your offcuts; in my case, six were needed.

**1** To begin this project, start by arranging your knives in the order you prefer and then place two of the largest in width side by side to determine the size of segment needed. You can then place your knives on a piece of paper or card, in the position you want them, and draw the outline of the size and shape required. Use this to mark the outline on the individual parts of the sandwich.

**2** Now is the time to sort through your offcuts to select suitable pieces. Plane and thickness them before planing one side straight to use as a reference.

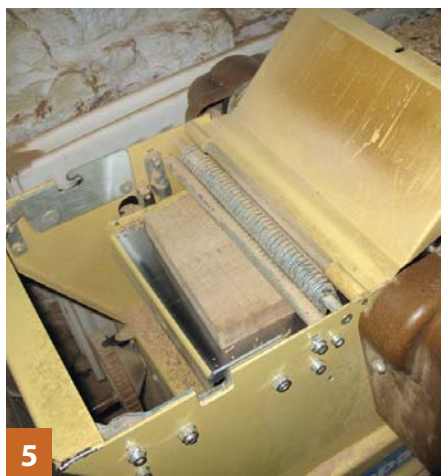
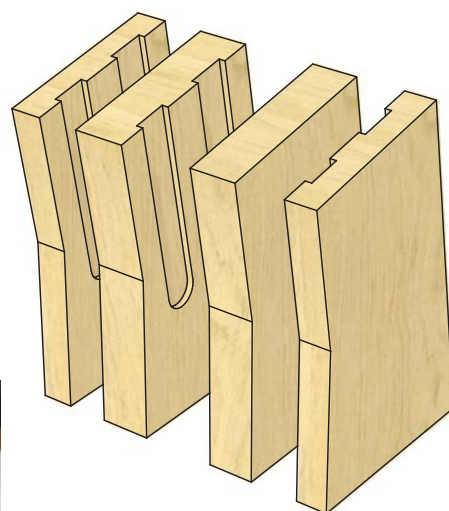
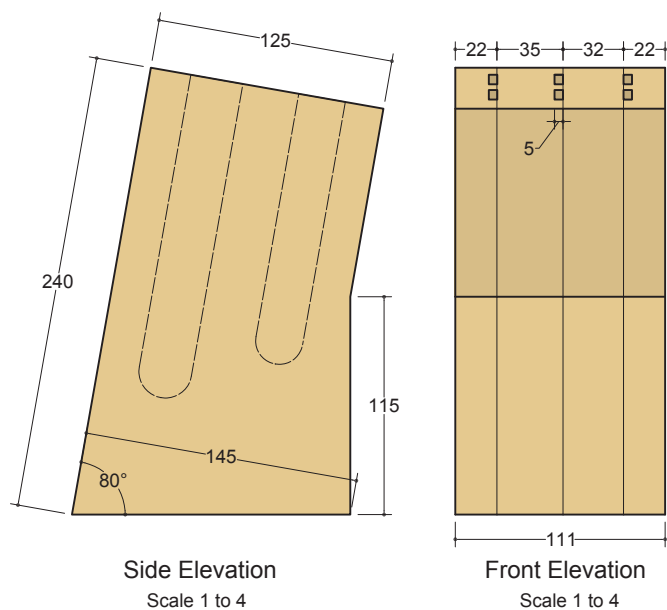
## Cutting list

Description	Qty	L	W	T
Outer layer	2	240mm	145mm	22mm
Inner Layer	1	240mm	145mm	32mm
Inner layer	1	240mm	145mm	35mm

Note: the inner layers can be built up to this thickness







**3** Trim your wood approximately to width.

**4** The next step is to plane the boards flat ...

**5** ... before thickening them to the required width.

**6** If you are going to have three rows of knives, the two blanks for the middle will need to be of a reasonable thickness to allow for the knife slots to be cut on both sides.

### Cutting the slots

**7** Select the blank you are going to cut the slots in and then draw around the outline of the knives. Do not attempt to cut the exact shape of the knives – the outline is just to ensure that when you take out the slots they will be large enough. The slots have straight sides, so take





these out with a straight cutter in a router guided by a fence. Measure the thickness of your knife blades to ensure they will be a loose fit; I found my slots needed to be about 4.5mm deep. Do not make the rows of knife slots too close; you will need about 32mm between them. This means that most likely, spacers will be required. The quantity and thickness of these will depend on your offcuts. After thickening the spacers, draw the outline and cut to shape.

**8** Here you can see the knife slots have been taken out.

**9** Use the first blank to mark out the other blanks and spacers.

**10** After thickening the spacers and blanks, draw the outline and cut to shape.

### Assembly

**11** Glue the parts together in the form of a sandwich, but do not use too much glue near the edges of the slots as the squeeze-out may stop the knives entering the slots. When assembling, the straight back and base are useful references to keep it all in line. When the glue has set, clean the block up ready for the finishing. The simplest way is first to clean the back by giving it a light cut on the planer, then sand with a belt sander for most of the levelling on the remainder, before finally sanding down to 320 grit. I recommend using a cascamite glue, as this will be easier to sand than a PVA type.

**12** Danish oil could be used for finishing, but tung oil will stand up to wet conditions better, which may well occur in the kitchen. Thin the first coat of tung oil with white spirit to aid penetration. Apply liberally and, after a few minutes, remove any surplus. Follow the first coat with undiluted oil, 24 hours later, again removing any surplus after a few minutes, set aside to dry before using. When completed, you have the satisfaction of knowing your knives will fit, which might not have been the case – even if you had found an empty block for sale!

**13** The knife block in use. A perfect fit. ■





# WOODWORKING

## Plans & Projects

 The UK's essential workshop project & technical manual

Issue 83 August 2013

# Router tables

## Your essential user's guide

## Setting up a workshop

Latest kit  
& tools

## PROJECTS

Bookstand  
Oak Dresser  
Display Cases  
Folding Deckchair  
Scrollsawn Toucan  
Turned Serviette Rings

**SUBSCRIBE**  
FOR 12 ISSUES  
and receive a **FREE**  
Draper palm sander!

**WORTH  
£29.99!**

Includes 5 sanding sheets



**UK OFFER ONLY**

## SUBSCRIBER BENEFITS

- Free Draper palm sander
- Free delivery direct to your door
- Never miss an issue

**WE HAVE 30 SANDERS TO GIVE AWAY, SO HURRY, WHILE STOCKS LAST!**

## 2 EASY WAYS TO SUBSCRIBE

**1 CALL: 01273 488005**

**2 POST:** GMC Publications Ltd, FREEPOST BR2265,  
Lewes, East Sussex BN7 1BR

**YES!** I would like to subscribe for 12 issues to **Woodworking Plans & Projects** and get my FREE gift worth £29.99!

Pay by cheque or debit/credit card £47.40

### Name & Address details

Title (Mr/Mrs/Miss/Ms/Other)	Name
------------------------------	------

Surname

**Address**

Postcode \_\_\_\_\_

Telephone \_\_\_\_\_

Email

### Credit/debit payments

☐ I enclose a cheque made payable to GMC Publications Ltd

OR

☐ Please debit my credit/debit card

\*TO THE VALUE OF: **£47.40**

\*Please indicate

Please indicate ☐  ☐  ☐  ☐  ☐  ☐ No ☐

Please charge  
my card number

Start  
DateExpiry  
Date

Secur  
Co

Security Code 

--	--	--	--

 (The last 3 or 4 digits on the signature strip)

Signature

Date \_\_\_\_\_

**Offer expires 30/09/2013. Sorry, no Direct Debit available.**

**PLEASE QUOTE ORDER CODE A4120**

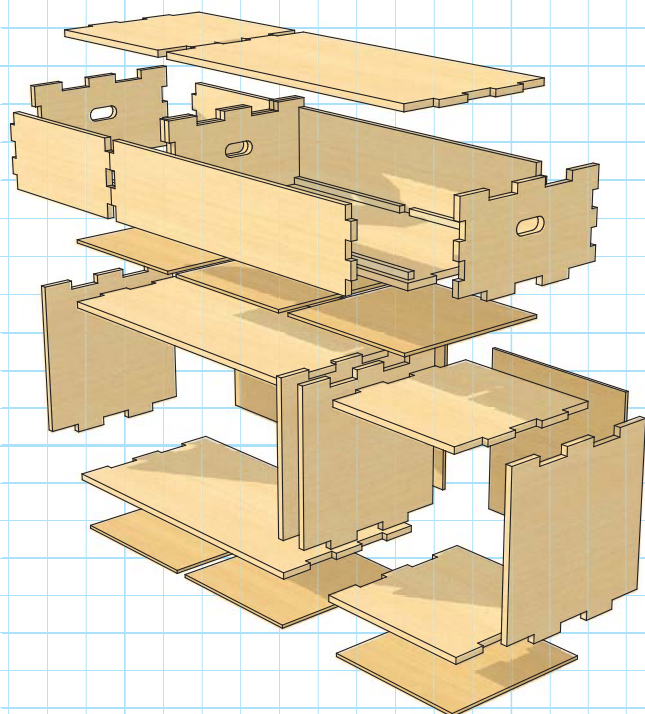
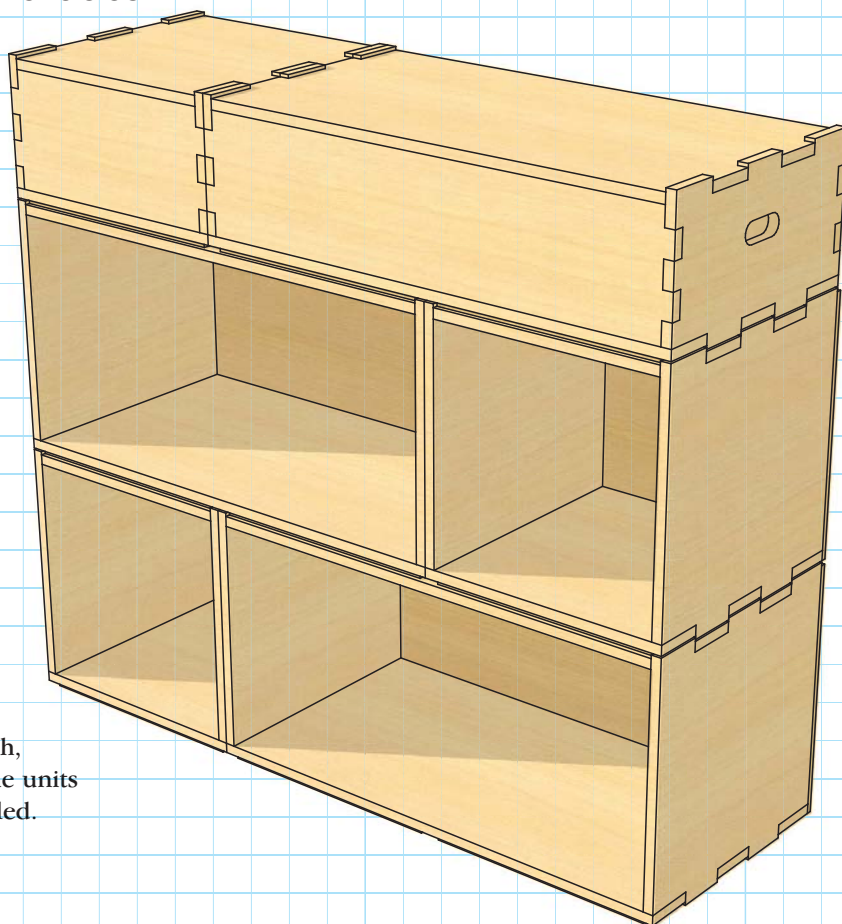


# Stacking storage

**Simon Rodway** makes this versatile interlocking unit – perfect for storing bits and bobs

**F**lexible storage systems are one of the holy grails of the furniture world, and this month I'm throwing my hat into that fairly crowded ring, with a modular stacking system that can combine shelves and boxes in a variety of configurations. Hopefully, this is a system that you can adapt to suit your particular requirements; the drawings for this project only show one possible layout among many. I have used 12mm ply or MDF throughout, plus 6mm spacer pads on the bottom and 6mm backs to the shelf unit. For the back you could use an even thinner sheet material, in truth, as its main function is to brace the shelf boxes and stop them rocking from side to side.

The module or basic unit is a 300mm cube. However, although the carcass depth and width overall are 300mm, the length of the carcass sides on the base unit is 310mm. This is because the fingers of the corner joints project beyond the top and bottom by 5mm each, in an interlocking configuration that prevents the units sliding from front to back once they are assembled.



## Cutting list

### Box module (half height)

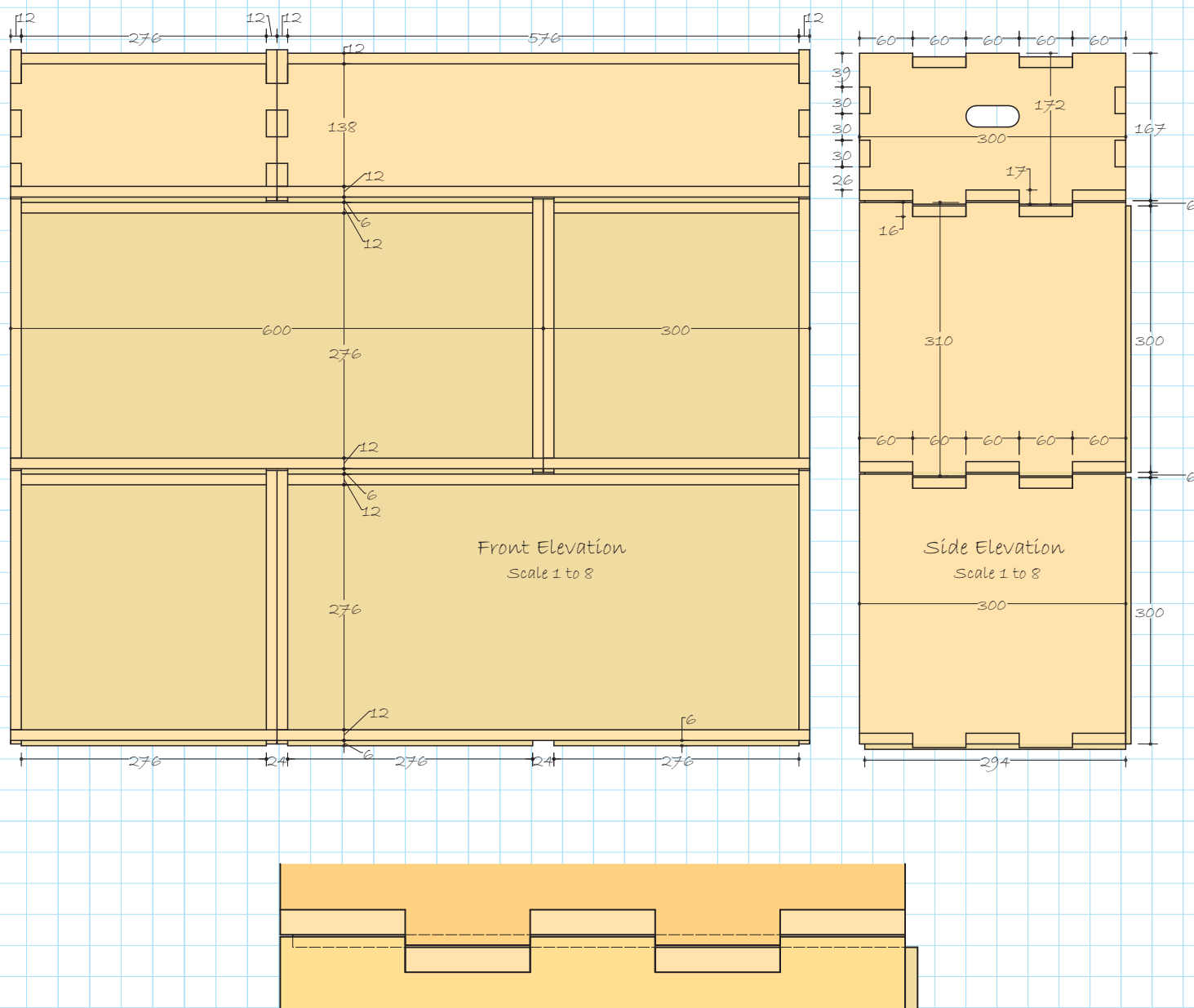
Ends	2	@	300 x 172 x 12mm
Top/bottom	2	@	300 x 300 x 12mm
Sides	2	@	300 x 138 x 12mm
Pad spacer	1	@	294 x 276 x 6mm

### Shelf module

Ends	2	@	300 x 310 x 12mm
Top/bottom	2	@	300 x 300 x 12mm
Back	1	@	300 x 300 x 6mm
Pad spacer	1	@	294 x 276 x 6mm

Larger units will be multiples of these measurements.





Additionally, each 300mm module has a 'foot' or pad of 6mm ply or MDF that it sits on. This pad locks into the carcass projections at the sides and prevents lateral movement. A 600mm-wide unit has two of these pads, with a 24mm gap between them to allow the tops of the carcass sides below to interlock with them. The pads are set back 6mm from the front edge to give a shadow gap between the rows of units.

Before you start making anything, I would sketch out possible layouts for the space or spaces you want to fill, using a grid if possible. One variation I haven't shown, which could look really effective and provide a real variety of storage spaces, would be the inclusion of double-height units. If you do this, bear in mind that each row has to be 'tied in' by the row above, rather like brickwork. I wouldn't recommend having more than two standard height units that are the same width directly on top of each other. In any case, if you are building a 'wall' of these modules more than four 'courses' high, fixing the shelf units back to a wall or something immovable at regular intervals is a good idea.

I have made the construction as simple as possible,

hopefully without making the units look too 'industrial', with simple finger joints glued throughout and screwed from the bottom to strengthen the joint where it won't show. The bottom pads are just glued and pinned into place, as are the backs to the shelves. The box carcasses are made in a similar way, with the addition of finger joints along the vertical corners and a handhold-type cutout at each end. The box tops, of course, aren't glued, and the fingers on the top need to be eased slightly so that they don't bind when opening. Reinforce the long joint along the sides with a small batten screwed from the inside into the bottom and carcass side.

In terms of appearance, this type of stacking storage unit can either be seen exclusively as belonging in a workshop or utility area, or perhaps an item you might include in a living room, with something like a primary colour paint finish if you've used MDF. The final look in terms of size, shape and finish is really your choice, and hopefully something that makes this particular project a bit more of a creative and rewarding challenge. Have fun and explore the limitless possibilities. ■



# hamilton beverstock

CNC sharpening & material cutting specialists



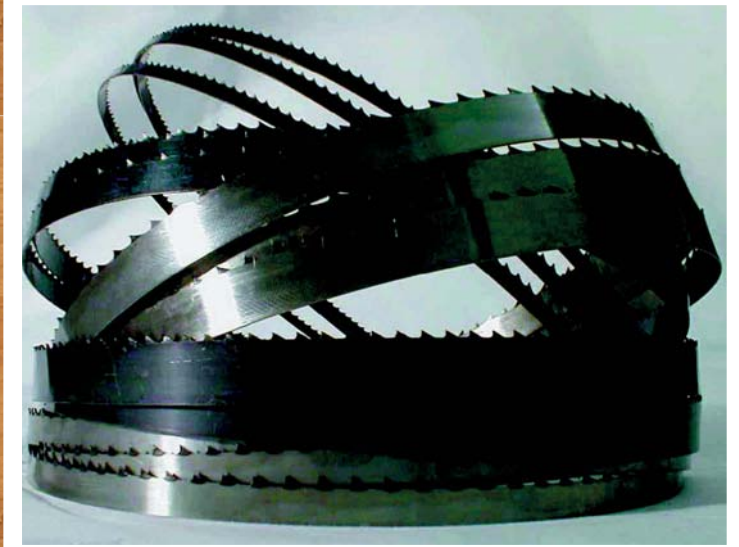
## The Leading Supplier of Band Saw & Circular Saw Blades in Wales

- TCT CIRCS • SERVICING • ROUTER CUTTERS • POWER TOOLS
- ABRASIVES • TURNING TOOLS • PLANER BLADES

### TOOLING & CUTTERS, SPIRAL & DISPOSABLE TIP CUTTERS, COLLETS & JIGS.



### BAND SAW BLADES - WELDED TO ANY LENGTH



With over 33 years experience in the saw industry, and as a supplier to major machine manufacturers, we know, like thousands of other satisfied customers, you'll be happy with our high quality band saw blades for cutting wood, metal, plastics, food...

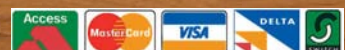
If you're a hobbyist or a professional, call us today for a friendly service, free advice and competitive prices.

**Hamilton Beverstock Ltd**  
**Grange Industrial Estate, Llanfrechfa Way, Cwmbran, Torfaen, NP44 8HQ**  
**Tel: (01633) 838900 Fax: (01633) 873803**  
**Email: [sales@hamiltonbeverstock.com](mailto:sales@hamiltonbeverstock.com)**

**View our full stock range at:**

**[www.hamiltonbeverstock.com](http://www.hamiltonbeverstock.com)**

Founder Member of  
The Saw Doctor  
Association





# Finishing

**Mark Baker** and **Anthony Bailey** bring you a new series that is long overdue! We can all learn something about the art of wood finishing...

**F**inishing is not just a case of slapping any old jollop on the work and expecting it to look good. The word finishing is a strange one, in that it doesn't fully explain exactly what it is but gives a vague hint that it is something to do with finishing off something. How? With what? To some this is a mystery, and an area that causes many people much confusion. For the purpose of this series, finishing means the stages needing to be addressed after something has been made.

There are myriad finishes available of numerous types and chemical composition, but there are also many things to do and consider prior to applying any type of finish to the work at all. This series is designed to help you tackle any project in an easy, systematic way. We'll look at the jargon, items available, how to use them, the processes involved and give some handy hints and safety advice so you can get the perfect finish while working safely.



There are all kinds of oil finishes available



Finishing is a dedicated subject in its own right



PHOTOGRAPH BY KEVIN LEE, ALL OTHERS BY GMC/ANTHONY BAILEY UNLESS OTHERWISE STATED



TECHNIQUE

**Above: To colour or not to colour: that is the question!**

**Left: Fine furniture demands a fine finish**

Finished work is all around us. It is often the case that we do not really notice much of it – but get something wrong, and we immediately see it. There are so many types of finish to choose from, for so many situations. Note that phrase. It is vital that you know exactly where something is going to be placed or going to be used so you can choose the right finish for it.



## Surviving the surroundings

The intended location of an item will have a big impact on what is used to finish it off. Consider a bathroom and kitchen. Both are environments which have a high likelihood of water and possibly heat and condensation being generated. Use finishes that are waterproof or certainly water/moisture resistant and have some sort of mould-inhibiting properties, too.

External work like benches, fences, arbours and trellises are going to face the various elements that nature can chuck at them: water, heat, and of course various organisms that will try to eat or rot the wood. Is the finish being applied to the wood safe for use where pets are concerned, or for use near plants?



**Water and damp-resistant finishes are essential in bathrooms and kitchens**



**How different a new component and new finish can look!**



**Garden furniture finishes need regular attention**

PHOTOGRAPH BY JOHN BULLAR





**There are specific decking treatments available**

There is so much more to consider. In the case of decking, is it going to get mouldy and slippery? Is the finish going to wear off? Get the finish on something right and the items will not only look wonderful, but will last for years. Flooring may be solid wood or a real wood laminate. It is amazing to see the impact that a gloss, satin or matt finish, or one which is more 'natural' in its appearance, has on the overall visual effect. Of course this is only part of it. Whatever finish you use, it must withstand the rigours of it constantly being walked on. So the finish must be tough and wear-resistant. The other question worth asking – is it repairable if something damages the floor?

**Right: A new finish for an old floor**



**Creating comparative swatches is very instructive**



PHOTOGRAPH COURTESY OF ISTOCKPHOTO/THINKSTOCK



**Colour schemes can be subtle or striking**



**A well applied clear mark-resistant finish**



**Choose child-safe finishes where necessary**

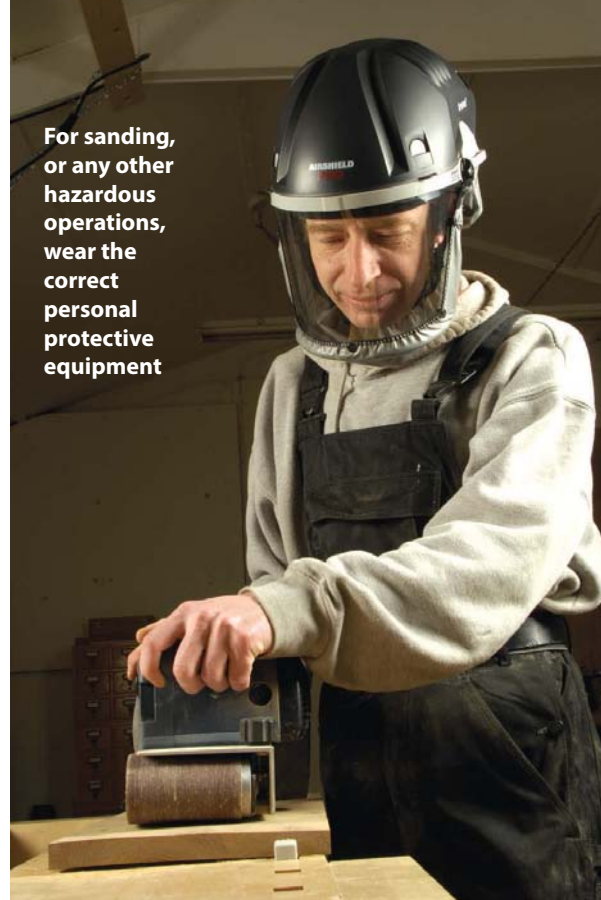
## Planning for punishment

Walls will have some sort of finish on them, be it paint, wallpaper or similar. There will be doors in the house. Architraves, windows, skirting in their various guises and shapes, all of which will need something in order to make everything come together in a cohesive look for each given area. Colour of course is important, but so is the right type of finish for the environment. Does it need to be washable? Do you have children, and if so, what age are they? That might not seem relevant, but there are some tougher finishes that might just help when things get drawn on by wax crayons and such like. Are you finishing something in a child's room? Is the item likely to be chewed? A toy – yes; a chest of drawers – unlikely! There are finishes for both situations so don't worry, we can help select something for each. There is a type of finish available for every conceivable situation and more are being developed every day. They don't need to cost the earth and some can be modified to help you get the look you want.





For sanding,  
or any other  
hazardous  
operations,  
wear the  
correct  
personal  
protective  
equipment



There are quite a few things commented on here but there is one phrase that exactly sums up what is needed to make sure everything comes together well: proper planning prevents poor performance.

Remember, you need to understand where the item will be used and what it is going to have to withstand in its daily life. What effect and look is required of the finish? This in turn will dictate how you will need to prepare the work prior to the application of the finish.

This, of course, leads on to safety information on how to minimise exposure to potentially harmful items such as dust and chemicals, and then the final stages are how to apply the finish; what items are required to help you to apply the finish to the work correctly? ■



### Next time: Surface preparation

In the next issue we will be focusing on abrasives: types, applications and using them correctly. Surface preparation is something that is vitally important; get it wrong and it won't matter what finish you put on, it will be flawed and not only look wrong, but might not stick, last as long as it should, or in some other way not work properly. Add to disappointment wasted money and time and you'll wish you'd planned it better. But get it right the first time, and you'll be well on the way to achieving what you want and need.



Transformed from  
junk into a delightful  
'country style' kitchen  
table

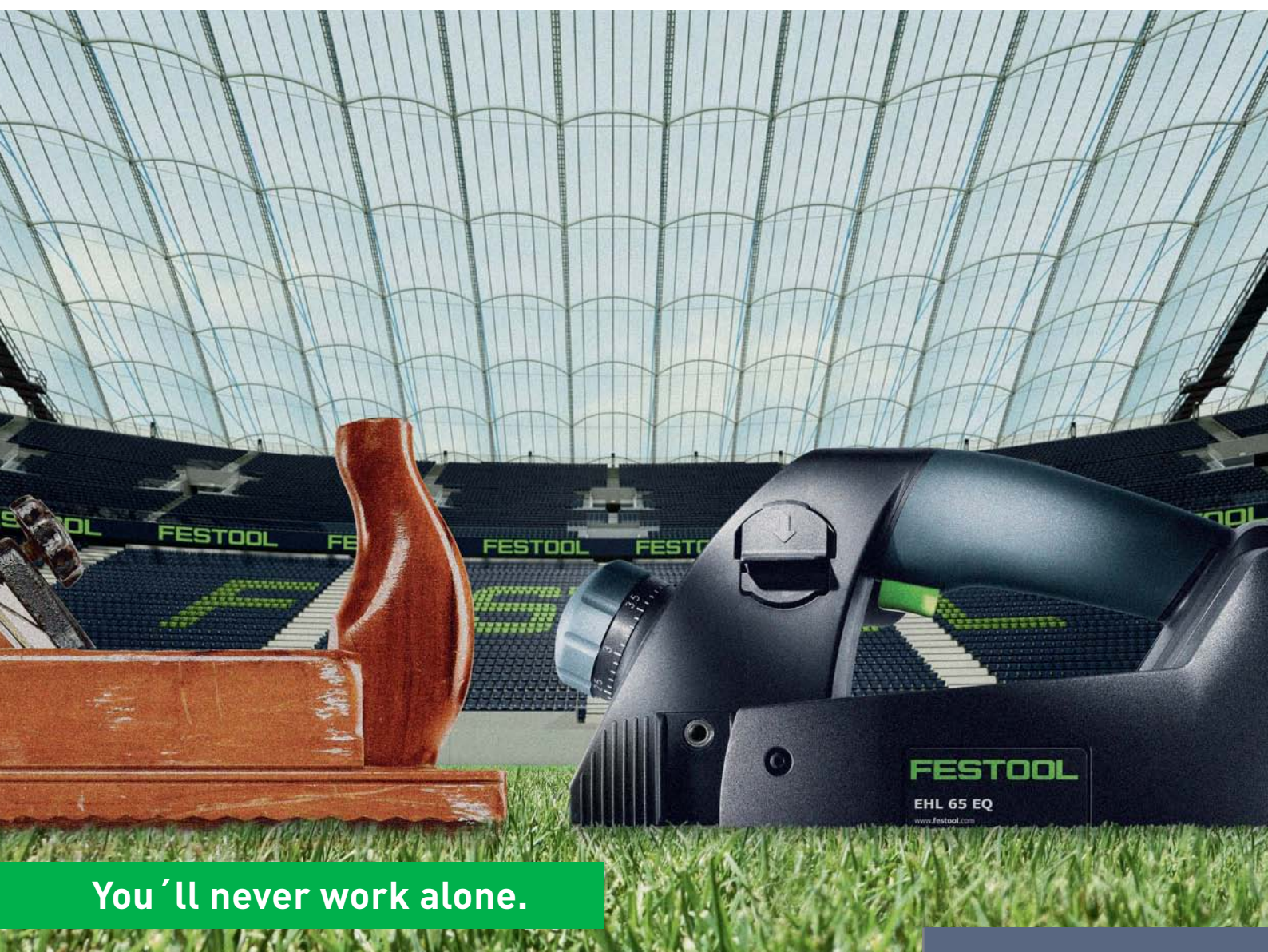


Good surface preparation before refinishing is important



# Time for a **substitution**

The new one handed planer EHL 65 EQ



You'll never work alone.

SERVICE  
all-inclusive



Tradition meets innovation. The new planer EHL 65 EQ weighs just 2.4 kg making it the lightest in its class. Fitted with a unique spiral blade, giving maximum surface quality, silent operation and easy blade change. We think its time for a substitution.

For more information visit your local dealer or [www.festool.co.uk](http://www.festool.co.uk)

**FESTOOL**

Tools for the toughest demands

[www.festool.co.uk](http://www.festool.co.uk)



# Wood pallet ukulele

**Chris Gleason** makes a bona fide humdinger of a uke using reclaimed pallet wood



This extract comes from Chris Gleason's fantastic new book, which outlines 12 different projects with one thing in common – they're all made from pallets! For our full review of this book and others, see page 24.

**Wood Pallet Projects** by Chris Gleason  
**ISBN:** 978-1-56523-544-1  
**Price:** £12.99 (plus P&P)  
**From:** [www.thegmcgroup.com](http://www.thegmcgroup.com)

## Cutting list

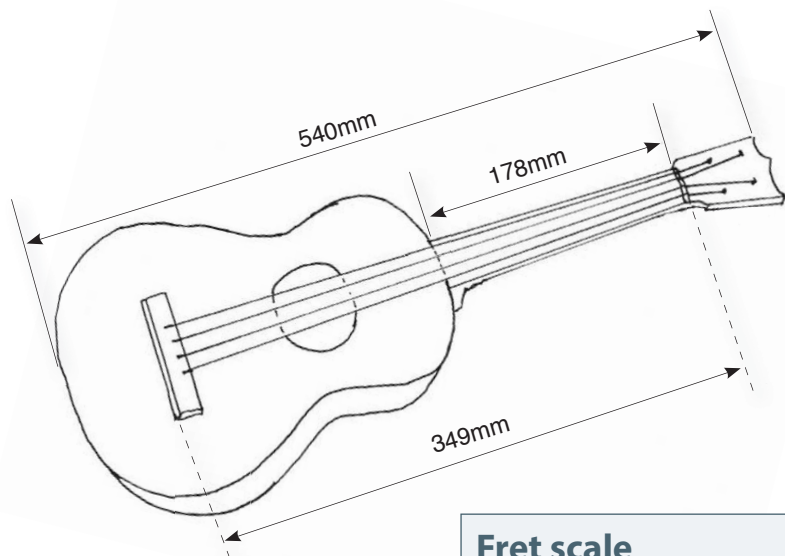
Neck blank	1 @ 57 x 330 x 44mm
Top and back	2 @ 178 x 254 x 3mm
Side strip*	1 @ 57 x 763 x 3mm
Bridge blank	1 @ 8 x 64 x 8mm
Fingerboard blank	1 @ 51 x 178 x 6mm

Overall project dimensions are approximate

\*Cut a few extra side strip pieces just in case

**T**his cute little instrument has had a couple of moments in the limelight in pop culture, and it is enjoying another one right now. As an acoustic music lover, and a fan of living room and front porch music, I'm all for it. If I were a reader, for me, the icing on the cake of a book about making a ukulele would be a chapter detailing how to build a ukulele using free pallet wood, so that's why I'm going for it here. I hope to show how a solid wood, fully playable instrument can be made using only pallet wood. This project is also a tip of my cap to Taylor Guitars' 25 limited edition pallet guitars. Not just a novelty, the ukulele I made is definitely of nice quality. In fact, I sold the ukulele I had owned previously after I made this one, which cost me less than \$20 for strings and tuners. It isn't the easiest project in this book, but it isn't rocket science, either, so if you're inclined, just take your time and you can probably make it work.





**1** Cut the top and back pieces to size. It would have been nice if I had had a wide enough board on hand to make the front and back pieces of the ukulele. Because I didn't, I glued together a pair of boards to produce a wide enough blank for the front, and then I did another one for the back. If you have boards that are wide enough, simply cut them to size.

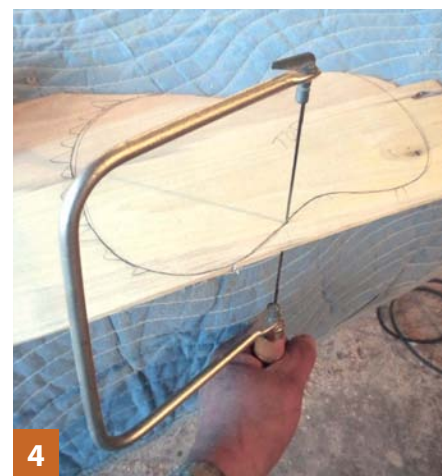
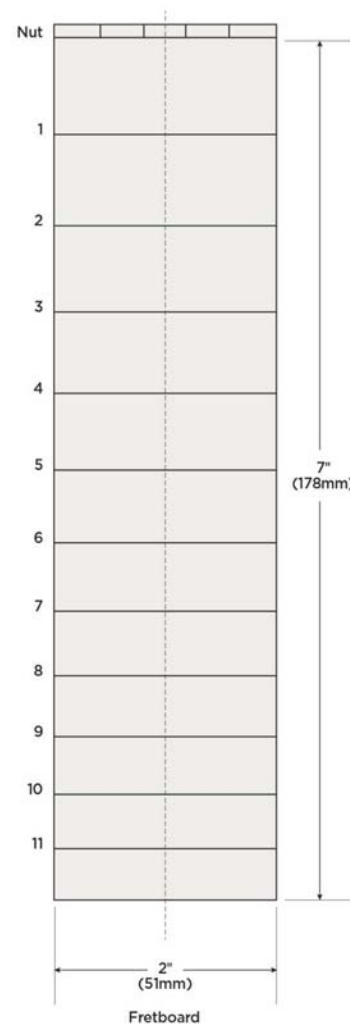
**2** Check the wood for problem areas. Makers of fine stringed instruments usually line up any seams in the wood with the centre of the instrument, but I wasn't too worried about this. I was, however, careful to avoid any flaws in the surface of the wood blanks for the front and back.

**3** Plane the front and back pieces. Once the joint had had enough time to dry, I ran the front and back blanks through my planer. The easiest way to do this was to place the blanks on a 19mm-thick riser that I fed through the machine. I planed the blanks to about 2.5mm thick.

**4** Draw and cut out the front and back pieces. Because I had a ukulele on hand, I used it as a pattern, and then cut the front and back pieces out of the delicate blanks with a coping saw, as they were a bit too fragile to cut using a jigsaw or bandsaw. Cutting them by hand wasn't a problem in terms of time, either – it only took a few minutes to cut out each piece. If you don't have a ukulele on hand, you can find measurements online to use to size your ukulele. You can make your ukulele a variety of sizes depending on your preference for tone and sound.

### Fret scale

Fret number	Distance from nut	Distance between frets
1	19mm	Nut-Fret: 19mm
2	38mm	1-2: 19mm
3	56mm	2-3: 16mm
4	71mm	3-4: 16mm
5	87mm	4-5: 16mm
6	102mm	5-6: 14mm
7	116mm	6-7: 14mm
8	129mm	7-8: 13mm
9	140mm	8-9: 11mm
10	152mm	9-10: 13mm
11	164mm	10-11: 11mm





**5** Label the front and back pieces. Because I had a preference as to which side of the front and back pieces I wanted to show off on the finished instrument, I made sure to label them.

**6** Measure and mark the centre of the sound hole. The front of the ukulele needed a sound hole. I used a regular drill bit to mark the centre of the hole. Use a ukulele that you have on hand or check online to determine the size and placement of the sound hole on your pallet ukulele.

**7** Cut out the sound hole. I drilled the sound hole in the front piece with a 44mm hole saw. A Forstner bit would also work for this step.

### The neck

**8** The next logical step was to think about the neck. I drew a rough outline for the side profile of the neck onto the side of the neck blank. Getting it exact isn't critical at this stage, so just try and be as close as you can. Remember: if you don't have a ukulele of your own that you can use to develop the patterns for this project, check online to find sample patterns and measurements you can use to create your pallet ukulele.

**9** Draw the design for the top of the neck on the blank. By measuring a few key points on my ukulele's neck, I was able to create a drawing on the top side of the neck blank. Especially important are the width of the neck at the nut and bottom of the neck, and also the location of the tuning pegs. Check online for these measurements if necessary.

**10** Cut out the neck. I used my bandsaw to cut away the waste on the neck blank.

**11** Sand the neck. The bandsaw will allow you to cut quite closely to the lines drawn on the neck blank, but the neck will still need to be cleaned up afterwards. A stationary belt sander is a good tool for this.

**12** Refine the neck details. Refine any irregularities on the curved portions of the neck using sanding drums in a pillar drill.





## The front and back

**13** Round the back of the neck. To round over the back of the neck, I used a Surform plane and sandpaper.

**14** Drill holes for the tuners. Drill four holes, perpendicular to the face of the headstock in the top of the neck for the tuners.

**15** Glue on additional stock to the neck as needed. Partway through the project, I realised that my neck wasn't quite thick enough at the heel. To remedy this, I just glued on a block of wood at the base of the neck.

**16** Cut the wood added to the neck to shape. Once I had cut away the excess and sanded it smooth, the addition of the heel block was barely noticeable. This is not an unusual technique for situations like the one I encountered here.

## The sides

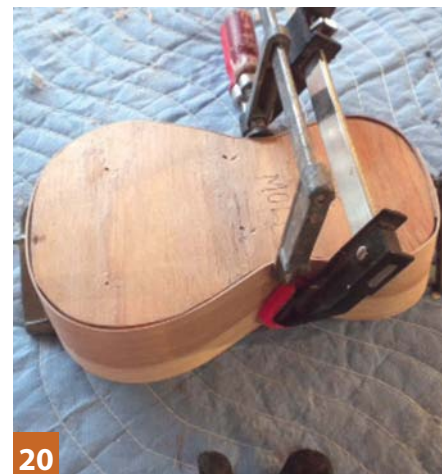
**17** Trace a mould to shape the sides. To build the body of the ukulele, I bent the sides from a single strip of wood, using steam. This required a mould around which to clamp the side piece. Making the mould was easy – I just traced the back piece for the ukulele onto some 19mm-thick plywood to get started.

**18** Trace the mould outline. Once I had an outline traced onto the plywood, I used a compass set to 3mm to trace a second outline just inside the first.

**19** Cut and attach the layers for the mould. I cut out the plywood on the inner line, giving myself an appropriately sized piece of plywood for the mould. I traced the cutout to make two more plywood pieces of the same size, and then glued and nailed them all together to make a mould that was 57mm high.

## Steam

**20** Steam the side strip and secure it to the mould. After steaming the strip of wood for the sides, I bent it around the mould and clamped it into place. You can see that I overlapped the ends of the side strip at the top of the ukulele; I trimmed them to size later.





## BENDING WOOD WITH STEAM



1

Cut the side strip to size and make some extras. Steam bending is easy once you know how. You'll want to start by cutting some strips that are suited to the size of your project. In my case, I needed strips that were 3mm thick and 57mm high. I made several so I would have some extras just in case of breakage.



2

You'll need to construct a steam chamber of some kind – I just used scrap plywood because it was quick, easy and free. The chamber should have a hole in each end so steam can come in one side and exit out the other while your workpieces, placed in the centre of the chamber, get nice and bendy.



3

Create a removable end. One end of your steam chamber will need to be removable so you can open it easily. It should also have an access hole for your source of steam.



4

Put a small hole in the opposite end of the chamber. A 6mm diameter hole is all you need for the steam to escape.



5

Select a steam source and modify it as needed. The heart of my steam bender is a wallpaper steamer I bought in town. My first move was to cut off the fitting on the end and insert a hose into the end cap.



6

Put your steamer to use. Use your steamer by inserting your work piece into it and turning on the steam source. When your workpiece is flexible, bend it into shape around your mould and wait for it to set. In addition to making ukuleles, I also use my steam bender for banjo pots, although that's another story altogether.

**21** After letting the clamped side piece sit for a day, there was little danger of it bending out of shape, so I removed the clamps and trimmed the ends with a hand saw. I also used the same hand saw to cut small notches into the base of the neck to receive the ends of the side piece. Finally, I prepped the back of the ukulele for assembly by running a bead of glue along its edge.



21

**22** Glue and clamp the back, sides and neck together. Gluing the back to the side piece and neck looks a little chaotic, but it isn't hard. Just make sure to keep the glue from the back from getting onto the mould for the sides so the mould doesn't get stuck in place!



22

**23** After a few hours, I removed the clamps and the mould to check the progress.



23

**24** Glue the top piece in place. Gluing the top on is pretty straightforward by comparison. Just add glue and clamp it in place.



24



**25** Once the ukulele was assembled, I turned my attention to making the fingerboard. Start by holding a 6mm-thick blank to the front side of the neck, and then, holding the assembly upside down, mark the waste sections on the back of the blank with a pencil. You can cut away the waste on the bandsaw later.



25

**26** In order for your ukulele to play properly, the fingerboard must be laid out correctly. To establish the correct spacing for the fret slots, I marked the locations of the frets from a ukulele I already had onto a thin piece of scrap wood to make a story stick. If you're building your ukulele to the specifications on the materials list, you can use the fret measurements from the illustration for your ukulele. If not, you need to calculate the position of your frets based on the length of your ukulele's neck. There are online fret calculators that can help you with this, such as [www.stewmac.com/FretCalculator](http://www.stewmac.com/FretCalculator).



26

**27** I used the story stick to mark the fret locations on the blank.



27

**28** Extend marks using a square.



28

**29** After cutting the fret slots with a hand saw and mitre box, I trimmed the edges of the fingerboard down to size and glued it to the neck.



29

**30** Fretwire is usually sold by the metre or yard. I used wire clippers to snip it into 51-76mm pieces that I then seated in the fret slots using a hammer. This may sound like a production, but isn't too tough.



30

**31** Measure the placement of the nut and bridge, and glue the nut in place. To ensure the ukulele plays in tune, the final crucial measurement is the distance between the bone nut and the top of the bridge where the strings terminate. I measured this distance off my store-bought ukulele, but, again, you can use online resources for yours.



31

**32** I didn't have an extra piece of bone for the bridge, so I made a quick and dirty bridge from – you guessed it – pallet wood! I don't regret the choice; my ukulele has plenty of volume and clarity! ■



32



## TREND COURSES & ROUTING DEMONSTRATIONS

**ROUTING COURSES**  
For details of our one or two day sponsored routing courses with full instruction on a wide range of routing applications visit...  
[www.trend-uk.com/courses](http://www.trend-uk.com/courses)

**ROUTING DEMONSTRATIONS**  
For details of our routing demonstrations around the UK visit...  
[www.trend-uk.com/shows](http://www.trend-uk.com/shows)

**trend**  
routing technology

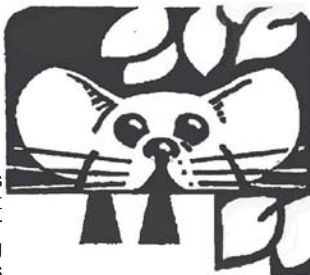
or call: **01923 249911**  
email: [enquiry@trendm.co.uk](mailto:enquiry@trendm.co.uk)  
AD/12/03

## WoodRatology Intensive, Hands-on One Day Courses led by Martin Godfrey

For Beginners and Improvers  
Covering the Basics of the 'Rat'  
Working down the grain for router table work, cross-cutting for housings, then finger joints and tenoning single and twin tenons, and then mortising and after lunch, a well fitting round of beautiful dovetails

Usually held on the last Thursday of each month. For 3-4 people. Start at 9am and finish about 4.30 pm. Informal and friendly. Includes a tasty light lunch plus a **10% discount** for goods bought on the day. Good local B&B's accommodation

**Ring 01458 832744 or go to [www.woodrat.com](http://www.woodrat.com)**



## The Wood Workshop

**Woodwork Course 1 (Tools and things)**  
A self interest woodwork course where the aim is to give you the confidence and the knowledge to use basic hand tools and some of the more common power tools.

**Woodwork Course 2 (Wood and things)**  
A continuation of course 1 with the emphases on timber.

**Woodwork Course 3 (things)**  
An advanced course rather different from the previous two.

**WoodRat Courses**  
This course will teach you all the principles you need to know.

Visit our website for updates on  
2013/2014 course information

**[www.woodworkshop.co.uk](http://www.woodworkshop.co.uk)**

Email: [enquiries@woodworkshop.co.uk](mailto:enquiries@woodworkshop.co.uk)

Tel: 01768 899895

## The Wood Workshop

7-8 Redhills Business Park, Penrith, Cumbria CA11 0DT

## S. L. Hardwoods Ltd Quality Timber Stockists

AT S. L. HARDWOODS WE SUPPLY...

Available in Oak and Walnut

2mm thick **real wood** Edging.  
Supplied unglued, ready to apply with PVA or Contact Adhesive.

**MDF cut 2 size + Edged**

Quality Sawn board and Planed All Round board **in stock!**  
Beech • American Cherry • Oak • Iroko • Maple • Sapele • Wenge... and many more!

An exciting new product range of decorative veneers on **Moisture Resistant MDF** for use in bathrooms.  
prices based on minimum 6 sheets

				
Zebrano £91.87	BE Maple £128.86	Teak £102.49	Rosewood £108.88	Wenge £94.00

**Full Range Online**

**Double sided, 19mm Veneered MDF**  
White Oak Crown Cut from **£29.99 + vat** minimum 25 sheets  
American Black Walnut from **£42.00 + vat** minimum 25 sheets

**Cabinet Making**  
Quality Sheet Material  
Cutting & Edging Service on Site  
Call for quote



**FREEPHONE • 0800 731 6345**

OUR SHOWROOM • 1 Tait Road, Croydon. CR0 2DP  
[www.slhardwoods.co.uk](http://www.slhardwoods.co.uk) • [info@slhardwoods.co.uk](mailto:info@slhardwoods.co.uk)

Prices do NOT include vat • Price correct at time of submission to press

## DIY Plans Electric Drive. Parts & Kits



**[www.toylander.com](http://www.toylander.com)**  
01767 319080

**The Modelmaker's Yearbook**  
**HOBBY'S**  
Annual 2013 • No.43 • Now 316 Pages **£3.20 FREE P&P**

- REMOTE CONTROL HELICOPTERS
- NEW WOODEN CONSTRUCTION KITS FROM MATADOR
- CREATIVE SPINNING WHEEL ARTICLE AND BOOK REVIEWS
- NEW MOULDING PRODUCTS
- EXTENDED RANGE OF TOOLS

**FREE PLAN 12" SCALE PRAM**

Visit our website at **[www.hobby.uk.com](http://www.hobby.uk.com)**  
Hobby's (Dept WPP), Knight's Hill Square, London SE27 0HH  
020 8761 4244 • [mail@hobby.uk.com](mailto:mail@hobby.uk.com) • [www.hobby.uk.com](http://www.hobby.uk.com)  
Available from WH Smith & leading newsagents or direct

## ALL OLD WOODTURNING TOOLS WANTED

**Also wanted - all woodworking hand tools and anvils.**

*Very best prices paid for Norris planes.*

Please contact Tony Murland

Telephone: **01394 421323**

Email: **[tony@antiquetools.co.uk](mailto:tony@antiquetools.co.uk)**



## opusmagnum

SENIOR FURNITURE MAKERS required.

Opus Magnum are a high quality bespoke design, development and furniture manufacturing company based in SW18. We are looking for employees who share the same passion, drive and commitment to furniture making as we do. If you strive for an interesting, varied and challenging role using a variety of different materials in world-class facilities with excellent career development potential then apply now.

The key attributes are:

- Minimum 4 years provable experience
- Must be able to read and understand technical drawings
- Demonstrate a good level of machining, veneering and assembly
- Well organized and work as part of a team
- Show excellent communication skills and professionalism
- Health & Safety conscious
- Good understanding of written, oral and spoken English

In return we offer an excellently equipped workshop, good working conditions and a great team to work with. These are permanent full time PAYE positions that come with a good remuneration package including paid annual leave.

Email cv and references to [matt@opusmagnum.co.uk](mailto:matt@opusmagnum.co.uk)



## ADD A NEW DIMENSION TO YOUR WORK WITH

Visit our  
Online Store  
Today!

(web address at bottom  
of this advert)

### metalcraft

Easy to use tools that do  
not require heat or power



Ideal wherever wood and steel can combine to make stylish...

- Furniture
- Clocks
- Signs
- Frames & Decorative Panels
- and so much more

Call today for our free Catalogue and if you quote the promo code "MWPP13" we will send you our new demo DVD free of charge

J & CR Wood, Dept MWPP13, FREEPOST NEA15848, Hull HU5 1BR  
01482 345067 | [info@janderwood.co.uk](mailto:info@janderwood.co.uk)

**www.metal-craft.co.uk**

To advertise here, call Karolina on 01273 402828

[karolina.walega@thegmcgroup.com](mailto:karolina.walega@thegmcgroup.com)

## Machine Mart

**NOW 61 SUPERSTORES NATIONWIDE**

**Clarke 4" BELT/ 6" DISC SANDER**

CS4-6D  
£84.99 EX VAT  
£101.99 INC VAT

- Dust extraction facility • 4" x 36" belt tilts & locks 0-90°
- 225mm x 160mm table, tilts 0-90°
- 370w, 230v motor

**Clarke 6" BELT/ 9" DISC SANDER**

CS6-9C  
£219.00 EX VAT  
£262.80 INC VAT

- Includes stand
- 1 Hp/ 230v/ 1ph motor

**Clarke TABLE SAWS**

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

**CTS10D**

\*Moulded base

INCLUDES LEFT & RIGHT TABLE EXTENSION

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

### Clarke PLANERS & THICKNESSERS

**CPT600**

- Ideal for DIY & Hobby use
- Dual purpose, for both finishing & sizing of timber

\*Max planing width 152mm

FROM ONLY  
£129.98 EX VAT  
£155.98 INC VAT

MODEL	MOTOR	MAX THICK CAPACITY	EX VAT	INC VAT
CP-6	1100w		£129.98	£155.98
CPT600	1250w	120mm	£179.98	£215.98
CPT800	1250w	120mm	£199.98	£239.98

**3 EASY WAYS TO BUY...**

**IN-STORE 61 SUPERSTORES**

**ONLINE**  
[www.machinemart.co.uk](http://www.machinemart.co.uk)

**MAIL ORDER**  
0115 956 5555



## RETAILERS

### IRELAND

#### Ken's Hardware

Sensational Hardware Store for You...

#### Are you looking for a quality hardware store in Lisburn?

We are a well established and highly efficient store, offering an extensive range of products and a service which is tailored around the client's own personal set of requirements.

#### DIY PRODUCTS, EQUIPMENT & POWER TOOLS

15 Graham Gardens,  
Lisburn BT28 1XE  
Tel: 028 9266 4169

www.kenshardwarelisburn.co.uk



Jet woodturning lathes,  
Henry Taylor chisels  
Full range of native  
and exotic blanks  
Flexcut handcarving tools  
and Tormek sharpening  
Excellent adhesives,  
abrasives and finishes

Find out more about our store:

www.thecarpentrystore.com  
sales@thecarpentrystore.com  
Unit D4, M7 Business park, Naas, Co. Kildare  
+353 (45) 883088

### LINCOLNSHIRE

#### CLOCK BUILDING SUPPLIES

MECHANICAL CLOCK MOVEMENTS  
by Hermle and Kieninger

CASE PARTS  
Dials, Brassware etc

QUARTZ MOVEMENTS

CATALOGUE WITH PHOTOS

SHOWROOM OPEN  
Mon - Fri 10am - 5pm Sat 10am - 4pm  
Tel: 01469 540901

www.martinhdunn.co.uk  
Martin H. Dunn Ltd, The Clock Gallery,  
Clarks Road, North Killingholme,  
North Lincolnshire DN40 3JQ

#### The Old Tool Store

Suppliers of fine, old woodworking tools.

We now stock new tools by selected  
quality manufacturers including  
Ray Iles, Ashley Iles, Kunz,  
Clifton and Gransfors Bruks.

Please contact us for details of:  
• Ray Iles range of D2 thicker irons for  
Bailey pattern planes  
• Standard replacement irons for most  
obsolete planes  
• Reground planes by Record and Stanley  
• Plane sole regrounding service.

We also buy quality old woodworking tools, from single  
items to complete collections. Good prices paid.

Whitehaven Farm, Boston Road,  
Horncastle, Lincolnshire, LN9 6HU.  
Tel: 01507 525697 Fax: 01507 523814  
E-mail: ray@oldtools.idps.co.uk

## LOCAL DIRECTORY

### CORNWALL

#### SW Woodworking Machinery

New & used Woodworking Machinery Service & Spares

Charnwood & Jet products

www.swwwm.com

Tel: 01726 844100

Mob: 07760748882

email sales@swwwm.com

### SURREY

#### Treespanner Timber

Timber Merchants in Surrey

East Cottage, Dry Hill Farm, Moon Lane, Dormansland Surrey RH7 6PD

Tel: 01342 871529 Email: treespanner@tiscali.co.uk

### IRELAND

Large Supplier of Woodturning Tools and  
Woodwork Machinery All On Display

W.H. Raitt & Son Ltd

Main Street, Stranorlar Co. Donegal, Ireland  
(00353 749131028)

whrait@eircom.net



### WEST YORKSHIRE

#### D B KEIGHLEY MACHINERY LTD

New/Secondhand Woodworking Machinery Service & Spares

Vickers Place, Stanningley Pudsey, Leeds, West Yorkshire LS28 6LZ

Tel: 01132 574736 Fax: 01132 574293

www.dbkeighley.co.uk



## WEB DIRECTORY



makitauk.com

Satisfying the  
professionals  
needs.



STANLEY BOSTITCH

Europa View, Sheffield Business Industrial Estate,  
Sheffield S9 1XH Tel: 0114 244 8883

www.stanleyworks.co.uk



www.evolutionpowertools.com





In the autumn issue of

# WOODWORKING Plans & Projects

ON  
SALE  
5 Sept

## PROJECTS

### Fumed oak tray stand

Small round table

Hat & umbrella stand

Scrollsaw crab

## Techniques

Guide to shed &  
summerhouse building

Finishing – surface preparation



PHOTOGRAPH BY KEVIN LEY



PHOTOGRAPH BY GMC/ANTHONY BAILEY

## Features

Triple Grove Furniture

Tools of Yesteryear

## Kit & Tools

Abranet Ace mesh

Logosol M5 portable sawmill

Five of the best – adhesives



# Tools of Yesteryear

## Firmer chisels

**The Editor** looks at a type of chisel that has somewhat fallen by the wayside over the years

**T**his is yet another of my quirky choices, picking on a tool which you can, in theory, still buy... or can you? In the olden days when dragons ruled the earth 'and I were a lad' it was natural to own a set of firmer chisels, as well as the bevel edge variety. Of course, there are plenty of chisel types still available such as paring, registered mortise, sash mortise, corner, skew and framing. Unfortunately, the older type of firmer, with its lighter build and straight sides, has fallen prey to the more appreciated and versatile bevel-edge chisel. You can still buy some firmer chisels but the build is more substantial than the older ones I have chosen, so the definition of firmer seems to have moved with the times.

What is so special about a vintage firmer chisel? It feels good working with finer-quality tools and being able to grasp the flat shank between finger and thumb – no plastic handles in sight. The square sides act as a guide when creating a mortise as they tend to stay square in the hole or when cleaning out housings, and the steel, being 'older quality', will keep a good edge.

## Choosing your chisels

Go to virtually any DIY or tool shop and you will be confronted with sets of the bevel edge variety, some very cheap and cheerful from the Far East and other quite expensive ones from western sources. But if you visit my favourite 'online marketplace' or your local flea market, chances are you will find old box- or ash-handled firmers on sale quite cheap. So why does this pattern of edge tool

matter? Maybe it doesn't in the modern world, but they are likely to be made from good-quality steel and have nice handles to boot. I think readers must know by now that I like collecting and restoring old hand tools, so, for me, acquiring well-used quality chisels is quite natural. If you go this route, make sure that they have not been 'restored'; this often means the blade has been 'finished' with a wirewheel or emery paper, which will round off the original square profile so the surfaces won't be entirely flat any more. The handles tend not to get repaired, but will frequently have pieces missing from mallet blows which they weren't intended to take, whereas hooped chisels are. Old chisels are imperial sizes of course; build up a set that suits your work, maybe no more than four or five. Allied to a set of more chunky modern bevel-edge chisels, you will be equipped for any task. ■

Most, but not all, firmers have the tang inserted into the handle with a hoop around

Right: The punched 'brandings' are your assurance of quality

Below: A modern bevel – top – is noticeably thicker than the firmer chisel below



Top: The blade on the right has a slight relieving bevel  
Left: A nice 'harlequin' – unmatched – set of firmer chisels ready for work



A clean, sharp edge is easy to achieve. The blade patination is 'character'





## Triple Set: All good things come in three!



**Palm sander  
Delta sander  
Random-orbit sander**



**Ø 125 mm**

- Sanding speed to suit the material due to speed control
- Ergonomically designed, handy grip cover with soft grip insert ensures a secure grip and good guidance
- Small and particularly light one-handed unit with excellent ergonomics
- Low-vibration
- Integrated dust extraction
- Possible to connect external dust extraction
- Long service life backing plate made of special tough material
- Especially suitable for overhead work

**Standard equipment**  
**Triple set OSE+ODE+ORE:**  
3 velcro backing plates  
3 filter cassettes + 3 filter bags  
Sanding paper SELECTFLEX  
3 x 25 x P 80, 3 x 25 x P 120  
1 Carry case TK-L BoB-2  
1 Case insert

**Order no. 398.373**



## The new plunge saw CSE 55 T for dry construction and wood cutting.



**High quality  
Saw blade DIA Z4-S**

**Guide rail GRS 160**

- No load speed 1700-3400 rpm
- Power input 1350 watt
- Blade Ø 160 mm
- Stepless speed selection, tachogenerator-controlled constant speed, overload protection, re-start inhibit and temperature monitoring.
- Dual clamped swivel element
- Swivel range from -1° to 48°
- Flip wedge for tear-free saw and plunge cuts without time-consuming removal of the riving knife
- Precise cutting depth adjustment by simply pressing on the cutting depth stop
- Dual clamped parallel stop prevents the saw from wandering
- Spindle lock: for quick replacement of blades
- Possible to connect external dust extraction



**Standard equipment**  
**CSE 55 T/DIA Z4+GRS160 Kit**  
1 Vacuum adapter  
1 Saw blade DIA Z4-S  
1 Systainer  
1 Guide rail GRS 160

**Order no. 388.300**

## VC 25 L MC. The „Small one“ has powerful suction.



**Wide-range accessories**



- Rated power P.max. 1400 watt
- Max. volume flow 3600 l/min
- Max. vacuum 19000 Pa
- Container volume 25 l
- Capacity liquid 15 l
- Power take off 100-1800 watt
- Handy and compact vacuum cleaner
- With a high-performance turbine
- Manual filter cleaning
- Level monitor
- With appliance socket and electronic automatic switch on/off
- With accessories magazine
- Equipped with large wheels and two swivel guide rollers
- Features a filter bag made of highly tear-proof fleece for optimum filling

**Standard equipment**  
Suction hose 32 mm Ø x 3.5 m with elbow  
1 adapter Ø 27-32 mm  
1 filter element class L/M  
1 fleece filter bag class L  
1 PP waste disposal bag  
2x 0.5 m aluminium suction tube  
1 crevice nozzle  
1 combination floor nozzle, switchable  
1 upholstery nozzle  
1 round brush  
1 suction pipe holder  
1 accessories holder  
1 cable/hose holder

**Order no. 385.468**

### You need good tools to do good work

For FLEX it's the craftsman who sets the standard. That is why we visit those sites where tools are used when we develop new machines. On construction sites, in the shops and factories. And that's precisely where we determine the specifications that every FLEX must fulfil. Foremost this includes the proverbial longevity of our machines. Then their power and functionality. Also the design, the ergonomics, and the safety of a FLEX. And of course its advanced technology that always provides new solutions to problems, revolutionising the work procedures of entire industries. We are proven right by each of the millions of craftsmen who perform outstanding work using their FLEX every day. [www.flex-tools.com](http://www.flex-tools.com)

**FLEX**  
Das Original





# THE ONLY JACK OF ALL TRADES



## PICK UP A SPECIAL JACK® 880 HANDSAW FOR A GUARANTEED INSTANT WIN!

To celebrate the 80th anniversary of the Jack® handsaw, IRWIN® is giving away 8 x £80 tool kits every day throughout September & October! PLUS, every entry is guaranteed to win an IRWIN® beanie hat! But that's not all – there are also 5 pairs of tickets for a weekend break in Copenhagen – the home of the Jack® Saw! To find out more, pick up a special Jack® 880 from your local tool retailer today! \*Terms & conditions apply. Go to [www.jack880.co.uk](http://www.jack880.co.uk) for more information.

**Get your hands on one.**

[www.irwin.co.uk](http://www.irwin.co.uk)

