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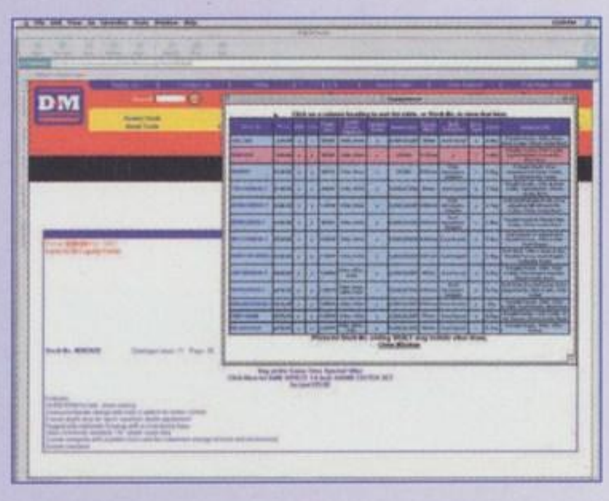

compare all of the items we have in stock by the variables you choose - IE if you chose a power drill you could compare it to all of the others we have in stock by weight, speeds, chuck, etc, to make sure you've chosen exactly the right item from our massive stock.

Our specialist website offers over 6,000 tools accessories and more

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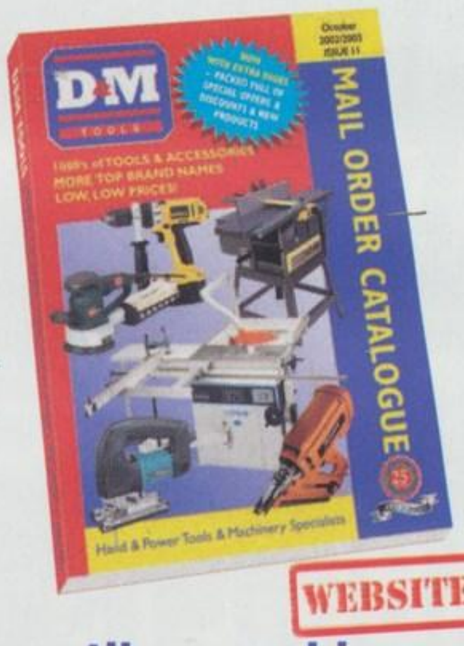

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The Woodworker

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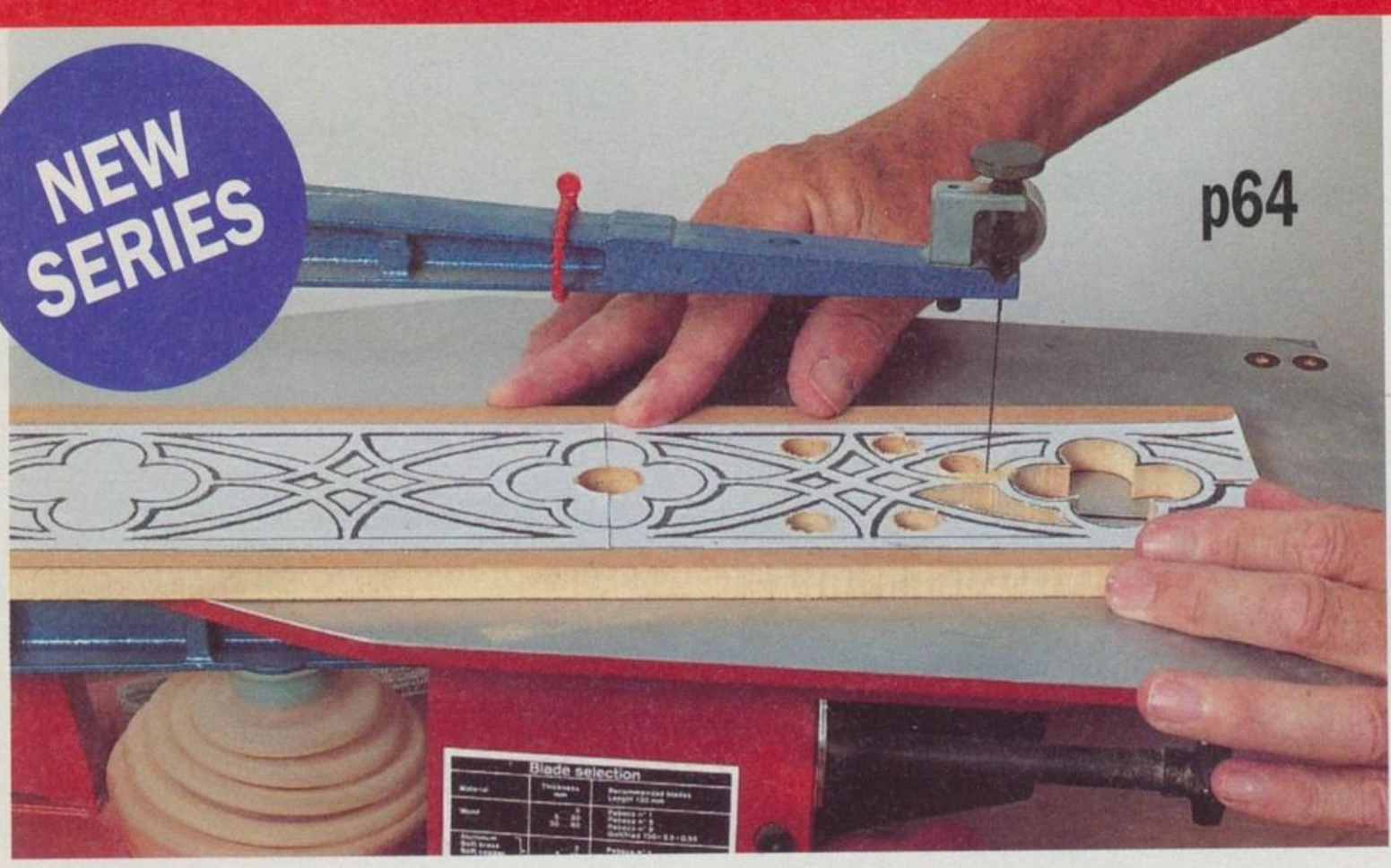

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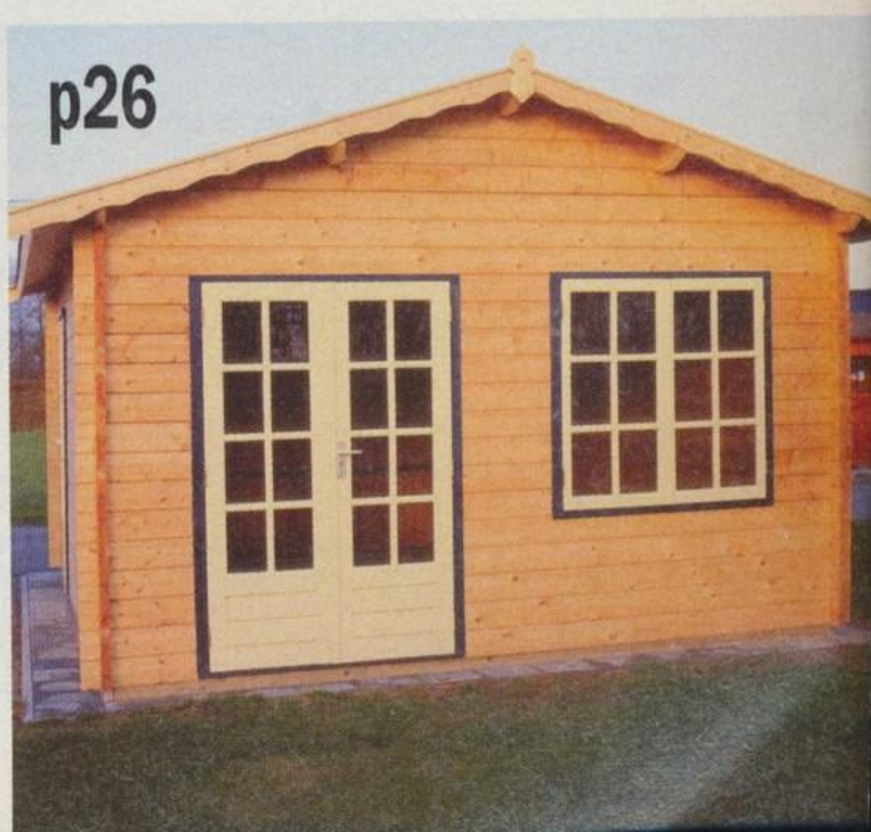

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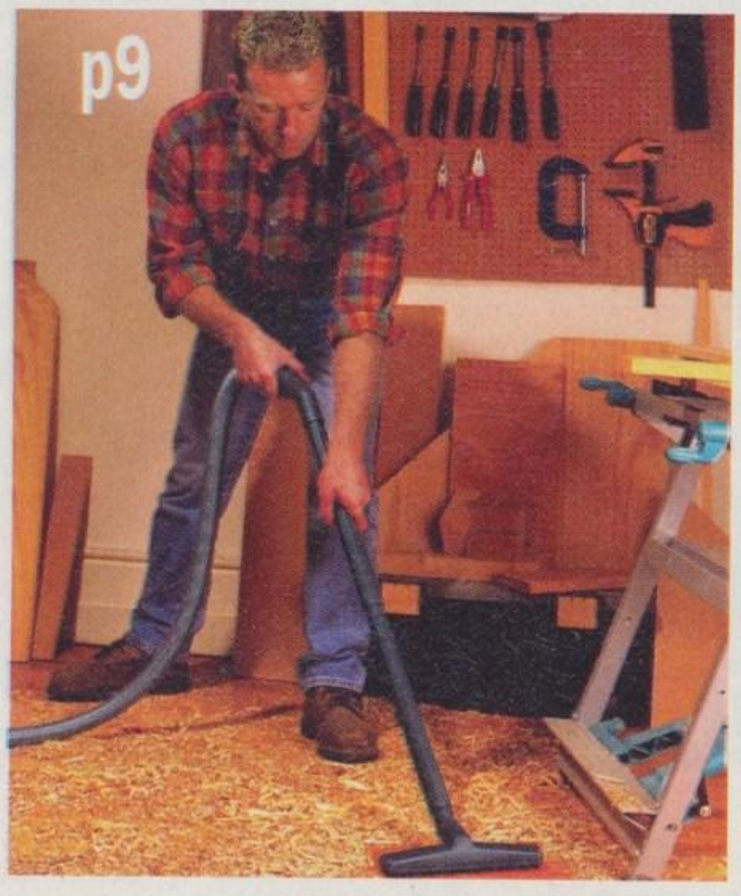

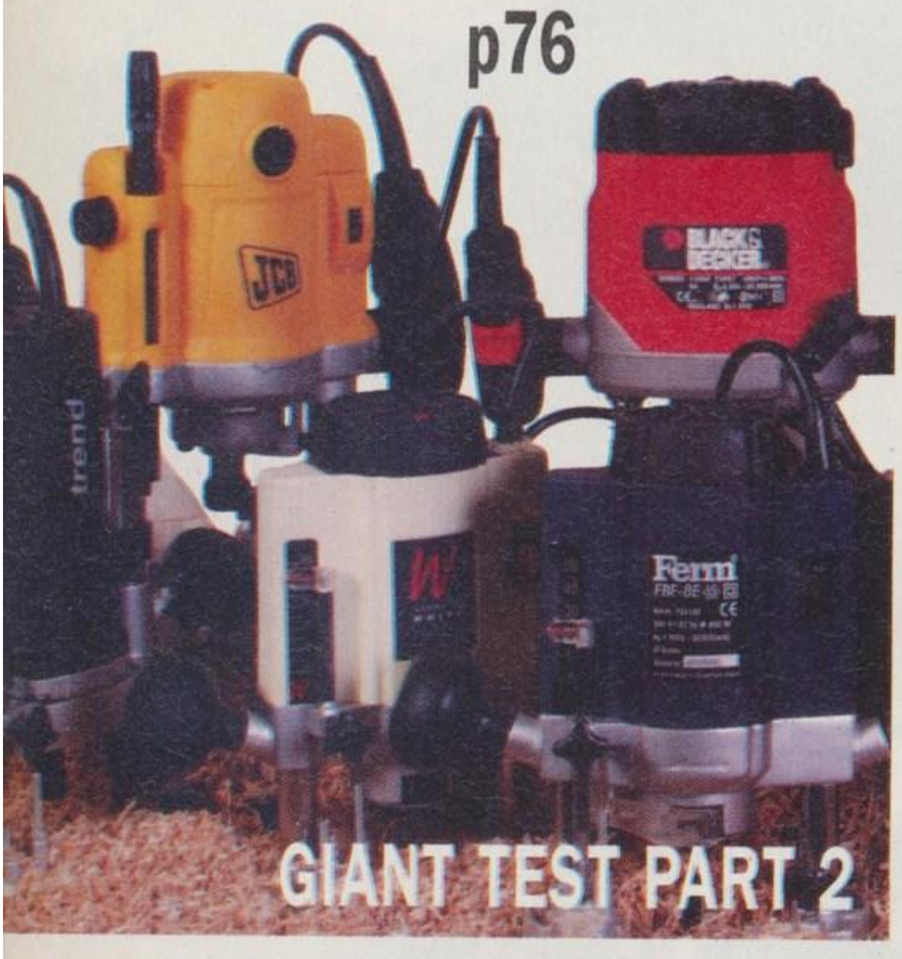

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CHIPPINGS

Why doesn't timber last longer outdoors? All this month I've been scampering between fitting our new kitchen and the site of the new workshop, to get things done while the weather is still reasonable. Our log cabin workshop is made from untreated softwood and the instructions recommend coating the timber within six weeks of opening the pack. I've bought UHT milk with a longer shelf life.

However, to avoid the dreaded rot, we're going to use a spray kit to apply the finish as soon as the building is up. You can see how to put down a base and level uneven ground in part two of our series (p26).

Congratulations to Mr Hatfield and William Gibson, respective winners of our Amateur and Professional Woodworker of the Year Competition. This was a tough contest to judge as there were more entries than ever before. Many of you are tackling furniture for the home but there were some inspiring toy and model entries as well. Thanks to all of you who took the time to enter, the skill level was very high indeed. Thanks must also go the 2003 sponsors of this competition.

The winner of the Amateur section will be able to choose £1,000 of tools from the Toolbank Big Blue Book and the Professional walks away with £1,000 of Delta Machinery.

Mark Ramuz

SAFETY FIRST

Woodworking can be dangerous. Always follow the manufacturers' instructions and safety advice when using hand and power tools. Never try the techniques shown in the magazine if you are unsure or the procedure doesn't feel safe. Always use all guarding and other safety equipment. All reasonable care is taken in the preparation of this magazine but the publishers cannot be held legally responsible for errors in the contents of this magazine or for any loss arising from such errors, including loss resulting from negligence of our staff.

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ABC

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nexus.subs@highbury-wyvern.co.uk

scheppach saws

ts4010

For more than 70 years Scheppach designers, technicians and engineers have combined their expertise and gained the reputation for being one of Europe's most innovative producers of woodworking machines.

Scheppach machines are noted for incorporating all those finer details which generally do not come in a standard specification and enable you to work efficiently with minimal set-up time. The range is extensive and well known for their excellent performance output. The larger practical dimensions have been incorporated with each machine. In addition, precision adjustments facilitate working to fine tolerances. Scheppach design features mean that no work piece appears too bulky and no task is too complicated.

Solo machines from Scheppach are the perfect partners for home and professional workshops. You can expect professional results every time whether the project is large or small. In addition, everything offered by Scheppach has a guaranteed seal of approval. They work to the strictest safety and environmental conditions stipulated by regulating authorities and covered by a two year manufacturer's warranty on all the machines demonstrates the confidence Scheppach have in the products they offer.

The Scheppach guarantee extends beyond the point of sale. Progress innovation and service have always been standard at Scheppach. Inspect their machines closely and you will immediately recognise Scheppach quality.

£2195.00 inc VAT

ts4010

The Scheppach ts4010 sawbench is the result of intensive development and sets new standards for precision and versatility.

The 107mm depth of cut makes the machine ideal for both a professional workshop and the dedicated amateur. The patented "Duplex" system provides accurate setting of both rise and fall angle positions. Constant power at 4000rpm achieved a near planed finish on solid timbers. Splinter free cuts on man made boards is achieved with or without pre-scoring.

Where the machine really scores is in its accuracy. Every part that needs to be adjusted (in order to achieve precision where cutting) is adjustable. In addition to complying with standard CE Norms, the machine also has been granted the "GS Holzstaubgepruft" for sawdust extraction efficiency. The end result is the flagship of Scheppach ts series sawbenches the ts4010.

TO BE PRECISE...

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Machine of the Year Award 98 1st place

Basato 5 £789.00 inc VAT

hms260 £1339.00 inc VAT

ha2600 £235.00 inc VAT

Basato 3 £379.00 inc VAT

What users think!

Having used many different woodworking machines for many years including Startrite, Wadkin etc. I have recently taken delivery of your Scheppach ts4010 and have found it to be the best purchase I have ever made in the form of woodworking machine.

R. Joinery - Tyne & Wear

I have just taken delivery of a ts4010 circular saw complete with sliding table and wheel base...This saw has been designed for the man who want precision cutting. Every piece that should be adjustable is just that...

To say that I am pleased with my saw is an understatement.

Mr PB. Co. - Fermanagh

Comprehensive NMA Catalogue e.mail: sales@nmauk.com or call to receive your FREE! copy now.

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NMA (Agencies) Ltd. Birds Royd Lane, Brighouse, West Yorkshire, HD6 1LQ.
Tel:01484 400488 - Fax:01484 711012. - E.Mail: sales@nmauk.com - Website: www.nmauk.com

POWER DELIVERY

Axminster Power Tool Centre has teamed up with Harley Waters Logistics to introduce a revolutionary next day, home delivery service. The new service is a first in the UK and marks a new era in the tool and machinery mail order market. It will further enhance Axminster's high standards of service by giving customers the opportunity to track their purchase in the Internet minute by minute via a Global Positioning System (GPS) fitted to each of the delivery vehicles. It even provides the customer with the opportunity to request a text message informing them when the delivery is 20 minutes away. The new 'Tools to your door' service delivers to homes across the UK from the Orkneys to the Channel Islands, it also provides extremely competitive rates to Eire.

The new 'Tools to your door' delivery service coincides with the launch of Axminster's 2004 catalogue, which will ensure the service is well and truly put through its paces from the start.

Axminster Power Tool Centre
☎ 0800 371822
www.axminster.co.uk

Capture the creative spirit

Egg crafting, classic embroidery, Chinese calligraphy, blackwork, doll painting, hardanger, quilling, glitter art, embossing, scratchart, write and rub foiling, and scrap booking are just a handful of the more unusual skills to inspire and entertain at the ICHF textile art, hobbycraft, needlecraft and Christmas craft shows for the 2003 Autumn season at Birmingham, Glasgow, Exeter and Cardiff.

For more information on show datesand venues ☎ 01425 272711 or log onto www.info@ichf.co.uk

TICKET GIVEAWAY!

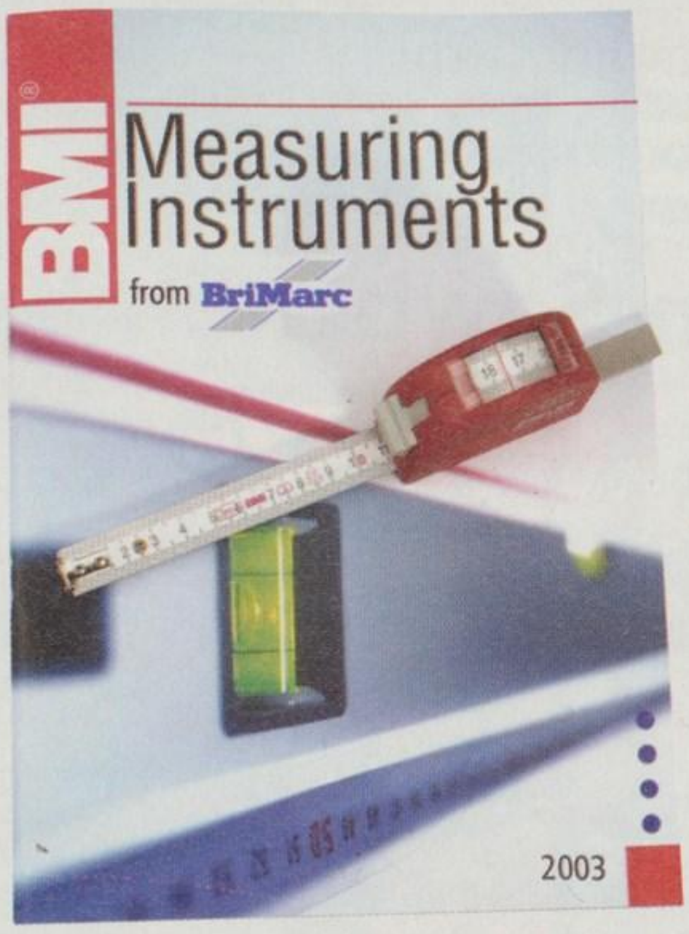
We've got 10 pairs of tickets to give away to lucky *Woodworker* readers. The tickets are valid for all ICHF shows so you can decide which one you would like to attend if you win. All you have to do to enter the prize draw is write your name and address on a postcard and send it to the following address: Woodworker/ICHF Show giveaway, Highbury Nexus Special Interests, Berwick House, 8-10 Knoll Rise, Orpington, Kent BR6 0EL.

Ventupress vacuums

Following our recent test of the latest Ventupress vacuum press and clamping system (Woodworker - September 2003), we have received quite a few phone calls from readers wishing to get in touch with the company. Full contact details are as follows:

Ventupress Vacuum Pressing and Clamping, 29 Glendine Drive, Sea Park, Dungarvan, Co. Waterford, Ireland. ☎ (+353) (0) 87 2254762 Email: martybates@cablesurf.com

On the level



Brimarc are now the exclusive UK agents for BMI tapes, measures and spirit levels. These extremely accurate measuring devices are all made in Germany to a very high quality standard observed from product development right through to manufacture. A brand new BriMarc catalogue is now available which features the entire BMI range along with many other top quality products from Leigh, Proxxon, Tormek and Veritas, to name just a few. For a copy of the catalogue and for details of your local Brimarc retailer contact Brimarc on the number below.

Brimarc
☎ 0845 330 9100
www.brimarc.com

Commission a Craftsman

A new, and rapidly growing agency and website, 'Commission a Craftsman' represents talented British craftsmen and highly accomplished designer makers, working in all styles and materials. www.commissionacraftsman.com provides a one-stop virtual tour through a range of disciplines from ceramics to timepieces. Using www.commissionacraftsman.com, and the agency, commissioners can make well-informed choices before committing to one particular craftsman, style or piece.

Commission a Craftsman is searching for talented makers in the following disciplines: automata and toy making, basket weaving, book binding, calligraphy, musical instruments, metalwork, ceramics, timepieces, furniture, woodwork and restoration.

www.commissionacraftsman.com or ☎ Greg on 0207 921 9704.

By Royal Appointment

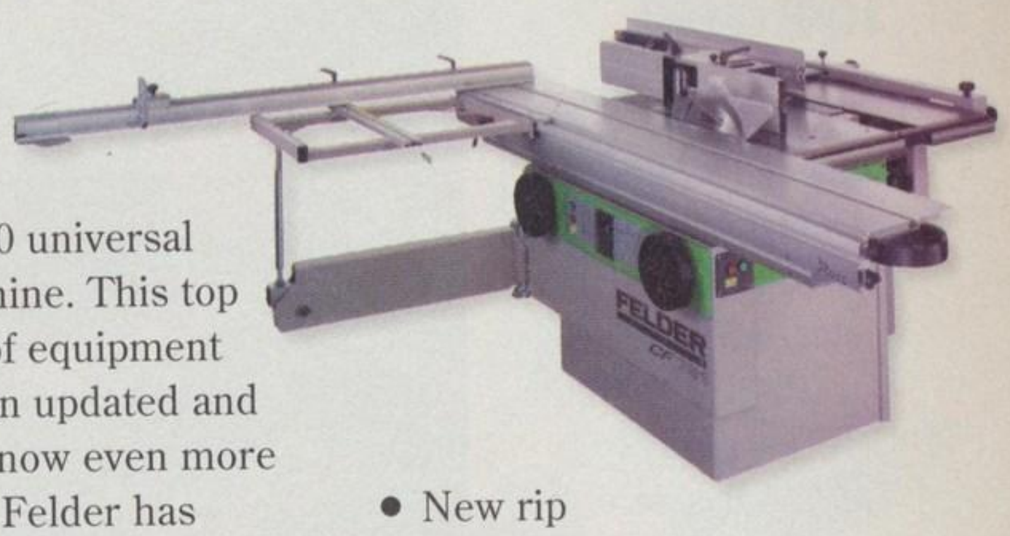
A woodcarving lecturer has become the first person to receive the President's Award from HRH The Duke of Edinburgh. Dick Onians was selected to receive the prestigious accolade, which is the first of its kind, for a lifelong dedication to teaching his craft. Mr Onians from Kings Langley received the award from HRH The Duke of Edinburgh at St James's Palace in July of this year.

The President's Award is the personal gift of City & Guilds' President, HRH The Duke of Edinburgh. One award will be presented each year to recognise the unsung heroes among lecturers and trainers and to acknowledge the incredible work done by teaching staff. It was introduced to celebrate the Duke having served over 50 years as President.

Dick Onians began teaching carving and sculpture 35 years ago to provide an income while he established himself as an artist. Formerly a lecturer of academic subjects, he switched to carving because he enjoyed it so much. He became so immersed in the subject that he designed a new City & Guilds woodcarving course and began teaching it at Missenden Abbey, Buckinghamshire, in 1992.

City & Guilds
☎ 020 7294 3168
www.city-and-guilds.co.uk
www.aredu.org.uk/missendenabbey

The best just gets better..



Great news just in for the winner of our £7,500 universal Felder machine. This top spec piece of equipment has just been updated and the prize is now even more impressive. Felder has updated the full range of 700 series machines which includes the CF-731 Professional. Improvements include

- Revolutionary X-Roll sliding table guiding system (6 year guarantee), providing an even smoother sliding action.
- Larger and stiffer sliding table with a larger supporting surface and a higher load capacity.
- New rip fence with fine adjustment, extra stability and adjustment for perfect parallel cuts.
- Larger outrigger table with adjustable 90° stops and printed scale for mitre cuts.
- Bigger cross-cut fence profile with bevelled scale and bigger flip over stops.

For information on the full Felder range,
☎ 01908 327800.

DIARY

October

14-26 Chelsea Crafts Fair
Chelsea Old Town hall, Kings Road
Tel: 020 7278 7700
www.craftscouncil.org.uk

17-19 International Woodworking & Turning Exhibition
Hall 2, Stoneleigh Park Exhibition Centre, Coventry
Tel: 01689 899207/899206
www.getwoodworking.com/iwte

18 Carving demos with Peter Berry
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

18 Turning demos with Tony Witham
Peter Child, Halstead, Essex
Tel: 01787 237291

25 Upholstery demos with Pamela Keenoy
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

25-26 Sorby demos
Elmers, Ipswich
Tel: 01473 623381

27 One-day routing course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

28 One-day machining course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

31-Nov 1 Sorby demos
CRM Saw, Waterlooville
Tel: 02392 255144

31-Nov 1 Kendal Tools Exhibition
Kendal Tools, Cumbria
Tel: 01539 733774
www.kendaltools.co.uk

November

1 Turning demos with Derek Phillips
Peter Child, Halstead, Essex
Tel: 01787 237291

1 Alltools open day & demos
Alltools, Staniforth Rd, Sheffield
Tel: 0114 224 3443
www.alltools.com

1 Turning with Andy Lodge
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

6-8 Sorby demos
Axminster Power Tools, Exeter
Tel: 01297 33656

8 Finishing demos with Stephen Hardcastle
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

10 One-day woodturning course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

The Country Living Christmas Fair takes place at the Business Design Centre, London between 12-16 November

11 One-day carving course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

12-16 Country Living Christmas Fair
Business Design Centre, London
Tel: 0870 739 9111

14-15 Sorby demos
Paskins, Kidderminster
Tel: 01562 829722

15 Turning with Simon Whitehead
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

15 Turning demos with Tony Witham
Peter Child, Halstead, Essex
Tel: 01787 237291

21-22 Record Power Day
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

21-22 Sorby demos
Tewkesbury Saw, Tewkesbury
Tel: 01684 293092

22 Carving demos with Bill Hodgson
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

21-23 The North of England Woodworking Show
The Gt Yorkshire Showground, Harrogate
Tel: 01934 420365
www.skpromotions.co.uk

24 One-day routing course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

25 One-day machining course
Isaac Lord, High Wycombe, Bucks
Tel: 01494 835200
www.isaaclord.com

25 Upholstery demos with Pauline Keenoy
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

28-29 Sorby demos
Fakenham Tool Hire, Fakenham
Tel: 01328 863737

29 Sorby demos
Toolmaster, Oxford
Tel: 01865 712152

29 Routing with Tony Wilson
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

December

5-6 Sorby demos
Jean Burhouse, Dunkeld
Tel: 01350 727723

6 Turning demos with Derek Phillips
Peter Child, Halstead, Essex
Tel: 01787 237291

6 Turning with Simon Whitehead
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

6 Alltools open day & demos
Alltools, Staniforth Rd, Sheffield
Tel: 0114 224 3443
www.alltools.com

13 Turning with Andy Lodge
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

20 Finishing with Jim Kitson
John Boddy's, Boroughbridge, North Yorks
Tel: 01423 322370

20 Turning with Tony Witham
Peter Child, Halstead, Essex
Tel: 01787 237291

Send diary entries to us at least five weeks prior to publication. As details can sometimes change, readers should always contact the venue concerned in advance. Please mention *The Woodworker* when calling.

Fully loaded

Bosch has just launched a pair of new belt sanders loaded with new features. The new duo, PBS 7A (single speed) and PBS 7AEK (variable speed), make light work of sanding large flat areas, shaping wood and removing stubborn materials. Both models feature powerful 600 watt motors and have restyled rounded front grips that are ergonomically designed for single of two-handed use. Both machines are supplied complete with the Bosch Micro Filter System, which reduces dust particles by 80%. They also feature an automatic belt-alignment function that keeps the sanding belt central during operation and makes changing the sanding belt quick and easy. The PBS 7A comes complete with sanding belt and the PBS 7AEK is available in kit form complete with sanding belt, parallel guide, clamping system and storage case. The sanders are priced £59.99 and £89.99 respectively, and are available from all good DIY stockists.

Bosch
☎ 01895 838743
www.bosch-powertools.co.uk

Back to the past

Restore the traditional look of your cast iron fireplace and wrought ironwork with easy to use Iron Paste exclusively from Liberon. Based on a modern safe formula, Liberon Iron Paste is today's alternative to traditional black lead. Iron Paste produces a silver black effect, which is reminiscent of original wrought iron. Because it is extremely resistant to heat it is ideal for restoring working cast iron fireplaces, chimney hoods, firebacks and grates, as well as fire irons and accessories. It can also be effectively used to colour and age newly installed fireplaces and to decorate metalwork.

Liberon
☎ 01797 367555

Hammer time

Ergonomic analysis by US striking tool manufacturer, Estwing, has resulted in the most radical design change in hammers in the past 50 years. The 'weight forward' design has a forged steel head with extended shank that is bonded and bolted to the cranked fibreglass handle, this Perma fastening system guaranteeing permanent head and handle connection. The 'weight forward' hammer is very comfortable to use and is designed to deliver more of the kinetic energy produced by the forearm muscles directly into the striking face of the hammer head. The new design, which incorporates a fibreglass handle and neoprene grip to absorb shock impact, is also intended to reduce fatigue during continuous use by tradesmen whilst delivering constant and maximum power throughout the day. Estwing products are exclusively available in the UK from the Rollins Group.

Rollins Group
☎ 01279 401570
wwwrollins.co.uk

Power and performance

Makita has once more raised the industry standards by improving both the battery power and therefore useable tool operating duration of its powerful 24V power tools. The 24V range includes the high torque Marathon combi drills, the SDS+ rotary hammer, the 200Nm-torque half-inch drive impact wrench and the versatile compound mitre saw.
Now the batteries of these powerful Makita tools have been upgraded from 3 amp/hour to 3.3 amp/hour. The 24V range is usually supplied with a 3.3Ah battery and a separate 2Ah battery (previously 1.7Ah) for maximum all-day working. This upgrade adds more than 12% usable working time to this popular tool range. The total capacity of these 24v tools is now 5.3Ah.

Makita (UK) Ltd
☎ 01908 211678

Heavyweight champion

Vacuuming outdoors or cleaning up after a big job can take its toll on the household vacuum cleaner. That's why the powerful new Goblin Boxer Wet and Dry Vacuum Cleaner is perfect for tradesmen, DIY enthusiasts or anyone with a big mess on their hands! The Boxer features a 1250w motor and a 20 litre tank, which is capable of picking up 16 litres of dry matter or 10 litres of liquid. The motor can be used either to suck or blow so it can deal with most situations, it can even be used in the garden for clearing leaves.

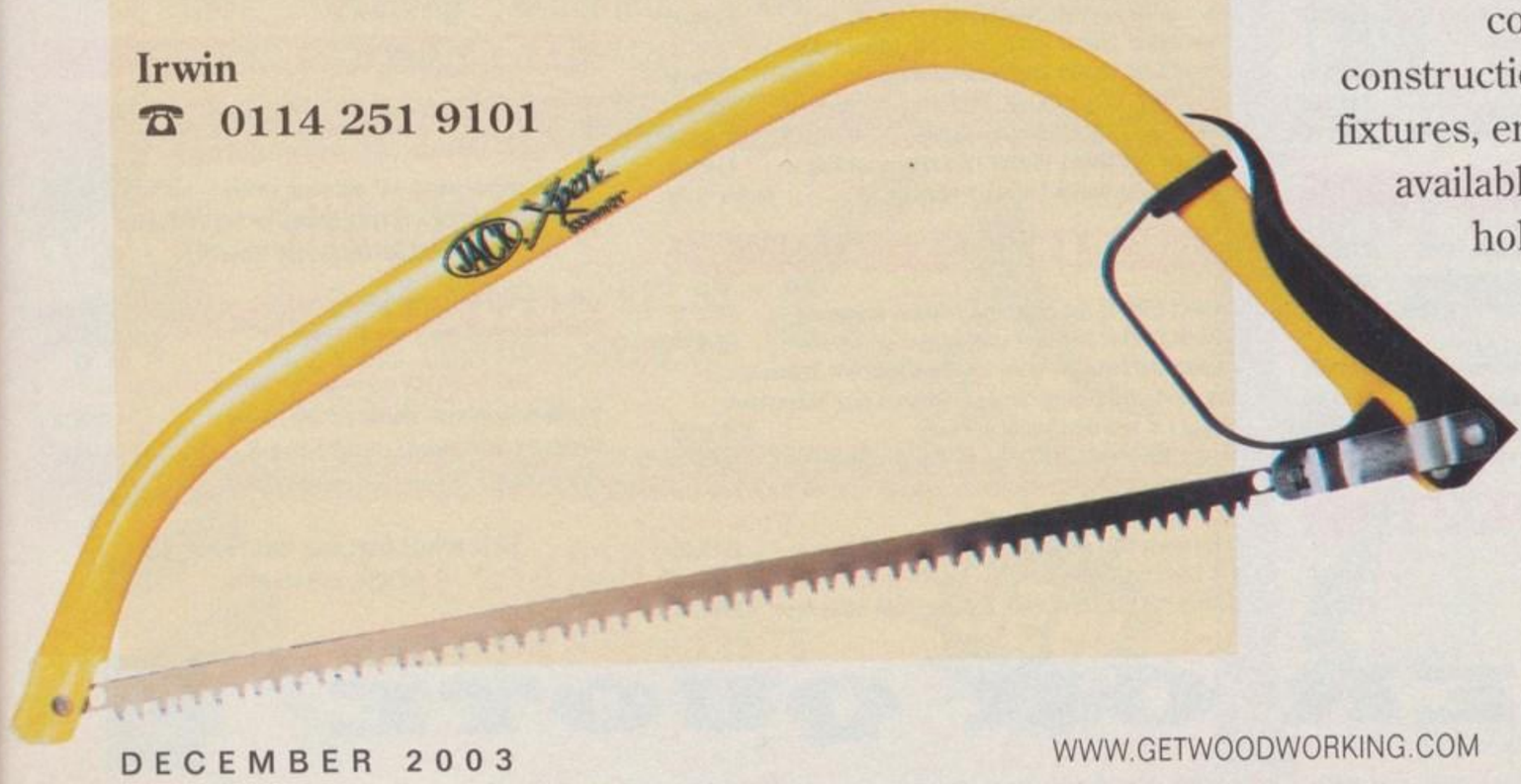
So whether you are clearing up wood chippings in the workshop, a leaking washing machine or cleaning a drain, the Goblin Boxer will be a champion.

The Goblin Boxer retails for £49.99 and comes with a 2-year guarantee.
For stockists
☎ 0870 060 2614.

Irwin gets tough

A tradesman's job can be tough, requiring tools strong enough to carry out heavy duty tasks such as ripping down breezeblocks or cutting back trees, jobs that can be damaging to many normal saws. However, the Irwin Industrial Tool Company has just the solution for these demanding tasks with its Irwin jack Xpert Bowsaw range. Irwin Jack Bowsaws feature blades made from cold rolled steel with precision filed and hardened teeth that can cut on both the pull and push strokes, allowing faster cutting and prolonged blade usage, essential when undertaking rough cutting tasks.

Irwin
☎ 0114 251 9101



Perfect pliers

Stanley has added another group of products to its popular Dynagrip range. All products in the range include Stanley's excellent non-slip Dynagrip grip system, and the pliers also include the following new features:

- Hardened and tempered jaws for durability and cutting performance
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- Polished heads
- RRP £7.99 - 12.99

Stanley
☎ 08701 650650

Superknife to the rescue

A new folding utility knife has just been released called the Superknife. This attractive looking tool is a hybrid of a convenient pocket knife and utility knife. The quality construction features anodised aluminium and stainless steel fixtures, ergonomic styling and belt clip. Accessories are also available for the Superknife include a blade dispenser that holds six original replacement blades with aggressive double ground edge and 1mm thick blades, and a carrying case. The Superknife retails for £19.95.

Classic Carpentry Tools
☎ 01227 362727
www.superknives.com

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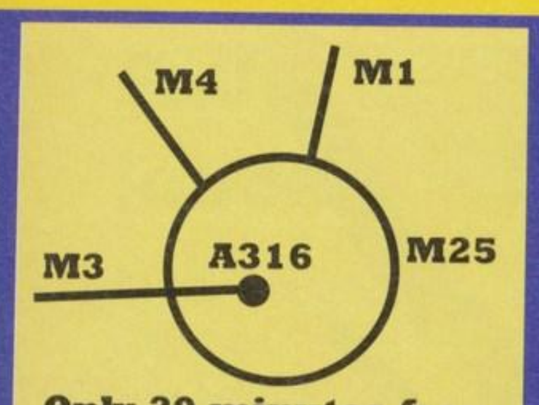

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Makita 3620 1/4" 860W compact router	£99.00
Dewalt DW613 1/4" 800W router c/w fine height adjuster	£149.00
Trend T5EK 1/4" 850w with carry case 240v	£149.99
Various package deals available on the T5EK	
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Dewalt DW615 900W vari-speed c/w fine height adjuster And 12pc tct cutter set	£159.00
Metabo OFE1229 1/4" 1200W vari-speed c/w carry case and 12pc tct cutter set	£239.00
Makita RP1100c 1/4"1100W vari-speed	£199.95
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Dewalt DW625EK 1/2" 1850w case plus fine height adjuster	£229.00
Dewalt DW625EK plus fine height adjuster, D&M 600mm Worktop jig & cutter & trend unibase	£329.00
Makita 3612c 1/2" 1850W complete with carry case	£239.00
Freud FT2000E 1900W 1/2" complete with carry case	£179.00
Metabo OFE1812 1/2" 1800W complete with 1/4" collet	£239.00
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Trend Hinge jig for door fitting	£159.95
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Metabo BST12IMP 12V drill driver 2 batteries	£99.95
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Makita 6226DWE 9.6V drill driver 2 batteries	£89.00
Makita 6227DWE3 12V drill driver 3 batteries	£125.00
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Dewalt DW984k2 14V combi c/w 3 batteries & bit set	£239.00
Dewalt DW988k2 18v combi c/w 3 batteries & bit set	£279.00
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Makita 8433DWAE 14V combi 2x2amp ni-cad batts	£199.00
Makita 8433DWDE 14V combi 2x2.6amp ni-mh batts	£225.00
Makita 8443DWAE 18V combi 2x2amp ni-cad batts	£239.00
Makita 8443DWDE 18V combi 2x2.6amp ni-mh batts	£259.00
Milwaukee LOKP14TX 14V combi 2x2.4amp batts	£229.00
Milwaukee LOKP18TX 18V combi 2x2.4amp batts	£259.00
Metabo SBT15.6PLUS 15.6V combi 2x2.4amp batts	£199.00
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Dewalt DW920K 7.2V angle adjustable driver c/w 1 battery and 1 extra free!	£99.00
Metabo Powergrip 4.8V screwdriver c/w 2 batteries	£69.95
Dewalt DW966K 14V angle drill c/w 1 batt & 1 free	£229.00
Makita D312DWDE 12V 2X2.6AMP NI-MH BATTS	£235.00
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Makita 8443DWDECL 18V combi hammer, circular saw And torch c/w 2x2.6amp ni-mh batteries and case	£459.00
Makita 8443DWDEJL 18V combi hammer, jigsaw and Torch c/w 2x2.6amp ni-mh batteries and case	£399.00
Metabo KSABST18 18V combi and saw 2x batteries	£369.00
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Dewalt DW988KJ2 18V combi hammer and jigsaw c/w 2 batteries as standard plus a 3rd battery free	£449.00
Dewalt DW988KS2 18V combi hammer and trimsaw c/w 2 batteries as standard plus a 3rd battery free	£449.00
Dewalt DW4KIT2 18V combi, trimsaw, recip saw, torch c/w 2 batteries as standard plus a 3rd battery free	£499.00
Dewalt DW5KIT2 18V combi, trimsaw, recip saw, jigsaw, And torch c/w 2 batteries plus a 3rd battery free plus Dwalt Radio Charger Free	£699.00

BISCUIT JOINTERS

Dewalt DW682K 600W adjustable plus 1,000 biscuits	£169.00
Makita 3901 590w adjustable plus 1,000 biscuits	£199.00
Freud JS102 710W adjustable with case	£119.00
Dewalt DW932k 18V cordless version + 1,000 biscuits	£199.00
Trend T20K 710w adjustable fence, case plus 1,000 biscuits free (while stocks lasts)	£135.00

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Dewalt DW351 152mm 850W plus Dewalt 1500mm guide rail	£149.00
Makita 5604R 165mm 950W 54mm cut @90	£84.95
Metabo KS54 160mm 1010W	£99.00
plus buy at the same time a metabo 42th blade for just £12	
Makita 5704RK 190mm 1200W plus carry case	£94.95
Dewalt DW62 184mm 1150W plus carry case	£119.00
Hitachi C7U 185mm 1150W plus carry case	£119.00
Makita 5703RK 190mm 1300W plus carry case	£129.95
Metabo KS66 190mm 1400W plus carry case	£145.00
plus buy at the same time metabo 48th blade for just £15.00	
Dewalt DW365 190mm 1350W	£119.00
Metabo KSE68 190mm 1600W soft start, double fence, speed Control, carry case plus buy a 48th blade for £15.00	£199.00
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Makita 5903RK 235mm 1550W plus carry case	£189.95
Hitachi C9U 235mm 1750W	£189.00
Kalton KDT184 door trimming saw 184mm 1000W	£249.00

JIGSAWS

Dewalt DW321K 701W vari-speed plus side fence	£139.00
Dewalt DW323K body grip version plus side fence	£159.00
Dewalt DW933K2 18v cordless jigsaw, battery, case, charger	£299.00
Metabo STEB105 710W vari-speed pendulum	£149.95
Metabo STE105 body grip version of above	£155.00
Makita 4324 400W vari-speed pendulum	£64.95
Makita 4340FCT 720W new vari-speed & work light	£119.99

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Dewalt DW677 600W 1.5mm cut	£145.00
Dewalt DW680K 600W 2.5mm cut	£139.00
Dewalt DW678K 850W 4mm cut, case, dust bag	£149.99
Dewalt DW678EK 1010W cut constant electronic	£219.00
Makita 1902 550W 1mm cut	£89.00
Makita 1923H 850W 3.5mm cut plus carry case	£145.00
Metabo H00882 800W 3mm cut plus case & dust bag	£149.99

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Dewalt DW733 1800W thicknesser 317x152mm	£359.00
Delta 22565 1500W thicknesser 317x152mm Plus stand and free delivery	£339.95
Record RD30 12" width planer c/w base	£699.00
Kity 439 planer/thicknesser 195x200mm plus stand	£589.00
Dewalt DW733S planer/thicknesser 250x160mm	£599.00
E/B HC260M planer/thicknesser 260x160mm	£579.00
Or HC260M plus wheel kit and spa1100 extractor	£775.00
E/B HC260K planer/thicknesser HSS blades, cabinet	£699.00
or HC260K plus wheel kit, blades, spa1100 extractor	£919.00
Scheppach HMS260 planer/thicknesser 260mm,stand	£P.O.A.
Kity 1637 planer/thicknesser 259x200mm 3hp	£839.00
Kity 1647 planer/thicknesser 310x200mm 3hp	£1179.00
Scheppach HMS3200 planer/thicknesser 310x180mm	£1479.00
Record PT320 planer/thicknesser 320x230mm with 3hp 1500mm Cast tables plus cast bed 250kg free delivery Supplied with wheel kit FREE while stock lasts!	£1499.00
Startrite FS300 planer/thicknesser cast tables & mono lift with fence attached. Capacity 300x200mm free delivery	£P.O.A
E/B HC333G planer/thicknesser cast tables and bed supplied with spa1100 extractor and free delivery	£1479.00

SANDERS

Dewalt DW411 palm sander 170W	£69.00
Makita BO4553 palm sander 160W	£52.99
Makita BO5010 125mm diameter round	£84.95
Metabo DSE3000i triangular detail sander & case	£69.00
Metabo SXE450 duo orbit 3 or 6mm action 400W	£139.00
Dewalt DW443 150mm random orbit action	£139.00
Makita BO5021 125mm round vari-speed	£89.98
Makita BO6030 150mm random orbit action	£145.00
Metabo SR358 1/2 sheet sander 350W	£149.00
Dewalt DW634 1/2 sheet sander 300W + free heat gun	£199.00
Makita BO4900V 1/2 sheet sander 330W	£169.00
Dewalt DW431 3" belt sander plus sanding frame free	£189.00
Dewalt DW650 4" belt sander plus sanding frame free	£259.00
Makita 9903 3" vari-speed 1010W	£169.95
Makita 9404 4" 1010w belt sander	£189.00
Makita 9403 4" 1200W heavy duty belt sander	£259.00

NAIL GUNS

New Makita Nail Guns & Compressors	In Stock
Paslode IM250 16-64mm brad nailer complete	£379.00
Paslode IM350 50-90mm stick nailer complete	£379.00
Full range of fixings in stock for both guns!	
Bostitch N79WW2 50-90mm air stick nailer	£319.00
Bostitch SB1664FN 32-64mm air finish nailer	£199.00
Or complete with 24l compressor & hose	£289.00
Bostich SB1850BN 15-50mm 18g air brad nailer	£119.00
Or complete with 24l compressor & hose	£239.00
Rapesco 181EL 10-35mm electric 18g brad gun	£43.95

MITRE SAWS

Record RSCMS12 12" Compound Mitre Saw 1800W While stock Lasts!	£199.00
Delta 36075 1400W 250mm blade	£129.95
Makita LS1040 1650W 255mm blade	£199.00
Elektra Beckum KS250 1800W 250mm	£179.95
Elecktra Beckum KS304 2000W 250mm	£299.00
Dewalt DW703 1600W 250mm blade	£299.00
Delta 36085 1400W 250mm double bevelling action	£269.95
Dewalt DW706 1600W 305mm double bevelling	£489.00
Dewalt DW700 1200W sliding crosscut action + legs	£299.00
Dewalt DW701 1600W sliding crosscut action + legs	£429.00
Dewalt DW708 102x300mm crosscut sliding supplied Complete with de1000 stand and material clamp, 240v only	£599.00
E/B KGS301 1600W 54x300mm plus stand free	£365.00
E/B KGS331 dust kit, fine blade plus stand free	£399.00
E/B KGS255 1300W sliding crosscut action 255mm	£299.00
E/B KGS303 1800W 81x280mm sliding plus stand	£479.00
Delta 36240 1500W 92x300mm sliding action	£399.00
Makita LS1013X 91x305mm sliding plus stand	£535.00
Scheppach CAPAS3 1800W 102x320mm sliding	£549.00
Record roller stands for extra support	each £13.99

SAW BENCHES

Dewalt DW742 flip over saw, mitre & sawbench	£589.00
Dewalt DW743 flip over saw, trigger on handle	£659.00
Dewalt DW746 Cast Table Saw Bench, 2.7kw 79mm cut. Supplied with sliding carriage, width & rear extensions, wheel kit, and dust kit, all for only	£1699.00
Elektra Beckum KGT501 flip over saw with stand	£699.00
Delta 36525 table saw with stand and extensions Free delivery	£259.00
Scheppach TKU saw bench with sliding table	£519.00
E/B TKHS315EP saw bench with sliding table	£409.00
Record RSTS12 saw bench 250mm blade with base	£399.00
Dewalt DW744 portable saw with stand & extensions Plus free delivery all for just	£699.00
E/B PK200 s/table, ext table, stand, rails, dust kit	£629.00
Kity 419 saw bench stand, sliding table & ext table	£599.00
Scheppach TS2000 various package deals ring for details	
Kity 619 saw bench 1.6m sliding table, folding ext	£1099.00
E/B PKF255 saw with accessories + spa1100	£1299.00
Scheppach Ts2500 saw with 1.4m sliding table	£1149.00
Scheppach TS4010 saw with 2m sliding table	£1699.00
Various package deals on TS2500/TS4010 give us a ring	
Startrite SC25 saw bench cast tables, telescopic sliding table, Out feed table, Steel width extensions inc. delivery	£P.O.A

COMBINATION MACHINES

Kity BestCombi 2000 5-Function Version	£1649.00
Kity BestCombi 2000 6-Function Version	£1799.00
Startrite 310RL cast iron table 3x2.5hp motors, sliding table, Planer, saw bench, thicknesser, spindle moulder supplied Delivered and commissioned & free wheel kit	£P.O.A
Record maxi26 6 function with swing arm, cutters & block set including delivery UK mainland	£1899.00
Record 310S cast iron tables, saw, spindle moulder, planer and thicknesser	£3799.00

RADIAL ARM SAWS

Dewalt DW720K 1450W 380mm crosscut, with stand	£699.00
Buy at the same time router brkt, special mitre fences, drum sander, Disc sander. list £216.00 all for just	£149.00
Dewalt DW721 2000W 610mm crosscut with stand	£1229.00
Dewalt DW728 2200W 610mm crosscut with stand	£1899.00

BANDSAWS AND SCROLL SAWS

Record RSBS10 bench top 114mm cap ,cast table	£159.99
Delta 28185 bench top 127mm capacity	£114.95
E/B BAS250 bench top 100mm cap, cast table	£199.95
Kity 413 155mm cap, with stand and mitre fence	£419.00
Record RSBS12 150mm, cast table, stand mitre fence	£259.99
E/B BAS316 cast table, stand, mitre & circle guide	£329.00
Dewalt DW876 200mm capacity, stand, mitre fence	£399.00
Record RSBS14 205mm, cast table, cabinet, fences	£379.00
Kity 613-cast aluminium table, stand & mitre fence	£569.00
Startrite 301E 200mm, cast table, stand & accessories	£669.00
Startrite 351SE 300mm,cast table, stand & accessories	£1028.99
E/B BAS500 300mm, new cast table, mitre fence & spa1100 extractor free all for only	£969.00
New Scheppach Basato3 vari-speed c/w stand	£379.00
Scheppach BASTO5.2 300mm capacity & cast table	£1329.00
Delta 40540 16" vari-speed scroll saw	£129.95
Delta 40570 16" vari-speed larger table scroll saw	£219.95

BENCH GRINDERS

New Tormek 1206 kit plus stone grader & cover!!	£189.99
New Tormek 2006 kit plus stone grader & cover!!	£299.00
Record scan150 152mm whetstone grinder	£79.99
Delta 23589 152mm 2 grinding wheels & light	£49.95
Delta 23655 vari-speed ,coarse, fine white wheel, light	£79.95

DUST EXTRACTORS

Trend T30AF fine filter, auto switching wet or dry	£149.00
Trend Airshield Respirator, battery, charger, carry bag	£149.00
Dewalt DW790 1000W auto switching wet or dry	£189.00
Metabo ASA1202 1200W auto switching wet or dry	£149.00
Makita 4401 240v 1000W auto switching wet or dry	£149.00
Record RSDE1 45lt 100mm hose 2.5 micron	£109.00
Record DX4000 twin motor, 100mm, 80lt	£269.00
Record DX5000 twin motor, wall mounted 200lt	£299.00
Scheppach HA2600 80lt extractor and fine filter	£329.00
E/B SPA1100 60lt 100mm extractor and fine filter	£239.00

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G20H Lever Clamp

Ref	Opening	Depth	List
G20H	200mm	100mm	£46.80

SPECIAL OFFER £23.95

K-Body Clamps

Ref	Opening	Depth	List	Special Offer
K60	600mm	85mm	£42.46	£26.50
K80	800mm	85mm	£47.65	£29.00
K100	1000mm	85mm	£53.15	£32.00
K125	1250mm	85mm	£58.04	£36.50
K150	1500mm	85mm	£63.54	£39.90

Ban 700 Band Clamp

Ref	Capacity	Strap	Angle
BAN 700	7m/23ft	25 x 1	60°-180°

List £38.77

SPECIAL OFFER £29.95

Ref	Description	List
BVE	Extra set of 6 angles	£7.50

Maxi Accessory Pack

Buy a pack of Maxis to make a bench vice for your K-Body Clamp

Ref	Contents	List
SW2	2 x Maxis in each pack	£51.64

SPECIAL OFFER £39.00

TG Screw Clamps

Ref	Opening	Depth	List	Special Offer
TG-20	200mm	100mm	£18.94	£13.95
TG-30	300mm	140mm	£23.82	£18.50
TG-40	400mm	175mm	£26.88	£21.75

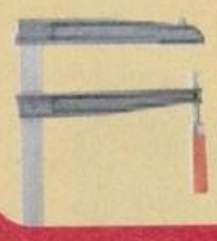
EKT-55 Edge Clamp

NEW

Ref	Opening	Depth	List:
EKT-55	10-55mm	0-45mm	£41.12

SPECIAL OFFER £29.95

Deep Throat Clamp



Ref	Opening	Depth	List
TG40T30	400mm	300mm	£70.67

Special Offer £57.50

WS Angle Clamp

Ref	Max Travel	Max Opening	List	Special Offer
WS3	300mm	2x55mm	£28.68	£23.50
WS6	600mm	2x100mm	£39.18	£32.95

EHZ Powergrip

Ref	Opening	Depth	List	Special Offer
EHZ-30	300mm	100mm	£35.19	£27.50
EHZ-60	600mm	100mm	£41.12	£32.50

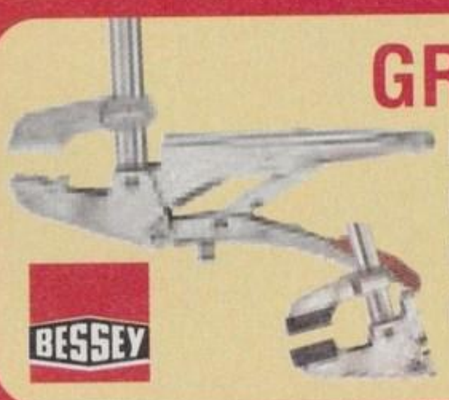
SVH Floor Clamp

For laying laminate floors etc.

NEW

Ref	Opening	Capacity width mm	List	Special Offer
SVH400	4000mm	120	£23.50	£16.95

GRZ-10 Parallel Grips



Ref GRZ-10
Opening 100mm
Depth 65mm
List £45.30

SPECIAL OFFER £34.90

Supplied with a pair of soft grip pads

NEW

Klik Clamps

Buy 2 x KLI 120 (8") for **£27.50**
or 2 x KLI 125 (10") for **£28.95**
(depth 80mm on both)

GS11 Mitre Clamp

Ref	Opening	List
GS11	105mm	£109.92

SPECIAL OFFER £69.95

Uni Clamps

Buy 2 x UK30 (12") for **£23.75**
or 2 x UK60 (24") for **£25.00**

NEW

BS3N Holdfast Clamp

Ref BS3N
Opening 200mm
Depth 120mm
List: £109.89

SPECIAL OFFER £45.00

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Top Tips

WIN A BOSCH TOOL

That's right, every month we will be sending a Bosch green range power tool to the reader who sends in the **Top Tip**. Good luck and please keep sending them in!

The address to write to is Top tips, *The Woodworker*, Highbury Nexus, Berwick House, 8-10 Knoll Rise, Orpington, Kent BR6 0EL.

ERIC SAYS... The Circular Saw

NEW SERIES

In our new series, Eric Streuli, Training Development Manager for Bosch Power Tools gives some tips on safe use of equipment.

As power tools go the circular saw is probably one of the more scary, with its sharp shiny blade and that blood curdling noise often associated with 'B' rated horror movies. But this efficient hand held power saw has sold by the million since it first appeared in the USA in the early 1920s.

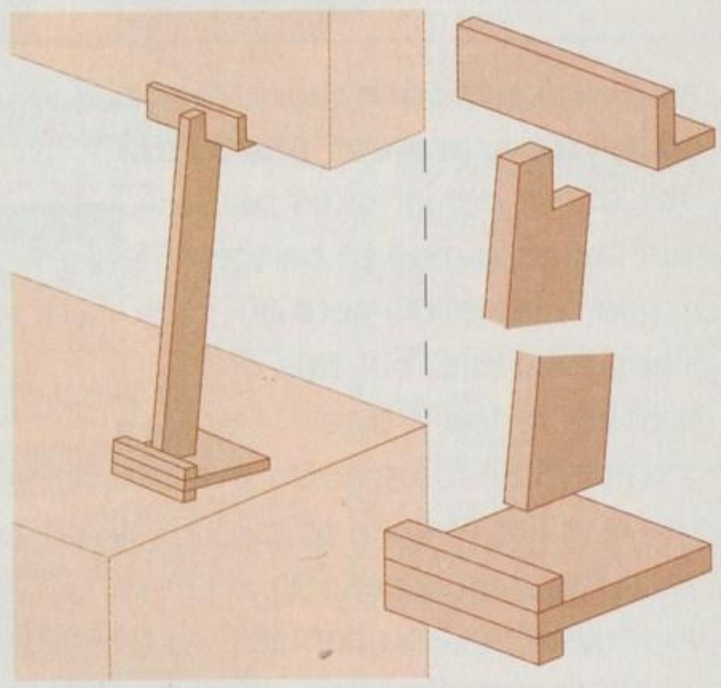
A common causes of problems in early models was motor failure. Today, there are still problems to beware of: worn or damaged blades, bent or mis-aligned riving knifes, faulty blade guards, incorrect depth adjustment etc. However, all too often the user pushes too hard or twists the blade in the cut. Let the blade do the work.

The secret of success and a good finish is a good quality well looked after saw, with a sharp blade of the correct type for the material and type of cut you require. Of course, always follow the safety and operating instructions, and wear eye protection.

Steppin' out

A jig that can quickly be made up from scrap is a woodworker's version of the metal step blocks. These are machinists tools that are used as a vertical setting aid. While these are precisely machined and interlocking, the wood versions don't need to be that fussy. Start with a rectangular block of ½in thick plywood. Cut diagonally in half and make a series of steps along the diagonal. The two parts can then be slid, relative to one another to create a stable, variable depth spacer.

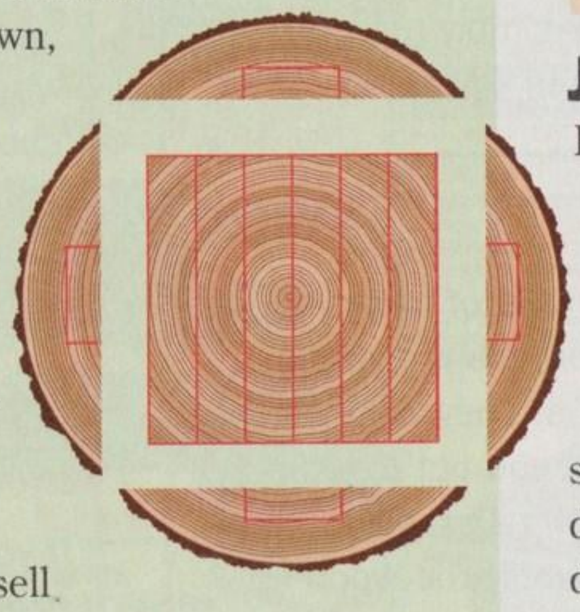
Dana Craig, USA



Sapless

With most common softwoods, it's difficult to distinguish by eye the difference between the sapwood and the heartwood. This may not matter for most uses indoors and dry conditions but when exposed to the weather, spawood rots away.

I find the best way to avoid sapwood for my outdoor joinery is to buy wide boards and rip them down, rather than buying thin stuff. Wide boards have to be cut from the body of the log. Builders' merchants sell 9x1in nominal boards that finishes, when planed, at 8½x ¾in.



Charlie Wright, Lincoln

Straight and level

If you want to make sure a piece of timber or door is being trimmed level, go to your local bargain store and pick up a set of cheap plastic spirit levels. Mine only cost £1. Dismantle the parts and take out the bubble pieces. These can be mounted on a power plane with some tape. Fix it somewhere you can see it clearly as you work.

I use the same trick on a belt sander and cordless drill, to make sure they are straight and level.

Bob Wilson, Notts

Jack of all cabinets

Fitting a cabinet to a wall in the exact position you need is tricky if you're working single-handed. I made a pair of jacks to help me with such site work and they work a treat.

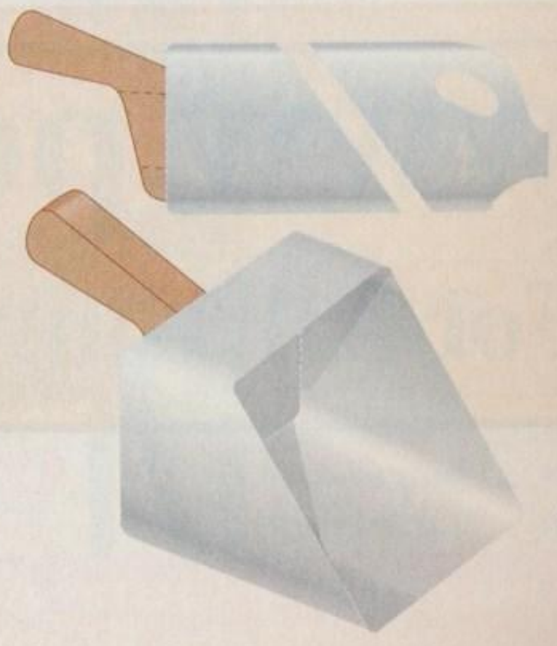
The base has two blocks to retain the strut in place and tilt to about 45 degrees. An angular pad stops the strut damaging the cabinet edge. Adjustment is made by knocking the base back and forth. Of course you can make up struts to suit any height of unit.

Rod Simmerton, Cheltenham

What a scoop!

You can make a small scoop for clearing workshop shavings by cutting the bottom out of a large plastic milk container. I add a wooden handle, fixed with a couple of small screws.

Brian Illingsworth, Llanelli

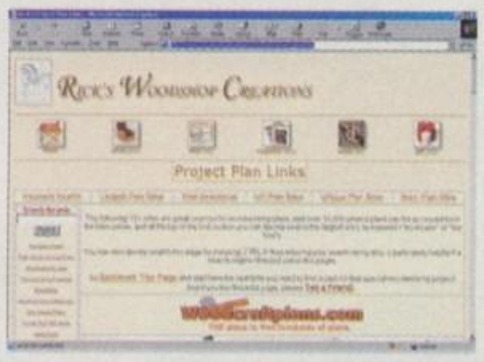


Surf's up

Dave Mackenzie trawls the Internet once again looking for the best woodworking plans websites

I occasionally get asked about the best sites for woodworking project plans. As a number of these sites have appeared on this page in the past I thought I would revisit some of them to see if they were still worth recommending, but shock horror most of them have disappeared! I read recently that project plans were one of the most popular woodworking items that are for sale on the web, so where had all of the sites gone? I can only guess that it's because there is lots of competition and only the most efficient survive. Of course, don't forget to visit our own site, www.getwoodworking.com

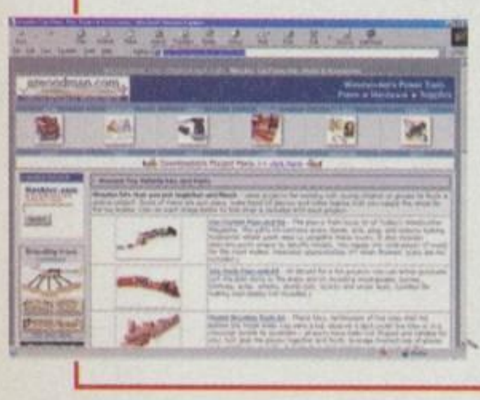
www.rickswoodshopcreations.com/Links/project_plans.htm



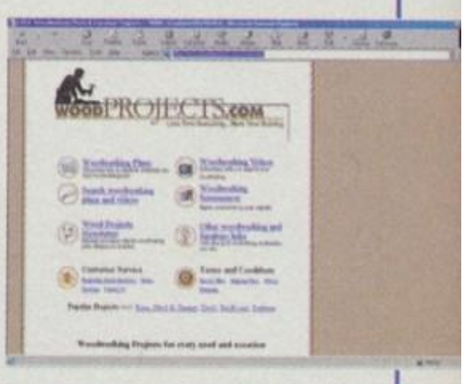
One of the earlier sites on this page claimed to be the largest with 3000 sets of plans available, but this one appears to top it by a considerable margin. On this site is a list of links to 121 sites that has access to well over 10,000 project plans, or so they claim. You can search the largest sites by keyword 'bookcase' or 'toy box', for example or simply browse through the lists until something catches your eye.

www.azwoodman.com/kits.html

This site will provide toy plans in a number of formats. They are supplied as downloadable files, plans by mail, plans in books or on videotape and CDs. They also supply wooden kits that you put together and finish as well as projects that require you to supply the wood for the toys' bodies. There are projects for working with toddlers and groups of older children.

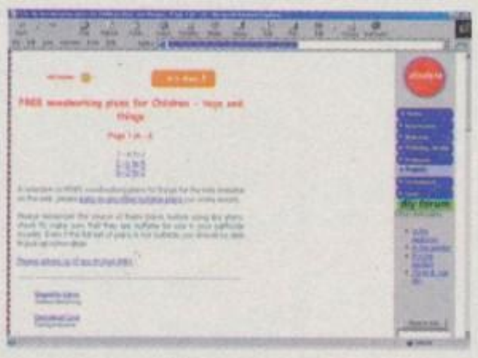


www.woodprojects.com/index.htm



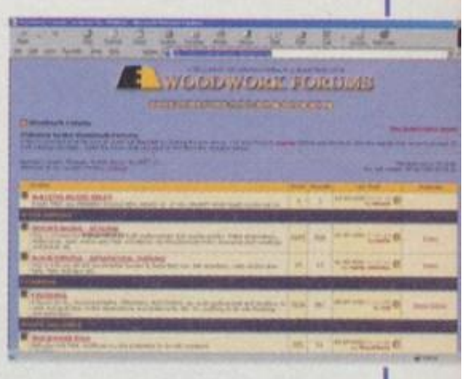
This is a well-organised site that specialises solely in plans. There are some 3,000 available that they claim is the largest on-line selection in the USA (more about exaggerated claims on websites later). Furniture plans account for a large proportion of that number, but plans for toys, garden structures, bird feeders, etc. are also available. Also for sale are woodworking videos and rather unusually, computer screen savers on a woodworking theme. If you sign up they will send you a quarterly newsletter with details of, you've guessed it, more plans.

www.diydata.com/projects/plans/childrens_plans.htm



This is a small section of a much larger site called DIYdata.com. On other parts of the site are the usual offerings of tools, books and woodworking advice, as you would expect. However, I selected this section because it's about making children's toys, which is one of my pet subjects but best of all the plans, are free! Judging from the couple of plans I looked at, the quality is variable but there is quite a large selection. You are also invited to contribute a plan to the collection to help other woodworkers.

www.woodworkforums.ubeaut.com.au



This is a site from Oz and it reflects the lively woodworking community that thrives down under. There are no project plans here, but it's worth visiting if you are looking for some busy and well moderated woodworking forums. The woodworking bulletin boards are divided into a number of sub-groups. For example there are forums on: general woodworking, turning, finishing, timber, house renovation, tools, woodcarving and several others.

Something to share?

If you would like your site featured on this page or would like to share your favourite woodworking site with the rest of us you can email me at: dave@djfmackenzie.freeserve.co.uk

www.powertooldirect.co.uk

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- Low noise output
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- Up to 950 watts peak output
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LOW NOISE

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- Mounted directly on to gas bottle for convenience - eliminates trailing gas hoses
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X8166	Fireray 130VS (STAND MOUNTED)	£49.99	£58.74

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- Suitable for commercial or domestic use
- Great for spot heating objects or people
- Lightweight and compact
- Tough ceramic emmitters
- Three heat level settings
- Built in safety tilt switch
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- Wheel kit available (X9062)

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Stainless Steel

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- Completely versatile - can be used with a pistol grip, carrying handle, spotlight with in-built stand
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- Weather resistant construction
- Swivel handle and stand

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- One handed on/off switch
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- Spare bulb conveniently stored in end cap

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- Magnetic NVR switch
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- Balanced metal impeller
- Free running castors
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X1342 **£97.83** (£114.95 INC VAT)

10 x 6" Planer/Thicknesser

- Powerful 2,000 watt induction motor
- Speedy conversion from planer to thicknesser
- Heavily ribbed cast tables
- Dust extraction facility (ideal for use with X1342)
- Mode interlock switch prevents incorrect operation
- Magnetic NVR switch
- Large precision machined adjustable work table
- Fully adjustable planing fence
- Thicknesser infeed and outfeed rollers
- 2 year warranty

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- Simple to use, 1.5hp (7cfm) oil-free air compressor with a 6 litre air receiver
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- 20 Metre professional oil resistant air hose equipped with PCL quick couplers and supplied in a high quality reel housing
- Reel body made from heavy duty plastic fitted to a robust galvanised steel tube frame
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Letters

Plane landing

In your Diary of a new Woodworker (July issue), your contributor expresses a need to invent a plane iron that never needs honing. Well, perhaps he could make a start by putting his planes down on the bench properly - on their sides.

Malcolm Edwards, Manchester

Finger exercises

I was interested to read about the making of a fingerpost (September issue) as I have done some hand carving of lettering for exterior number plates.

In the article, there are several phrases along the lines of 'a fairly plain san serif face works best', while the photograph shows serifs on the vertical strokes. I take the meaning to be that beginners should start with a sans serif face?

I cannot say that I have found cutting serifs with a craft knife or mini skew chisel to be a problem - cutting curved lettering with a limited number of gauges was much more taxing.

Nonetheless, congratulations to Mr Norrie Dinning on an attractive fingerpost with clear incised lettering. It would be good if other villages would commission such work.

Geoffrey Fisher, County Durham

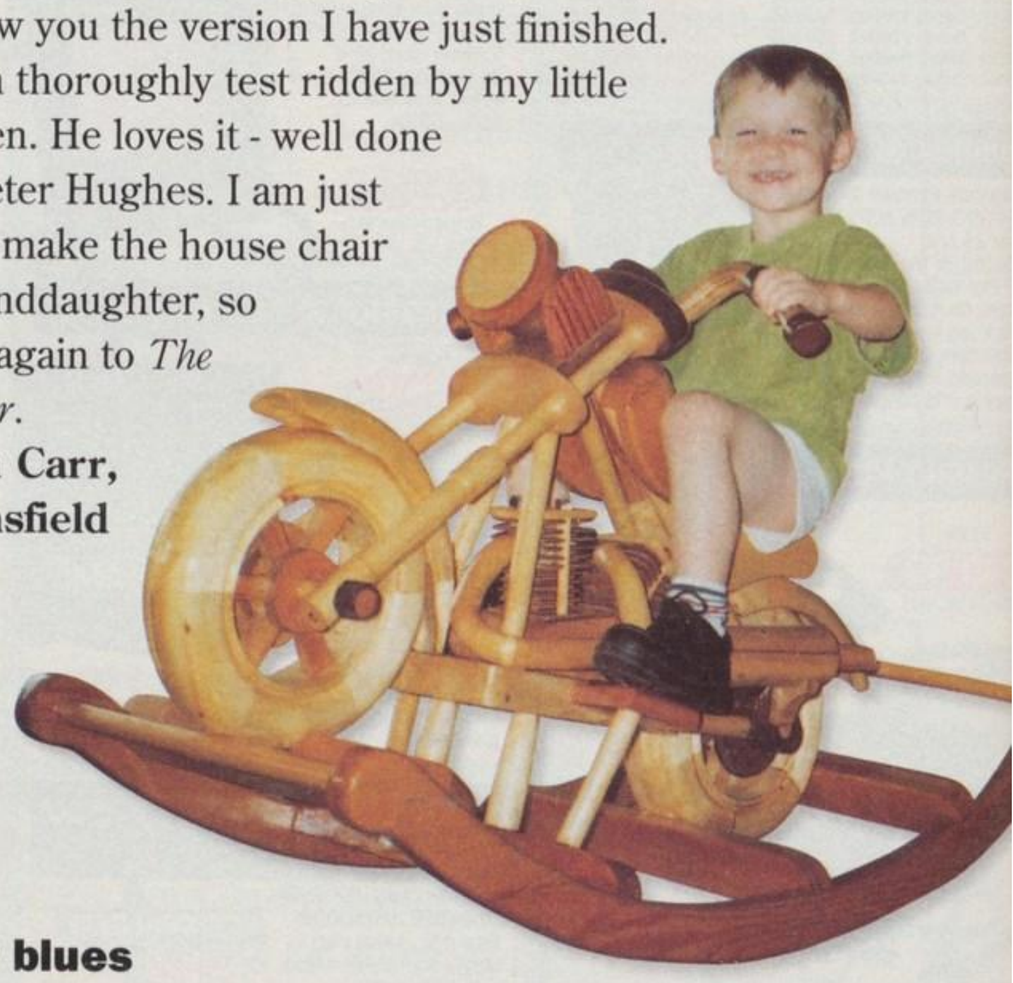
WIN A YEAR'S SUBSCRIPTION TO *THE WOODWORKER*

Send in your comments, criticisms or just plain old observations about woodwork or the magazine and you could win a year's subscription to *The Woodworker* if yours is the Star Letter.

Biker bits

I know other readers have commented on the great Rocking Motorbike plans (June, July, Aug issues) but I just had to show you the version I have just finished. It has been thoroughly test ridden by my little nephew Ben. He loves it - well done again to Peter Hughes. I am just starting to make the house chair for my granddaughter, so thank you again to *The Woodworker*.

Ian Carr, Mansfield



Bandsaw blues

I would like to let other readers know of a spare parts problem. The locking lever on my RPBS8 Record bandsaw broke after 18 months use. I was informed the part is not produced as a spare but fortunately Trend make a locking lever that fits perfectly, part number KB12/M/8 if any other readers need a new lever.

P Delaforce, Orpington

Bus timetable

This is a model of a 1952 English double decker bus, made into what I call 'A Double Decker RV.' The scale is 1 ½in=1in. It was built for a competition at the Ohio State Fair in the miniature class. It gained a first place ribbon and Best of Show award.

I had one year to build it and it took 1500 hours, with a cost of $800 in materials. With the odd scale, I had to build all the furnishings myself, using wood and model aircraft plywood. It has 100% brass fixtures and the tyres are carved from maple. It even has a real Corian counter. The buss is equipped with real glass windows and 41 light bulbs (12V), and weighs in at 50lbs.

Mark Gordon, Colombus Ohio

Woodwork widows...

We hear of so many projects made for woodworkers' partners that we now include this special section in the Letters page. Here's a chance for partners or relatives to really show their appreciation of all that hard work. Just send in a few snaps of your nominee and a project or two and you could win your woodworker a one-year subscription to *The Woodworker* if chosen for publication.

Whilst looking through my husband's Woodworker magazine I noticed the woodwork widow's section. Having moved into an old house two years ago and with the day off for Valentines Day, my husband took me for a run out to a local hardwood yard. This was better than a few years earlier when he took me to a demolition yard looking for bricks!

Anyway, I thought he had become very romantic when, with his back to me, I heard him say, I love you. I wandered over to him to find him running his fingers over some Yew!! I replied I love Yew too!

We bought a load of Ash complete with bark that day and the photograph shows the wardrobes he lovingly built for me. Many thanks to your magazine as this has been his monthly inspiration when the job slows. I am now looking forward to some dining chairs made from Yew.

Andrea Watson

Donkey return ride

In 1982-83 my father (TGH Tooley) read an article in your magazine about the Marquetry Cutter Donkey at the London College of Furniture, now called London Metropolitan University.

He visited the college in 1983 where he made some sketches and took photographs of the donkey as he wanted to recreate one, which he did and was able to master.

Unfortunately, he passed away in 1998, so we have decided to donate the donkey to the college, which they collected in July.

Mrs Kathryn Loran, Dawlish, Devon

Savonarola specials

I thought you might like to see a few of the chairs I have made following a plan in *The Woodworker* a few years ago. They are made in oak and my daughter now has a dining set and stool in the same style.

J Illingworth, Cornwall

Women are doing it for themselves

WW STAR LETTER

I bought your magazine for the first time last week and, although I am finding it very informative and interesting, I was shocked by the assumption of your 'Woodwork Widows' that the woodworker of the house was a man. There are lots of women like myself who enjoy tackling DIY projects, including woodwork. And why assume there is a partner to send in the photo? Why not invite friends/relatives of woodwork enthusiasts to write in. It would be really good to see a more inclusive attitude.

Jane Mutisya

We started the series because of the large number of letters from wives/partners who wanted the skills of their men recognised. Of course you're right and we would welcome the chance to publish pictures of women's woodwork projects. Please send them in and help us break the mould.

MSR

Surely some mistake?

Going through a bunch of old books and magazines that my mother was sorting through for a book fair fund raiser I found this photo of Alan Holtham - any relation? There was another photo of him receiving a prize of a lathe. It might cheer someone up!

J. Ingrams via email

It cheered us up! *MSR*

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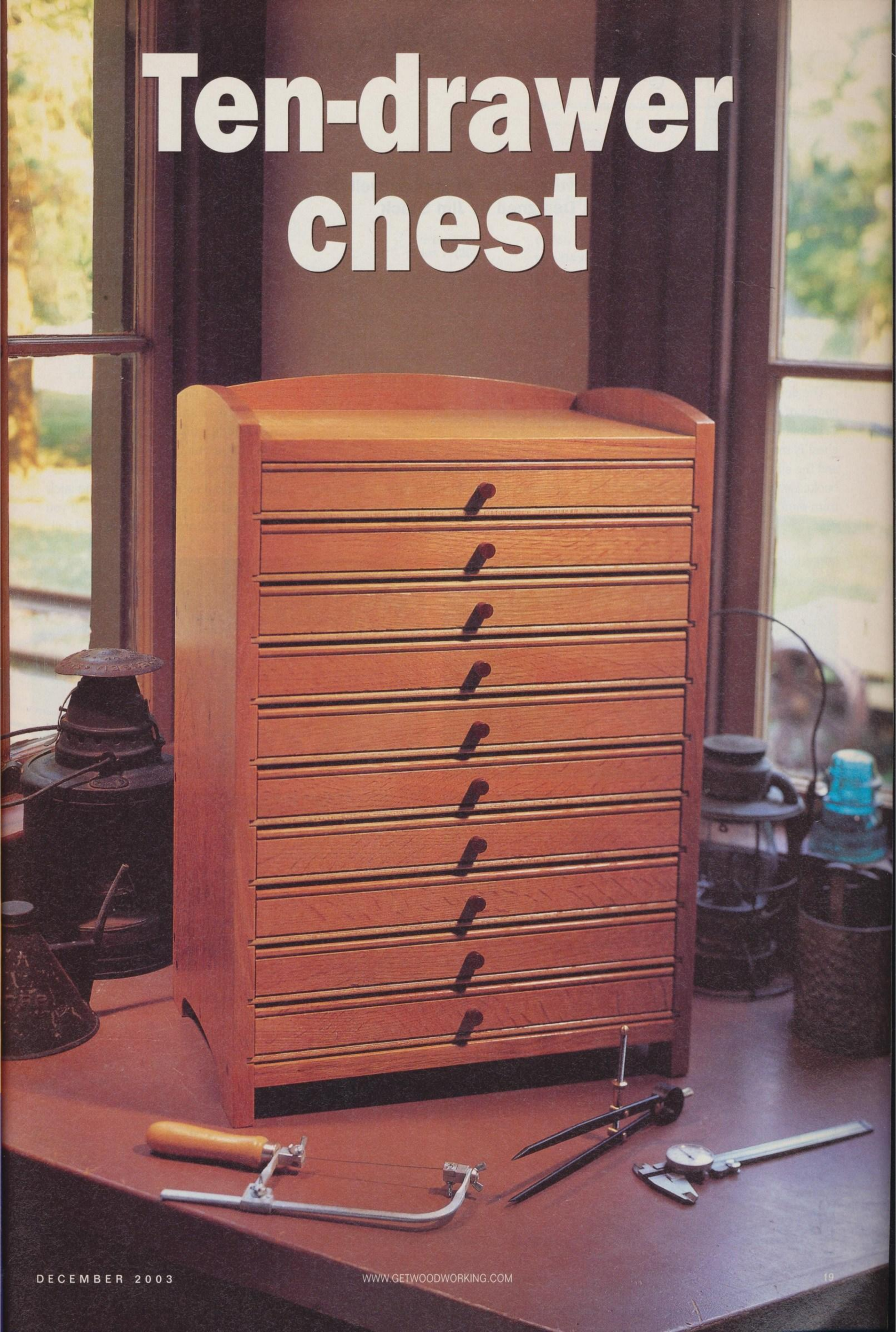
Ten-drawer chest



PROJECT

This little chest of slimline drawers would sit just as well in the house as in the workshop. Designed by Jim Stack

Most woodworkers have several tools that are small, like screwdrivers, files, chisels, pliers, dividers and compasses. These can all be stored in shallow drawers, which is where this chest comes into the picture.

The design for the chest came from a couple of inspirations. One was a Craftsman-style bookcase plan. The chest is made of quarter-sawn white oak, and the sides and top are shaped like the bookcase. The other inspiration came from multi-drawer chests that were made years ago to store sheet music.

This chest was assembled with butt joints and screws. The screws were countersunk and the holes plugged with ⅜in redheart plugs. The drawer pulls are also redheart, which were cut using a ½in plug cutter.

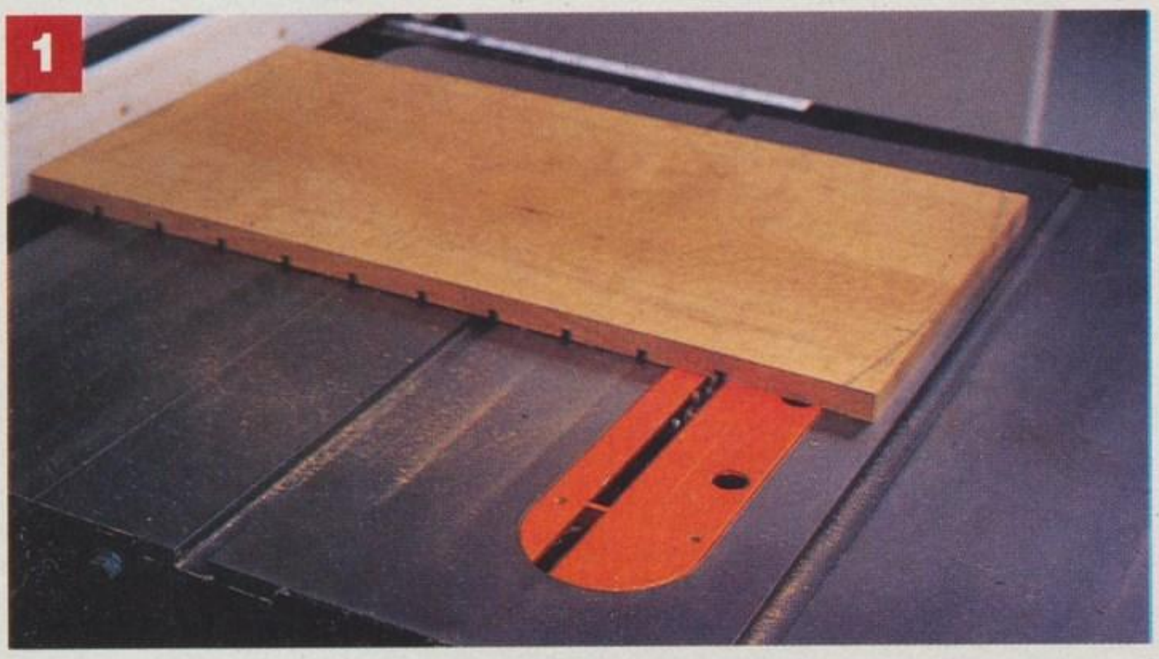
Step-by-step

1 Cut the sides A ⅜in narrower than the finished dimension. Then cut the grooves for the drawers. Glue a ⅜in × ¾in strip L to the back of each side. This strip will cover the ends of the grooves.

2 Draw the top arc on each of the sides.

3 When laying out the radii at the bottom of the sides, use a small, round object to draw the small radius that defines each foot.

4 Connect these two small radii with an arc that is 1in high from the bottom of the side. Trammel points mounted on a stick are great for drawing arcs. A little trial and error is involved here unless you can work out the radius using maths. I try connecting the dots, moving the pencil up or down the stick until I find the radius that works. If you don't have trammel points, drive a nail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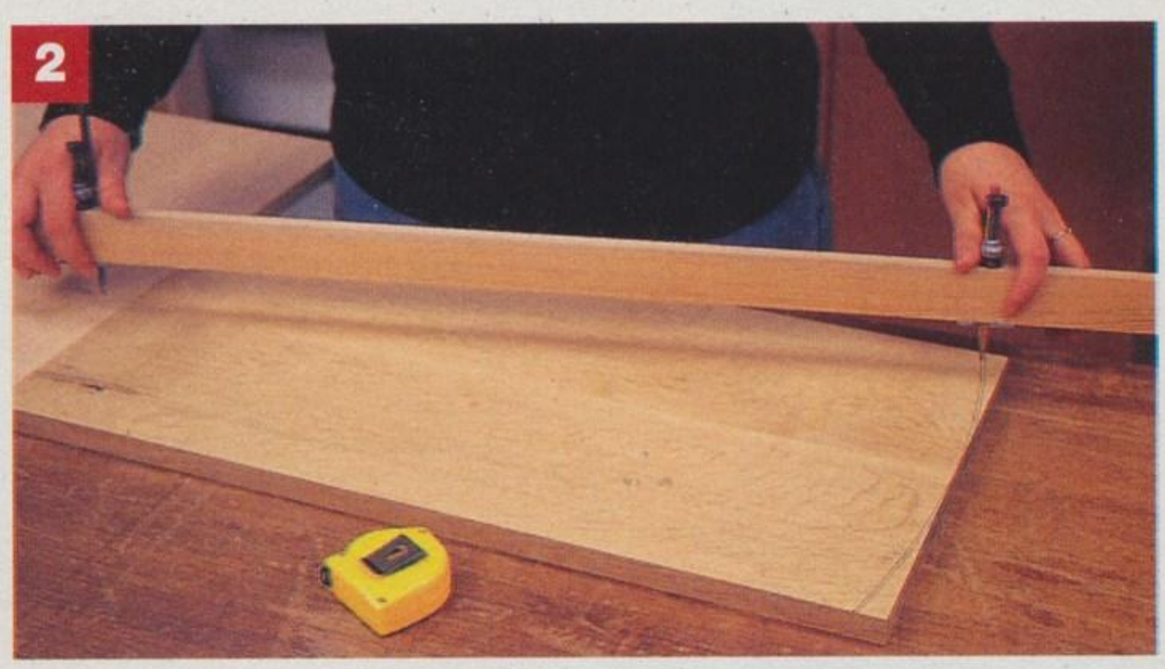
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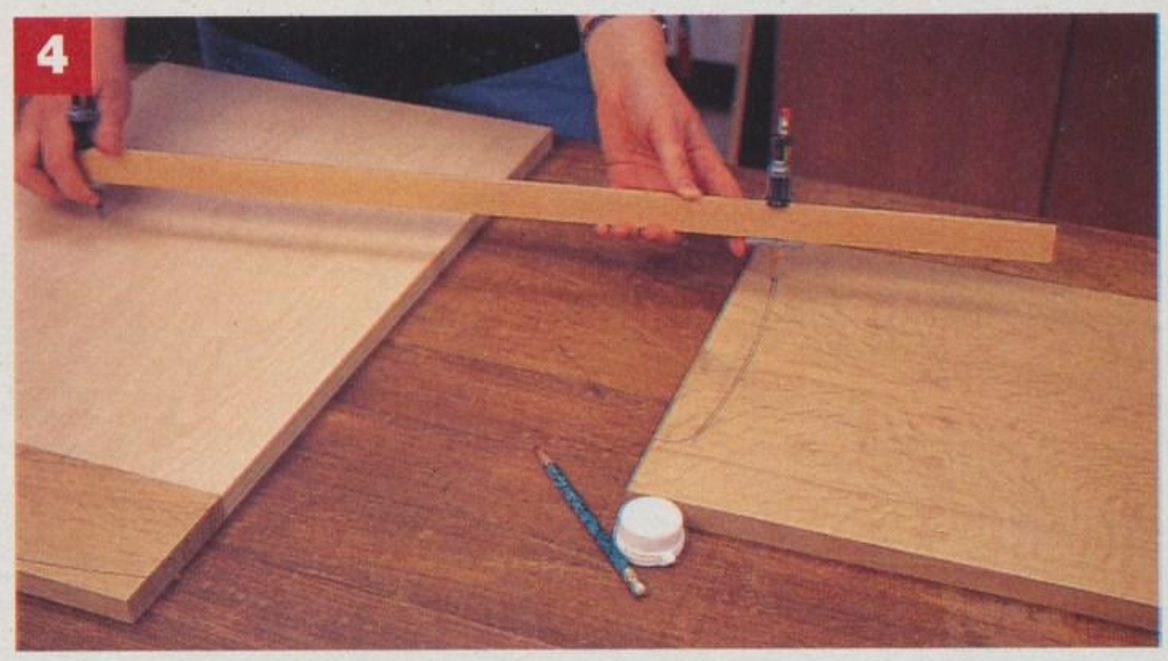
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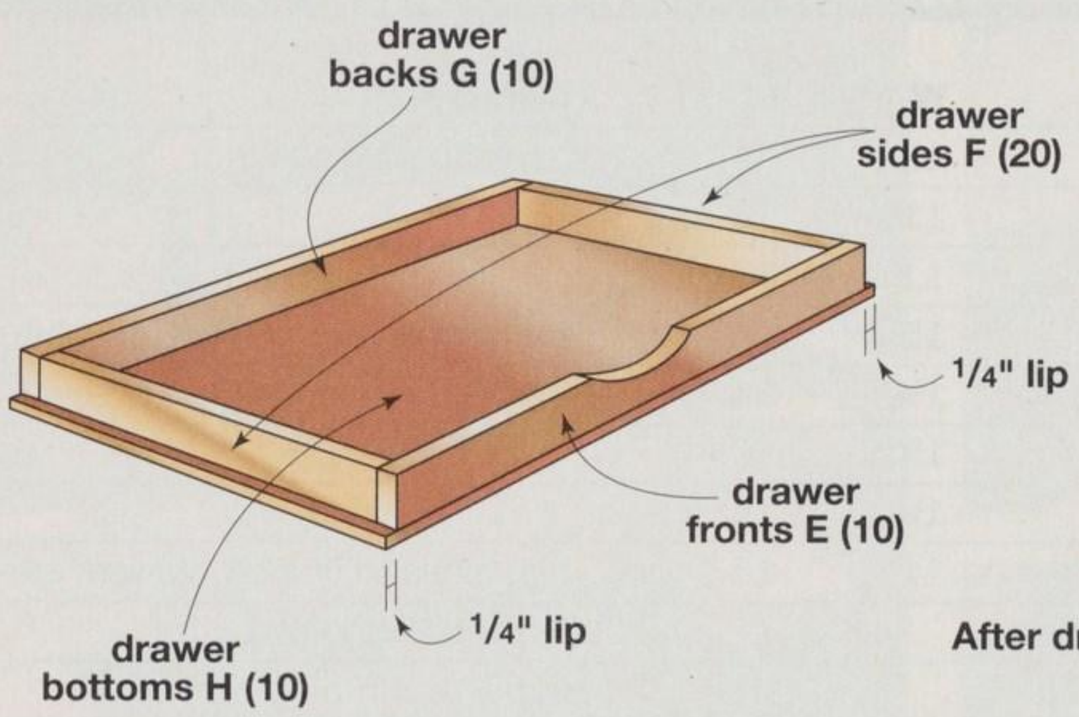
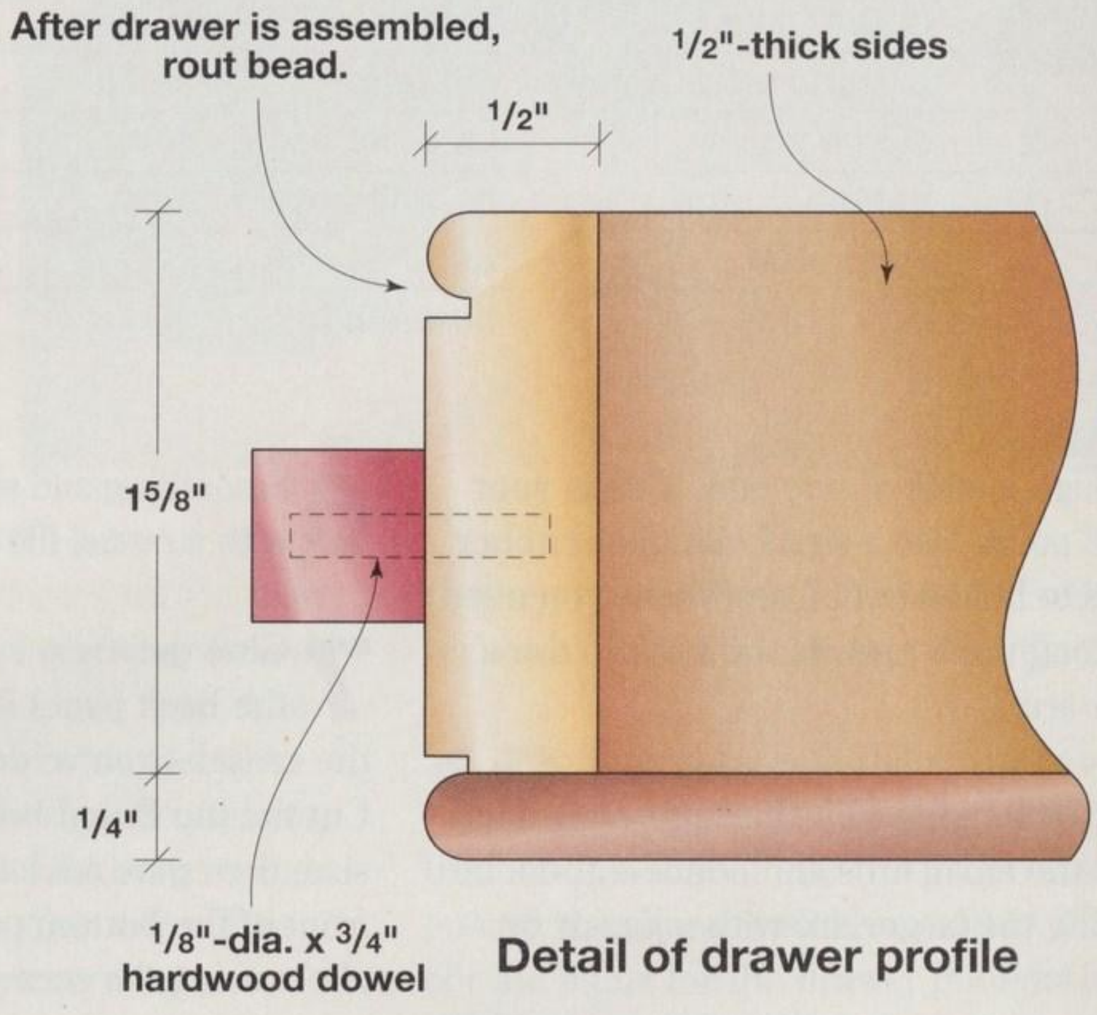
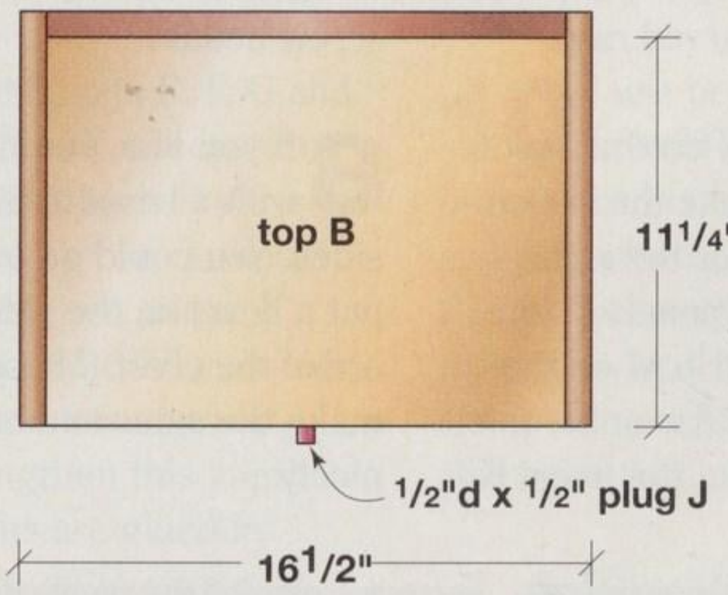
Book offer

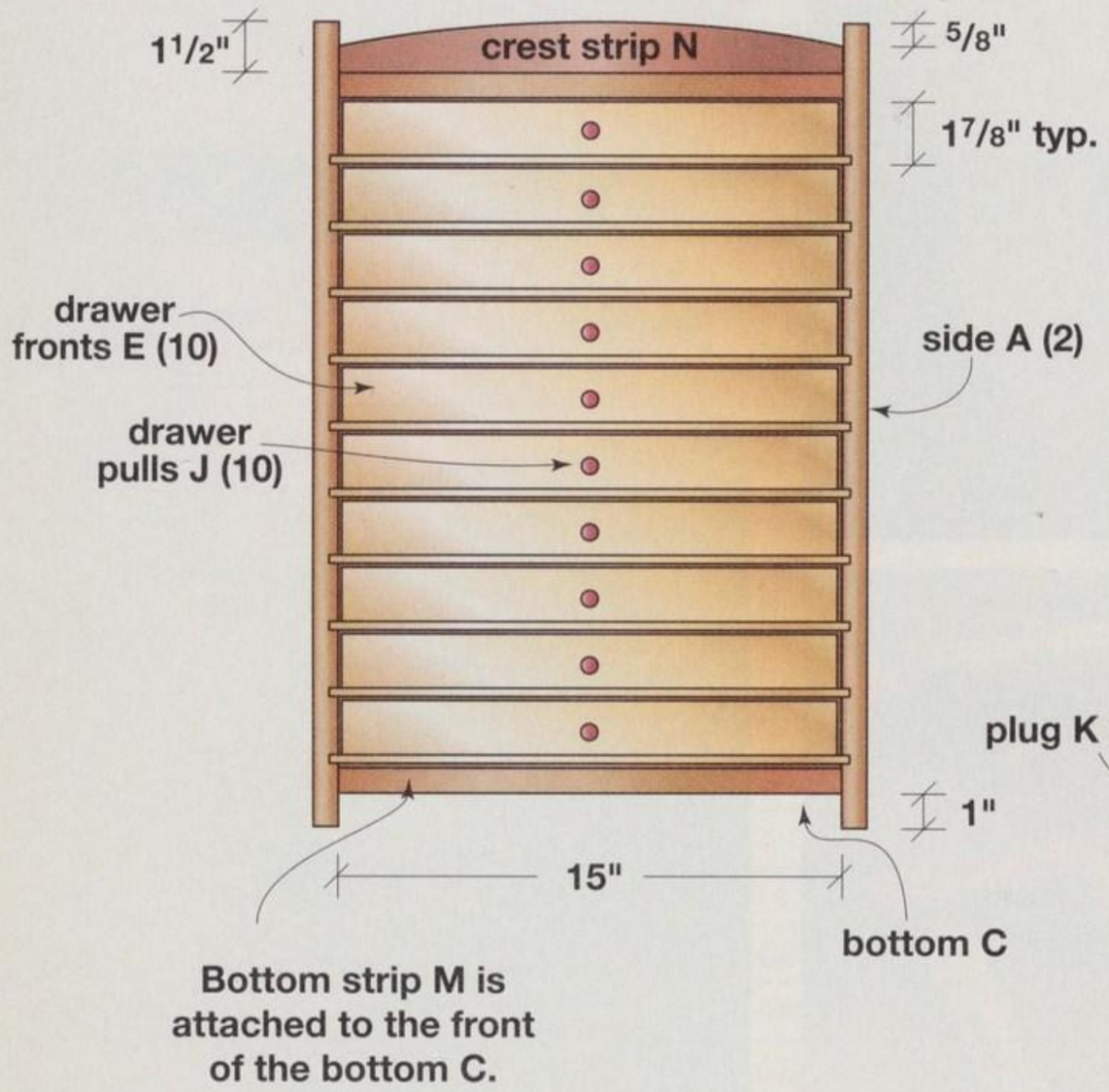
Woodworker readers can order copies of *Building the Perfect Tool Chest* for the special price of £14.99 (rrp £15.99), plus FREE p&p (UK mainland only). **To order, please call the David & Charles Hotline on 01626 334555 and quote code Z985.**

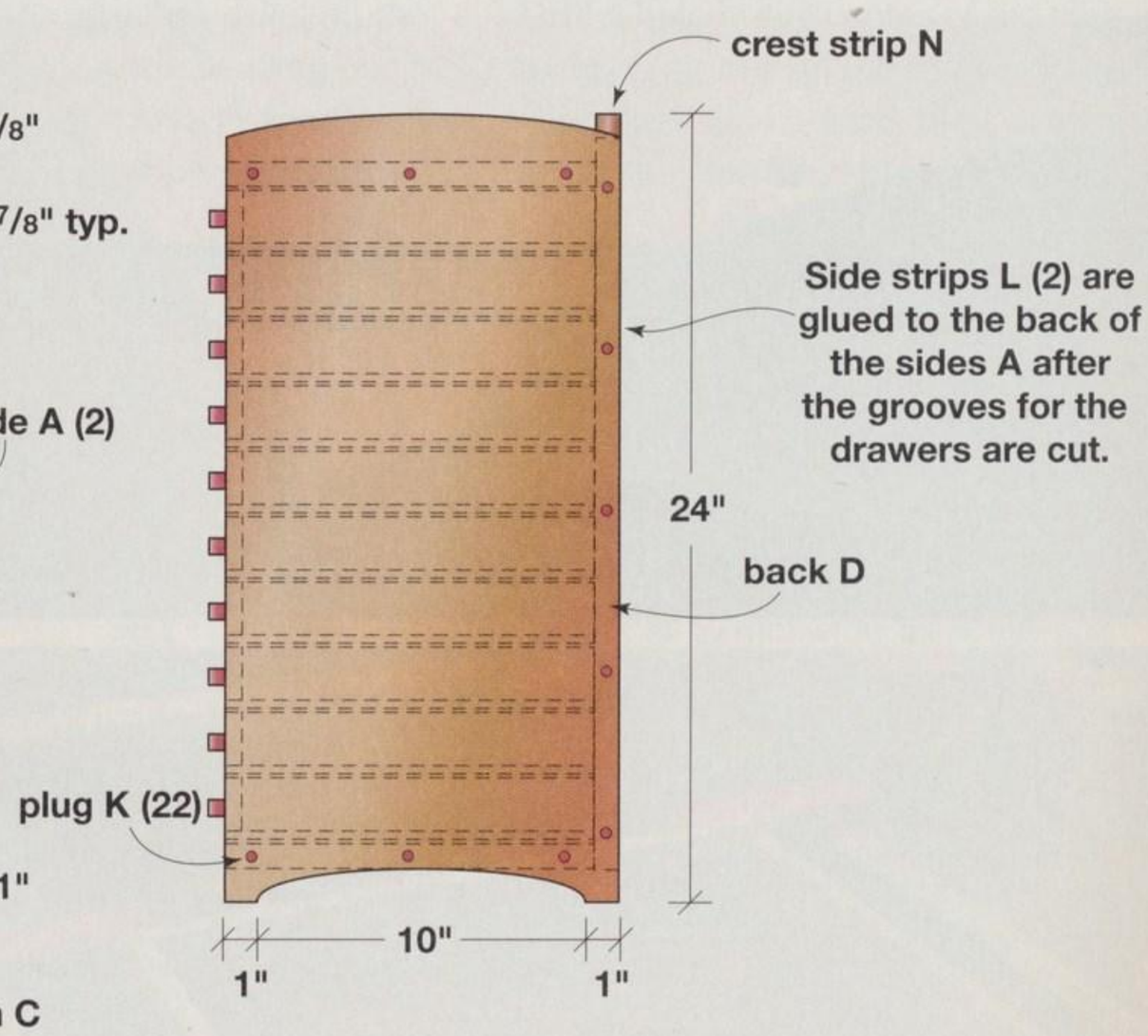




Detail of drawer profile







Tool chest cutting list (inches)

Ref	Qty	Part	Stock	T	W	L	Comments
A	2	sides	qs white oak	¾	12	24	qs = quarter-sawn
B	1	top	qs white oak	¾	11⅝	15	
C	1	bottom	plywood	¾	11¼	15	
D	1	back	plywood	¾	15	23	top crown is 2¼in-wide qs white oak
E	10	drawer fronts	qs white oak	½	1⅝	14 15/16	
F	20	drawer sides	poplar	½	1⅝	10¼	
G	10	drawer backs	poplar	½	1⅝	14 15/16	
H	10	drawer bottoms	plywood	¼	11¼	15½	trim sides to fit after drawers are assembled
J	10	drawer pulls	redheart	½ dia		½	cut with ½in plug cutter
K	22	plugs to cover screws	redheart	⅜ dia		¼+/-	cut with ⅜in plug cutter
L	2	side A strips	qs white oak	⅜	¾	24	
M	1	bottom C strip	qs white oak	⅜	¾	15	
N	1	crest strip	qs white oak	¾	2¼	15	
P	10	dowel rods	hardwood	⅛ dia		¾	

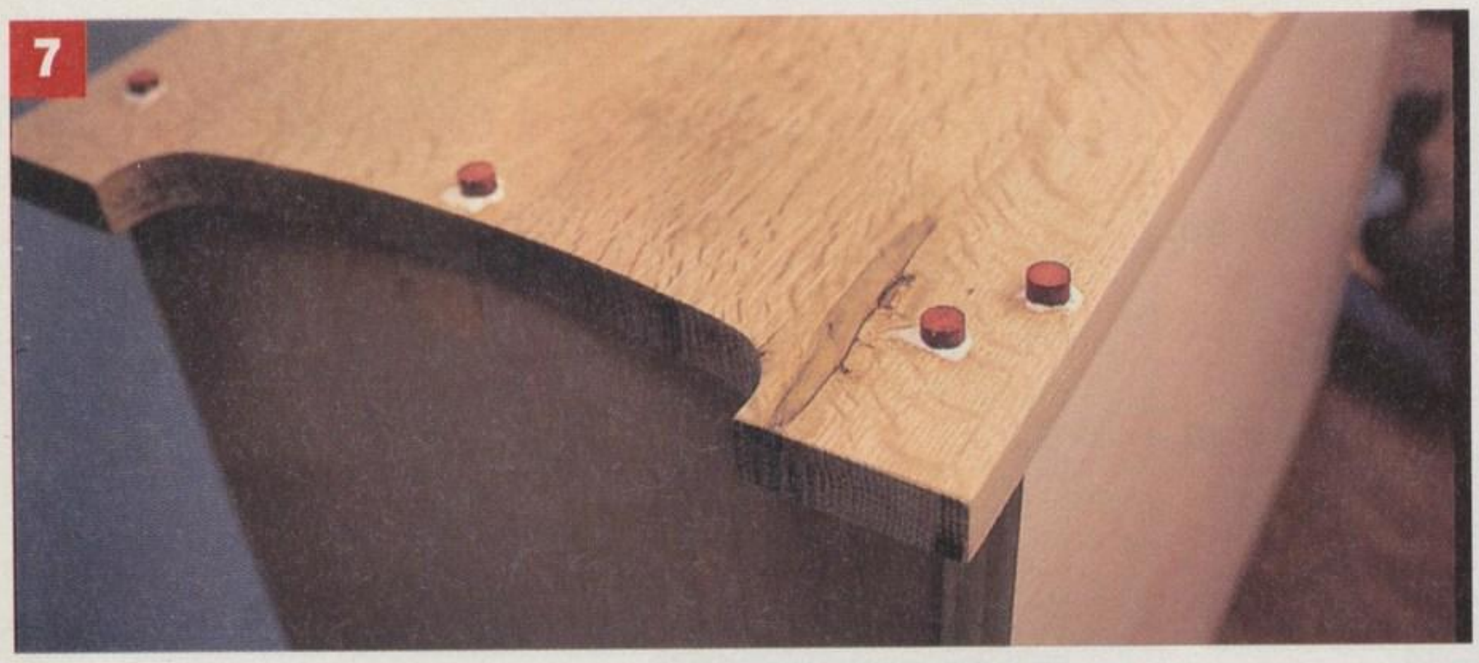
through a stick at one end. This is your fixed point. Use a small clamp or rubber band to hold a pencil anywhere you need to along the length of the stick to draw your arc.

5 Drill holes with the same radius as the small arcs and connect them by cutting the larger arc with a jigsaw or band saw.

6 Smoothing and shaping is easily done with a rat-tail file or curved rasp.

7 Glue the crest strip N on the top of the back panel D. Make the arc on the crest as you've done for the sides. Cut the top B and bottom panels C to size, then glue a ⅜ × ¾in strip M on the front of the bottom panel. Assemble the chest using 2in screws. Cut the plugs K and glue them in place to cover the screw heads.

8 If you like, you can cut the crest arc with a bevel to match the arc of the sides. You could go one step further and put a bevel on the side arcs to match the arc of the crest. These little details will make the sides and back flow together nicely.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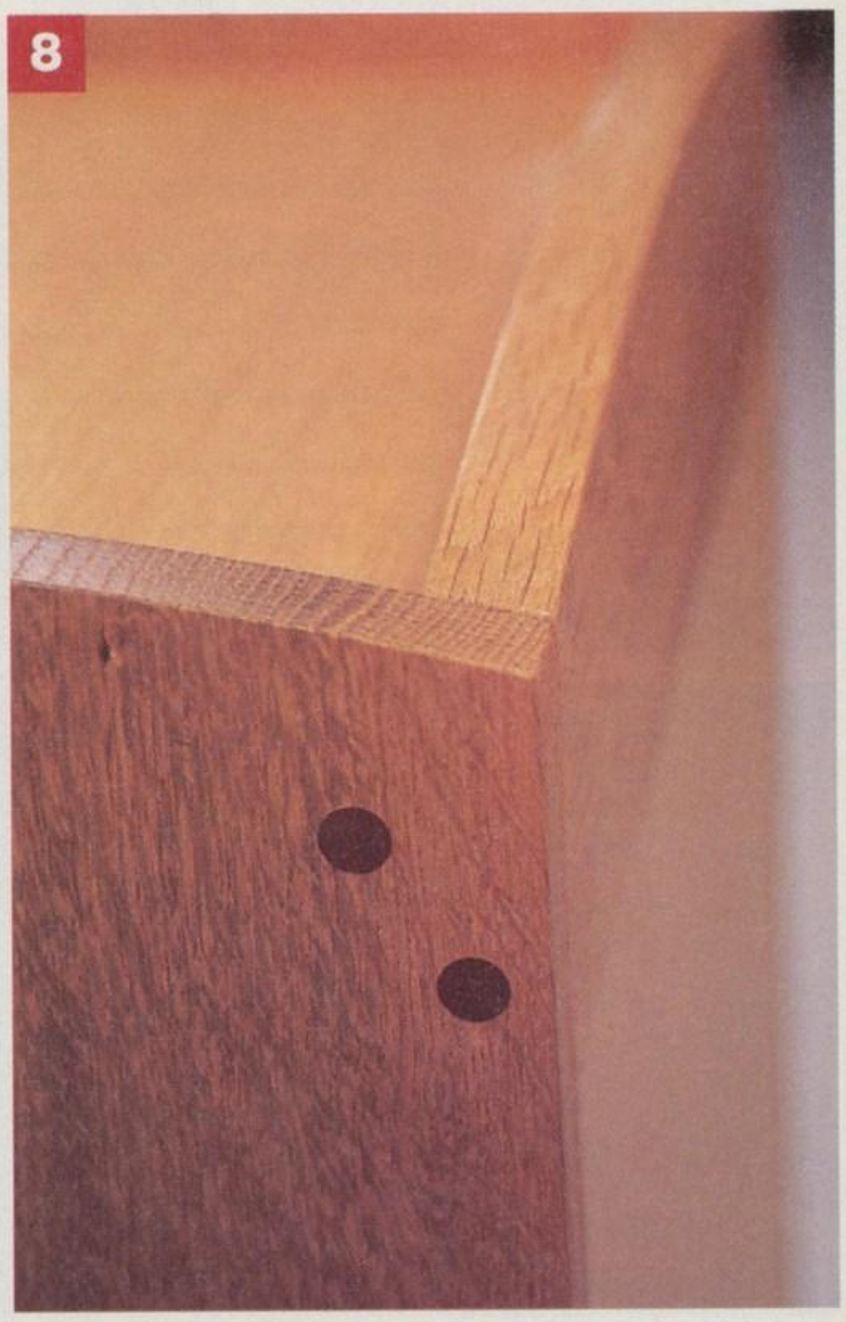
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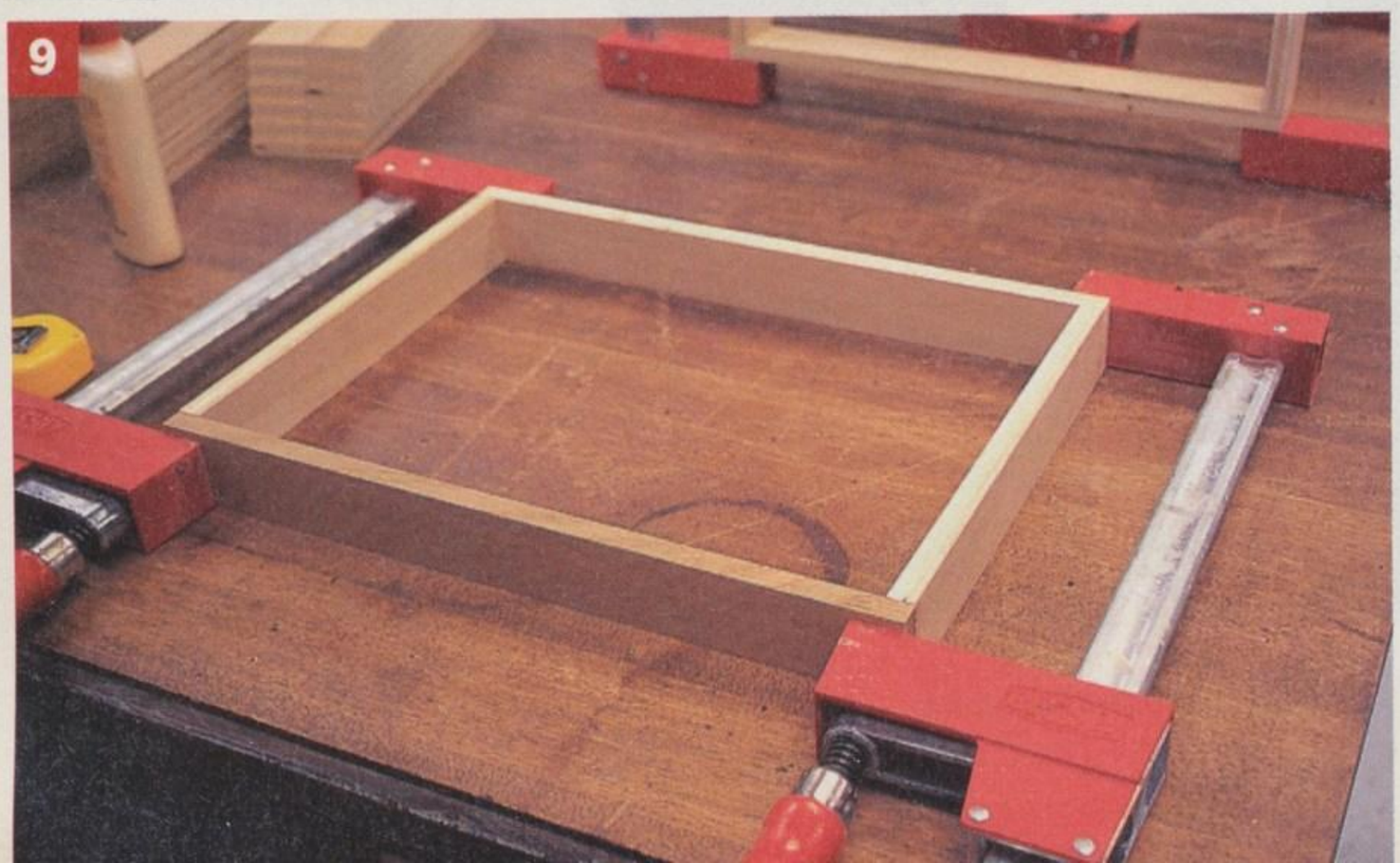
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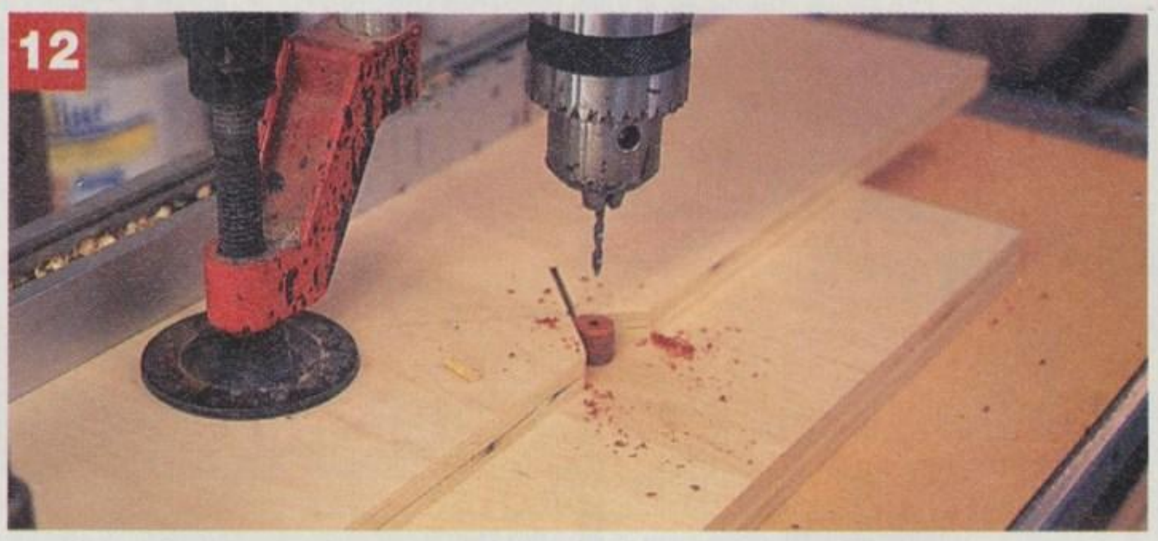
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9 Cut all the drawer parts E, F, G and H to size. The sides F are captured between the front E and back G parts, so glue-up can be done with two clamps. I just used glue on these butt joints. I know what you're thinking: Why would he use just glue and no fasteners or other joinery to strengthen this joint? Well, after the bottoms are glued in place, the drawers are quite strong. If you would like to use fasteners, please do so. Screws or tenons would work well.

10 I use bench horses all the time to hold parts for gluing. Several drawers can be glued at one time. After applying glue to the bottoms H, hold them in place with a few small brads or nails. Then stack up a few drawers and clamp them while the glue dries. This also helps keep the drawers flat.

11 When the glue has dried on the drawers, rout the beading on the top and bottom of the drawer fronts. The drawer bottoms are the perfect thickness to accept the radius of the bead. (See the technical illustration drawer detail.)

12 If necessary, fit the drawers by planing or sanding the sides of the bottoms that fit into the grooves to ensure the drawers slide smoothly. Then cut the plugs for the drawer pulls J. I attached the pulls with a ⅛in dowel rod P. Drill a hole in the center of the plug, and a matching hole in the drawer front. Glue the pulls in place, then sand and finish the chest and drawers.

Tool chest cutting list (millimetres)

Ref	Qty	Part	Stock	T	W	L	Comments
A	2	sides	qs white oak	19	305	610	qs = quarter-sawn
B	1	top	qs white oak	19	285	381	
C	1	bottom	plywood	19	285	381	
D	1	back	plywood	19	381	584	top crown is 57mm-wide qs white oak
E	10	drawer fronts	qs white oak	13	41	379	
F	20	drawer sides	poplar	13	41	260	
G	10	drawer backs	poplar	13	41	379	
H	10	drawer bottoms	plywood	6	286	394	trim sides to fit after drawers are assembled
J	10	drawer pulls	redheart	13 dia		13	cut with 13mm plug cutter
K	22	plugs to cover screws	redheart	10 dia		6+/-	cut with 10mm plug cutter
L	2	side A strips	qs white oak	10	19	610	
M	1	bottom C strip	qs white oak	10	10	381	
N	1	crest strip	qs white oak	19	57	381	
P	10	dowel rods	hardwood	3 dia		13	

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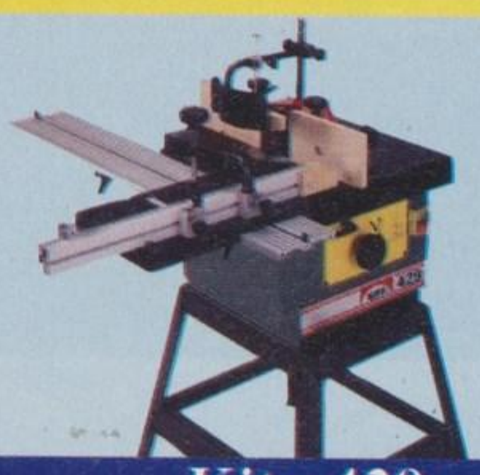

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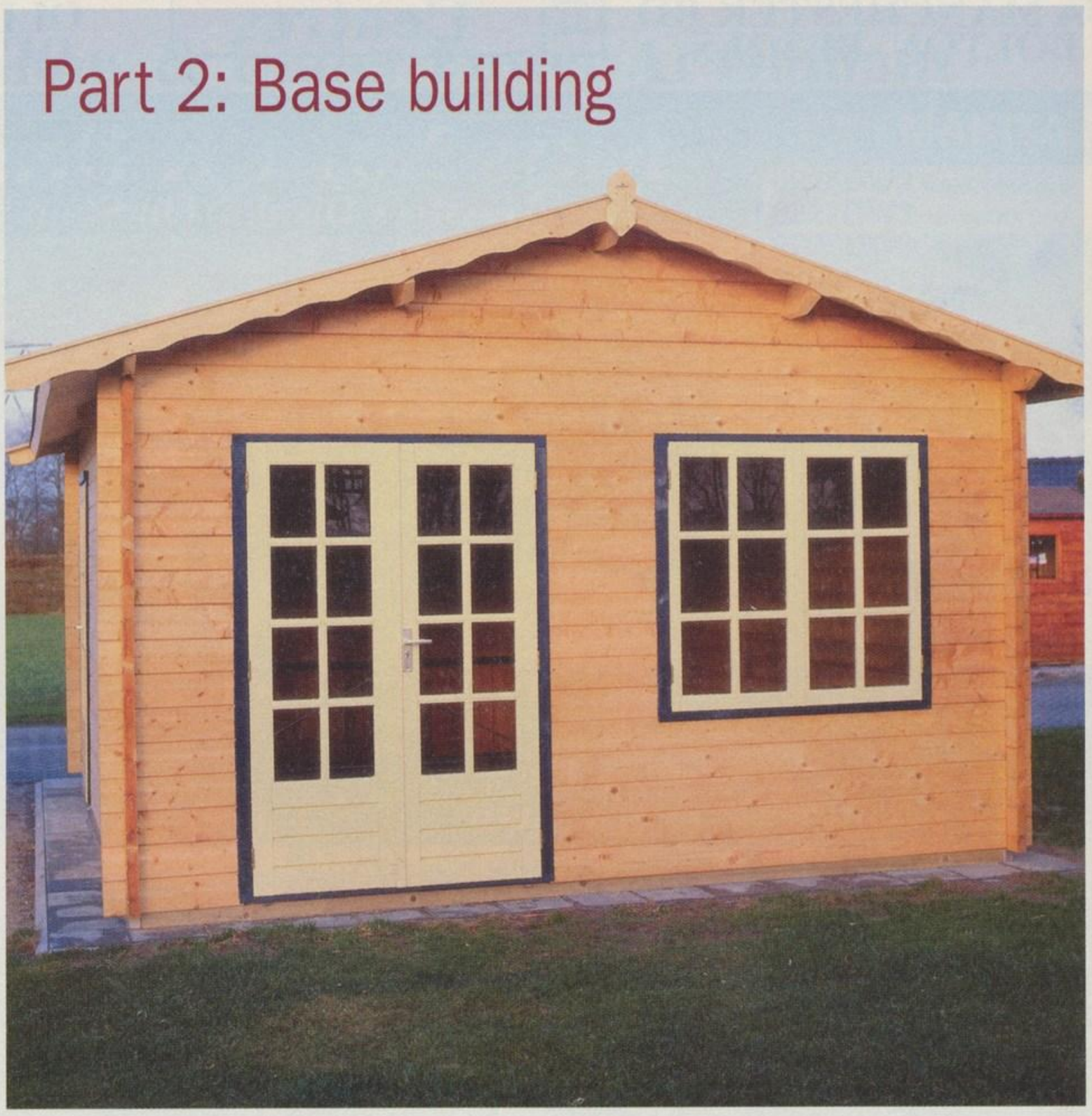
Part 2: Base building

Preparation is the key to all woodwork projects and workshop construction is no exception. Mark Ramuz shows how to prepare for your new workshop



1st class cabin

Our log cabin was delivered on a 35 tonne truck direct from the Dutch factory and dead on time. The cabin arrived in three wrapped pallet loads: the windows and doors; the roof and floor and the wall beams. The T&G 44mm thick planed softwood beams sit on pressure treated sole plates that lock together at the corners. It's worth asking the driver to place the pallets separately rather than stacked so that you can keep the roof and floor under wraps while you work on the wall construction. Also supplied is a checklist of all the parts, fixings, roofing and instructions.

Once you've decided on the location, shape and size of your workshop, it's time to move on to the hard work of forming a level base. You may be lucky enough to have an existing concrete pad or paved area which is dry and level. Otherwise, you will need to prepare the area. You may need to build a retaining wall and dig out more subsoil on a sloping site. It pays to invest in a 6-8ft long spirit level and builders' square to check you have a flat, symmetrical base.

Step-by-step

1 Our site slopes sharply away from the rear fence of the garden. The first job is to level the 4x5m area, remembering to add at least another 300mm all around so that rainwater and earth don't build up at the cabin base. You can use the pre-treated sole plates as a guide. Clear away any large rocks and roots. This site slopes steepy so the front of the cabin will be suported on a deck frame.

2 To keep down weeds, lay a nylon membrane across the area. This is available from garden centres and builders' merchants for around £15 per 1x12m roll.

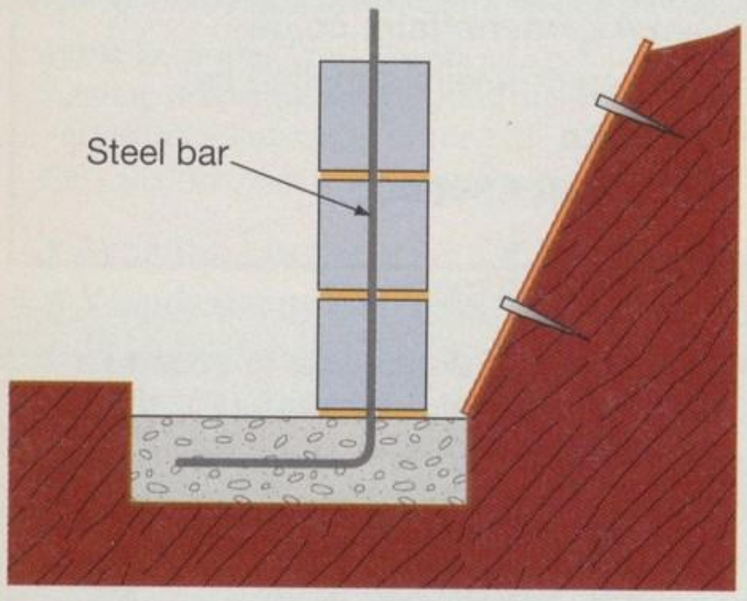
3 Continue to lay the sheet around the vulnerable areas. It's not essential to cover the inner section as this will be covered with flooring anyway.

4 Providing the ground has been well compacted, you can lay the sole plates directly on to paving slabs, placed around the perimiter of the workshop. Use 50mm of sand or MOT type 1 aggregate to level any uneven areas and form a base for the paving slabs. It's a good idea to make you base at least

1

2

3



Build retaining walls from stone, brick or blockwork. Use angled steel bar to reinforce the wall to its full height. Don't build this type of structure above 1m high

150mm bigger all around so that you can add a layer of gravel around the edge. This will stop water building up or splashing on the cabin sides.

5 As the site has such a steep slope, the front section of the cabin will project over the retaining boards and be supported on 4in square fence post uprights. These will have 4x2in sawn cross beams bolted to the front and back of the uprights. The front beams will support the front of the workshop and the back sections will support the floor

Figure 1 Area marked out with guide lines

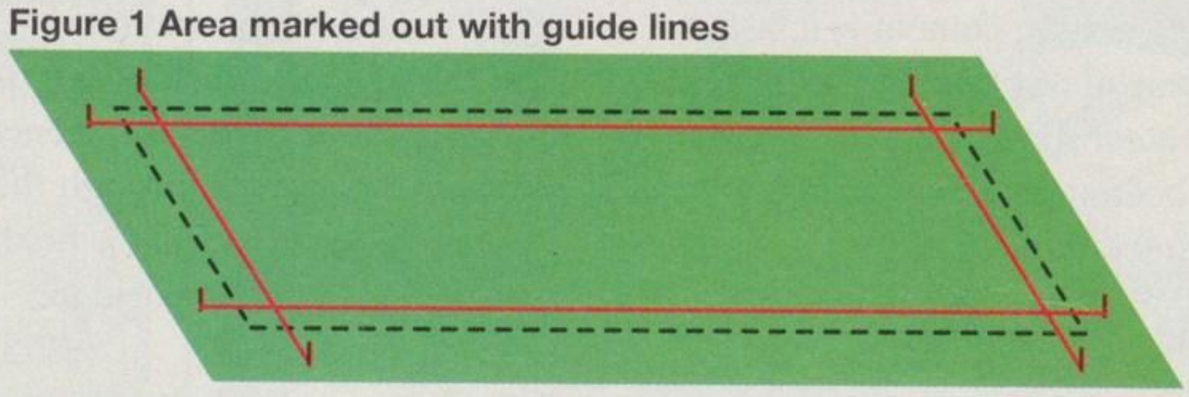


Figure 2 Completed formwork

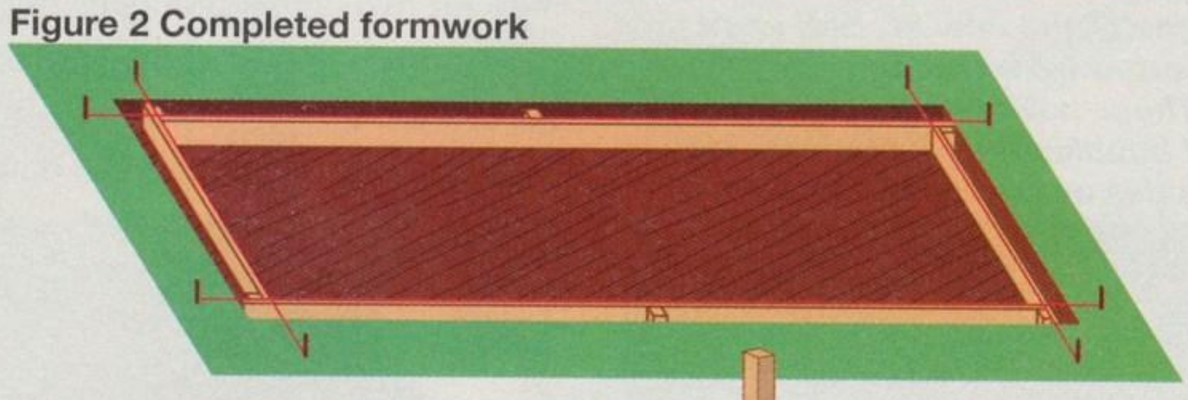


Figure 3 Level hardcore

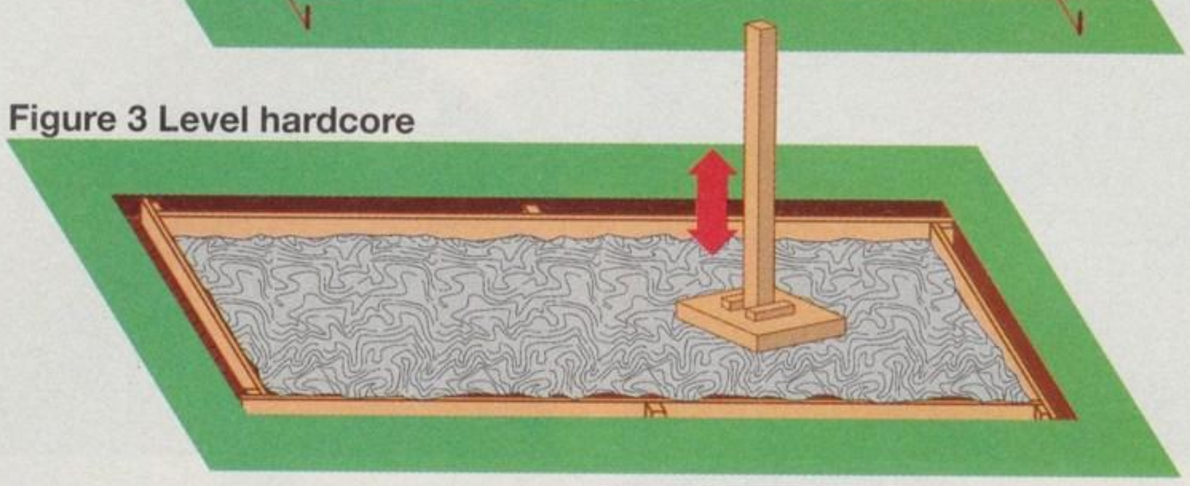


Figure 4 Compact the concrete with a plank

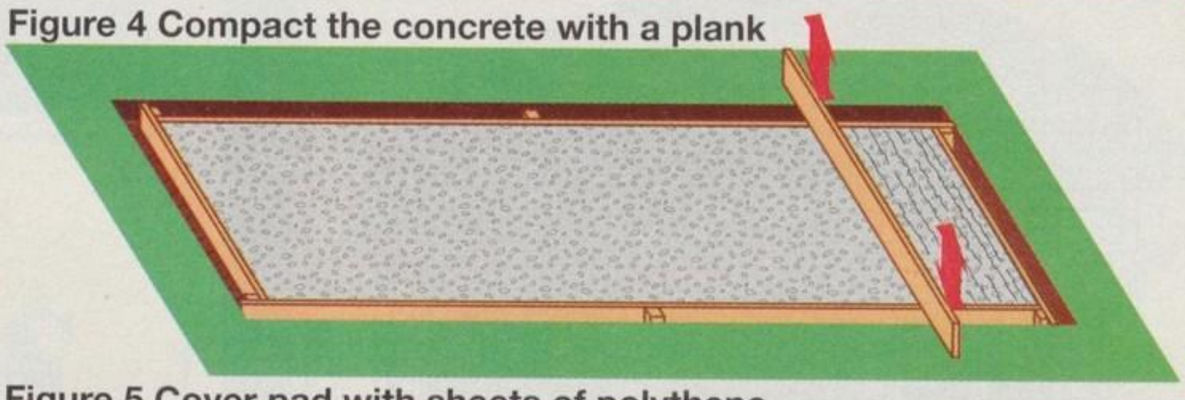
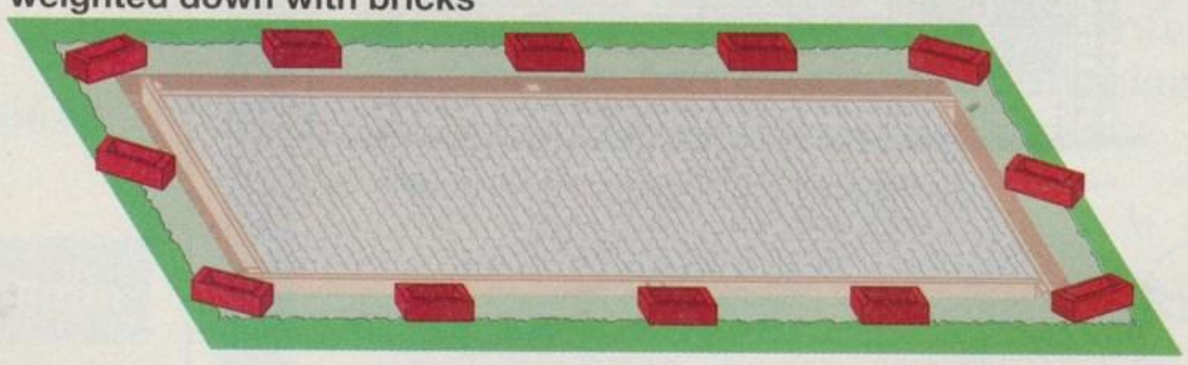
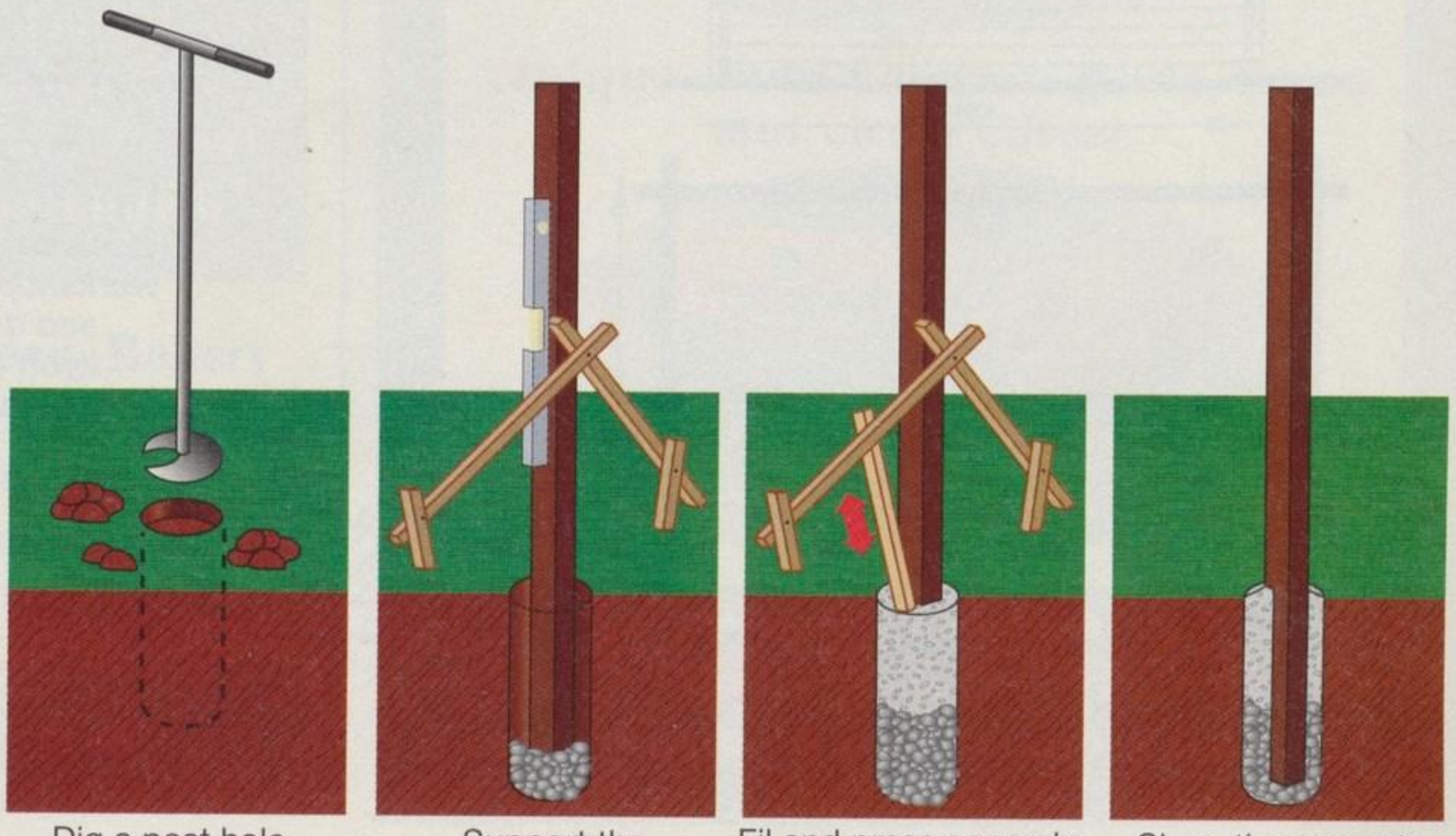


Figure 5 Cover pad with sheets of polythene, weighted down with bricks



How to fix timber uprights to build a deck



edge. Quick-setting cement is a fast and accurate way of positioning the uprights. Don't use steel fence spikes. The sole plate has been temporarily nailed to the posts to check the levels.

6 To support the cabin sides, the 4x2in timbers are coach bolted to the 4in uprights. Check the sole plates are horizontal then drill through the timbers. Quick cramps are ideal for holding the pieces in the correct position.

7 Fit two coach bolts per upright and tighten. Position these diagonally across the timber face for strength and tighten. Saw off any excess bolts.

We used one of the new 8ft BMI spirit levels imported from Germany by Brimarc. These have twin extra-large horizontal bubbles that can be viewed from the sides as well as overhead.

Useful information

Our Lugarde log cabin and all buildings shown here supplied by
Garden Affairs Ltd
☎ 01225 470372,
fax: 01225 442855
www.gardenaffairs.co.uk
BMI spirit levels supplied by
Brimarc
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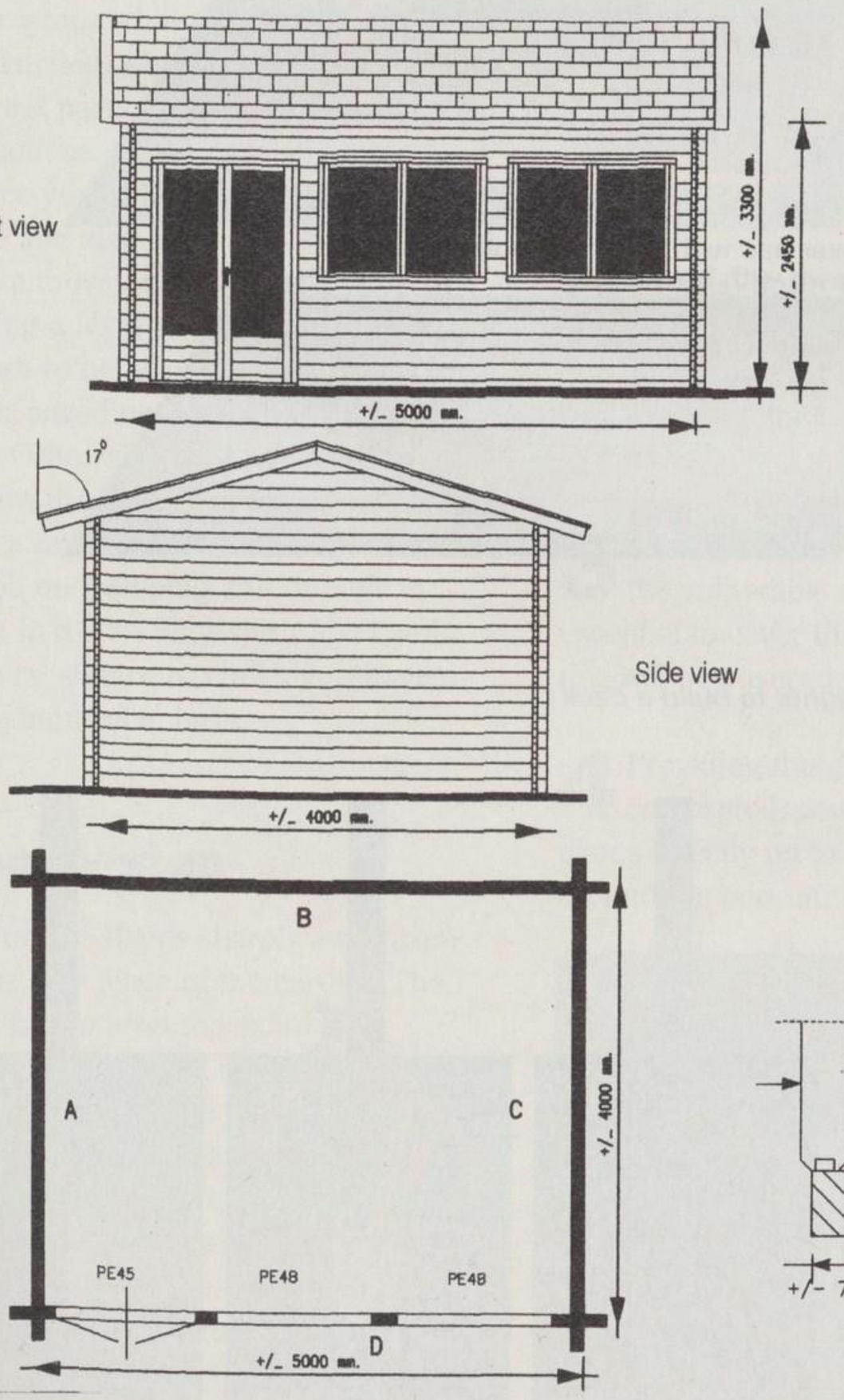
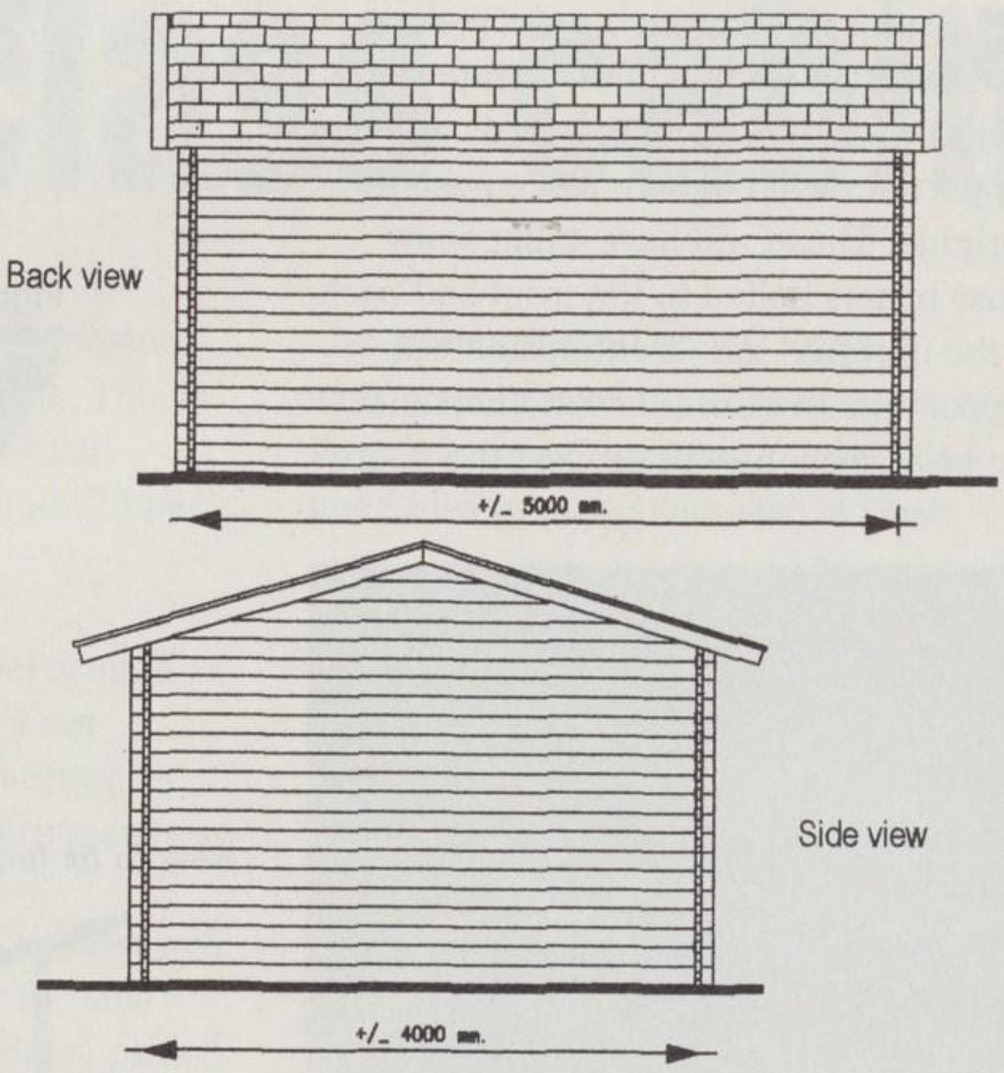
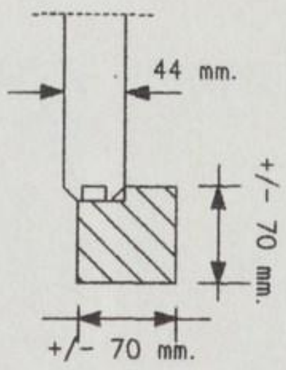
Of course you don't have to stick to a square or rectangular shape for the workshop (Ludgarde)







Here's the plan provided by Garden Affairs for our 'Nick' workshop log cabin. It will have double glazed windows and doors along the South facing side for maximum light. Check the window heights against your bench height when planning your workshop specifications

Next Month

We build the walls of the log cabin and install the windows.

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It's a knockout!

Dave Mackenzie shows how to make his compact variation of the traditional bar skittles pub game

Bar skittles is a traditional pub game that has been superseded in many modern pubs by pool and slot machines but can still be seen in unspoilt rural pubs. The origins of the game have been lost in time, but it has been around for several hundred years in various forms.

The name is also subject to variations, as well as bar skittles it is also colourfully known as 'devil amongst the tailors' and table skittles.

As you might expect there are no standard sizes for the game so I made mine compact so that it can be used at home and stored away without taking up

Bar skittle rules

The ball is swung clockwise around behind the pole, the objective being to knock over the skittles as it returns to the player. So in order to knock over all nine skittles, a player must hit the skittle furthest away first.

A coin should be tossed to see who takes the first turn. The skittles are only reset at the beginning of a turn or when all nine have been knocked over. Three throws per turn are allowed so that the maximum score in one go is 27. The ball must start its revolution around the outside of the board so that it hits the skittles upon its return towards the player. The ball is permitted to go around the pole only once for each throw - the player should catch it as it returns so as to prevent it going round a second time. The objective is to be the first player to reach a score of one 101.

too much room. My version is made mainly from oak, but any hardwood would be ok. It is obviously not strictly necessary to have a turned column and a piece of thick dowel would work just as well. However, traditional pub versions of the game often have turned columns. This was because they were usually made by the village carpenter, who used them as an advertisement for his skills.

The origins of the game have been lost in time, but it has been around for several hundred years in various forms

Base construction

Mark out and cut all four sides (A and B) to size from some ½in (12mm) oak boards. Mark the best face of each part to go on the outside of the base and also the top edge. These are going to be joined at the corners with simple comb joints.

To this end set up a marking gauge to measure ½in (12mm) and scribe a line across the back at both ends of all of the sides to mark the length of the pins. Set up a mortise gauge to scribe the width of the pins and the distance from the top edge. With this set up scribe marks at the ends of all of the sides on the inside and the outside faces. Use cross-hatching to indicate the waste area between the pins. Next use the marking gauge still set at ½in (12mm) to scribe a line across the outside faces of the waste wood areas. You do not scribe completely across the pins on the outside faces, as the marks would show. Cut the sides of the pins with a tenon saw. On the short sides the waste wood can be removed with a saw to form the shoulders but on the long side the waste wood in the centre of the joint is removed by chopping it out with a chisel. When this is done test the joints for fit and adjust them if they need it.

Next cut the five support pieces (C, D and F) for section and length. The two very short supports (E) are to go either side of the column. The supports are

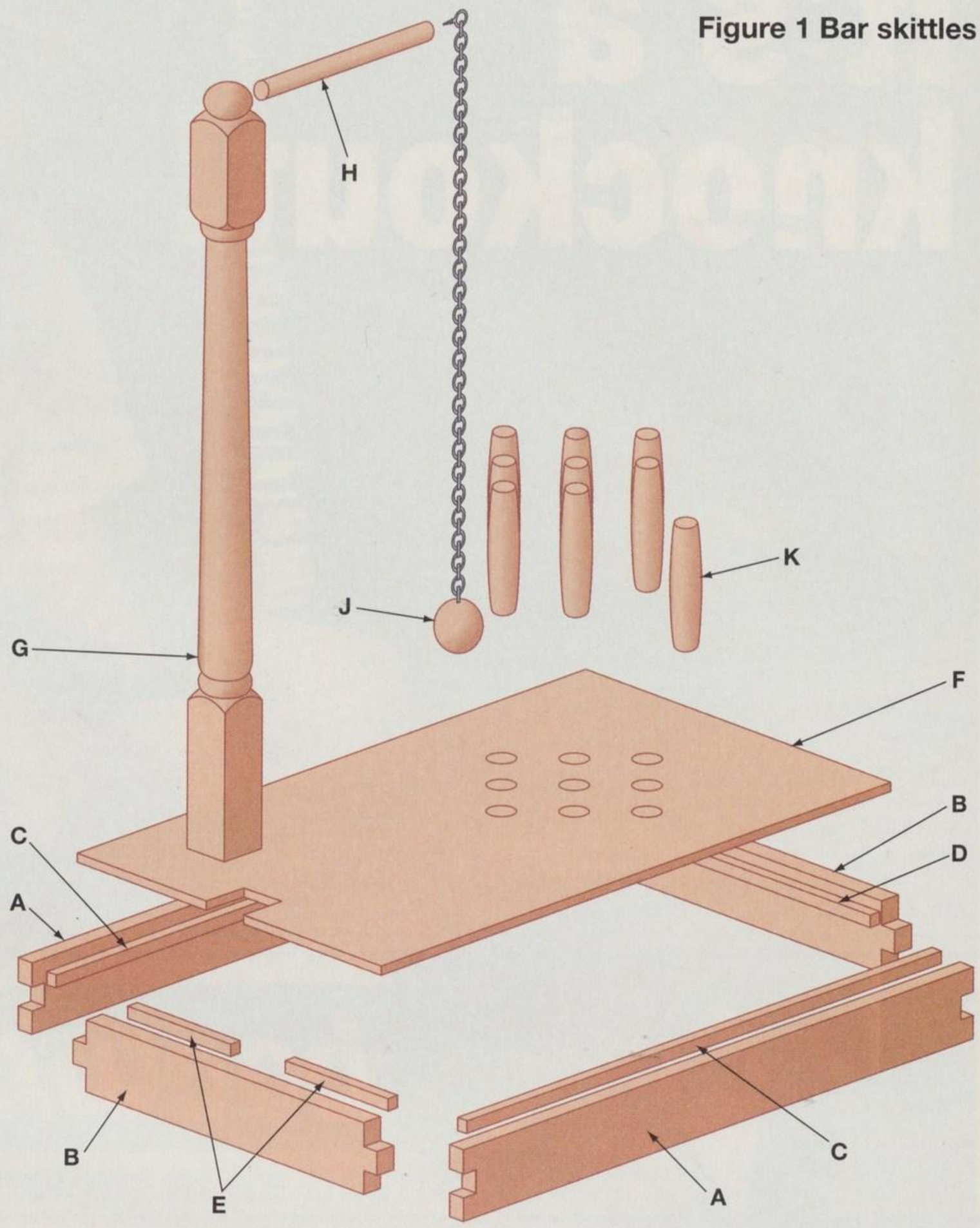


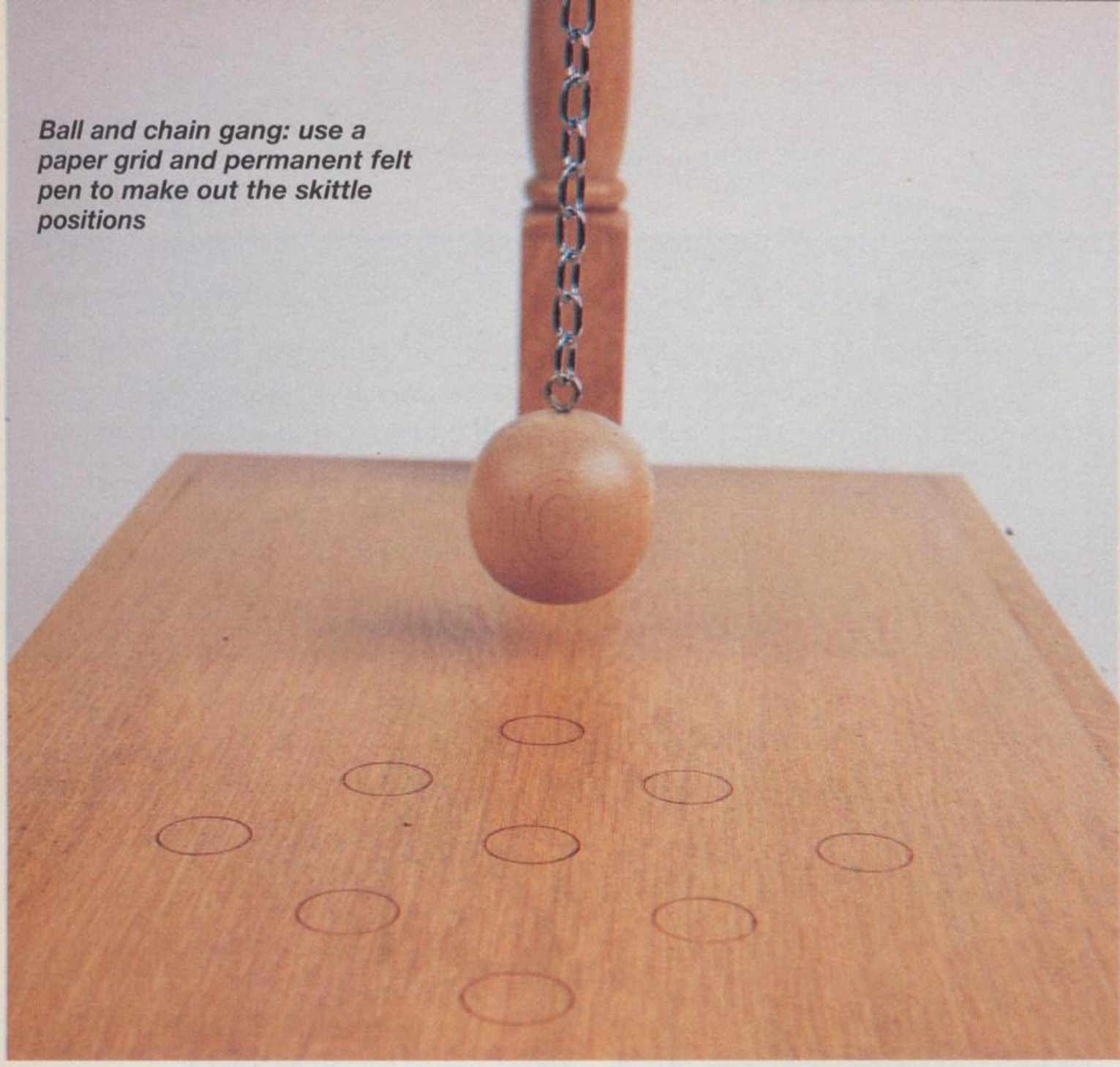
Figure 1 Bar skittles

Cutting list for bar skittles

There is no allowance for waste in the list for the turned parts. Oak is used for all parts except the top (F), which is made from oak-faced ply and the skittles, which use recycled mahogany.

Part	No.	Description	Millimetres	Inches
A	2 off	Long sides of base	508 x 57 x 12	20 x 2 ¼ x ½
B	2 off	Short sides of base	305 x 57 x 12	12 x 2 ¼ x ½
C	2 off	Long supports	483 x 12 x 12	19 x ½ x ½
D	1 off	Short supports	254 x 12 x 12	10 x ½ x ½
E	2 off	Very short supports	102 x 12 x 12	4 x ½ x ½
F	1 off	Top of base	483 x 279 x 9	19 x 11 x ⅜
G	1 off	Column	667 x 38 x 38	26 ¼ x 1 ½ x 1 ½
H	1 off	Arm	184 x 15 x 15	7 ¼ x ⅝ x ⅝
J	1 off	Ball	51 diameter	2 diameter
K	9 off	Skittles	101 x 25 x 25	4 x 1 x 1

Also required: approximately 24in (610mm) of chain and two screwed eyes.



Ball and chain gang: use a paper grid and permanent felt pen to make out the skittle positions

fixed with glue and pins ⅜in (9mm) down from the outside top edges of the sides.

Following this the top (F) is cut out from a piece of oak faced plywood. Plane the edges until it fits snugly into the frame and then cut a notch at one end to fit around the base of the column.

Turning the column (G)

Prepare a piece of square sectioned oak for the lathe. Ensure that the faces are exactly square as parts of the column are left unturned. Mount the piece on the lathe and place marks where the shoulders at the ends of the square section are to be cut.

To cut the shoulder, use a largish skew chisel. Place the chisel on the rest on its edge with the point down and feed it straight into the spinning wood. Initially the point of the chisel is slightly higher than the handle and as the point is pushed in the handle is raised. Carry on like this until the skew binds in the channel it is creating. Reposition the chisel so that it is cutting into the groove from an angle on one side and push into the slot you just made. Repeat this on the opposite side. Do not try to make large cuts but simply take off a little each time. Doing this makes a small shoulder. To enlarge it, turn the chisel over so that it is on the other edge with the point upwards and cut the shoulder in from an angle with the heel of the skew. Make several passes like this until the shoulder is the required size.

Next use a roughing out gauge to turn the areas between the shoulders to a 1 ½in (38mm) diameter cylinder and where the top knob is located. Mark the position of the beads and cut the beads at both ends of the long tapered section. This can be done in a number of ways but I like to use a skew chisel to make 'V' grooves at either side of the beads and then a small gouge to round them over.

After this is done cut the taper between the beads with a skew chisel. Finally, cut the ball at the top. This is treated as a large bead for the purposes of cutting it on the lathe. Use some medium followed by fine grade abrasive paper to smooth your work before removing the piece from the lathe.

Trim off the ends and drill a ⅝in (15mm) hole in the top of the column that houses the arm. This is done using a pillar drill fitted initially with a ⅛in (3mm) twist bit to make a pilot hole followed by a large diameter spade bit. Put a depth stop (piece of masking tape) on the bit so that it does not penetrate completely through the column.

Turning the arm (H)

This is a straightforward piece of turning that is done initially with a gouge before using a skew to plane the surface smooth.

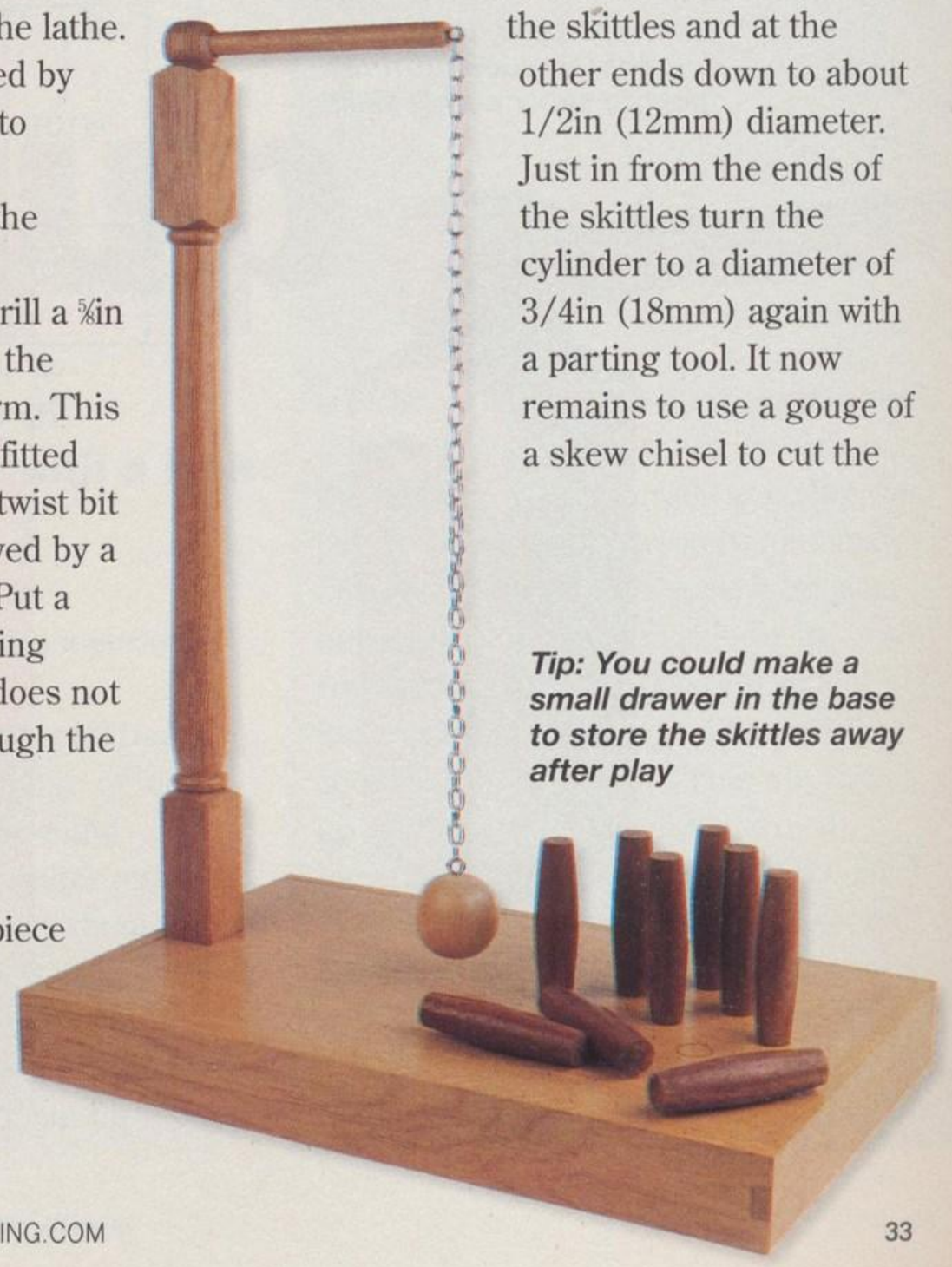
Turning the ball (J)

A completely spherical ball can be quite challenging to turn on a lathe. The best way that I know is to use a purpose built jig (see 'making a croquet set' in the June 2003 issue of The Woodworker) but in this case I do not think it is necessary to go to such elaborate lengths. This is mainly because the ball is simply hung on a chain and does not have to be spherical enough to run smoothly along a surface. Also it will loose some of its shape when its been thumped into the skittles a few dozen times.

In this instance the ball is made in the same way as a large bead but so that the shape is roughly ball-like I used a card template to match the shape to.

Turning the skittles (K)

There are nine of these and as it is a fairly simple turning job I did them in batches of two plus one odd one. To this end prepare all of the blanks and mount the first one onto the lathe. Turn to a smooth cylinder with a diameter of 1in (25mm), which represents the thickest part of a skittle. Mark the blank into two 4in (102mm) lengths and also place a mark to indicate where the centre of each skittles is located. Use a parting tool to turn the areas between the skittles and at the other ends down to about 1/2in (12mm) diameter. Just in from the ends of the skittles turn the cylinder to a diameter of 3/4in (18mm) again with a parting tool. It now remains to use a gouge of a skew chisel to cut the



Tip: You could make a small drawer in the base to store the skittles away after play

taper between the centres of each skittle to the ends that have been turned to a diameter of ¾in (18 mm). When this is done, sand them to a good finish and cut them from the lathe with a parting tool. When you do this make the ends slightly concave so that they will stand up without wobbling.

Marking the stand

On a piece of paper draw a grid similar to the one illustrated by **Fig 2**. Place this on the base at an angle of 45 degrees and prick through where the lines intersect to mark their position on the top of the base. Use a permanent felt tip pen and draw around a washer to make the rings. I used a washer and not a coin because a washer has a hole in the centre so that I could see the prick marks on the base to position the rings accurately. Permanent felt tipped pens are sold for use on overhead projector foils.

Assembling the parts

Fix the column to the inside of the base with glue and a screw. Fit the top to the base with glue. Obtain a couple of screwed eyes and fit one to the ball and one to the end of the arm. Fit a length of chain (I used chain that was obtained from a DIY store) between the ball and the arm. To do this, cut the chain so that it is long enough to suspend the ball about 1in (25mm) from the top of the frame. Use a hacksaw to cut open the end links of the chain, thread them through the screwed eyes. Finally squeeze the links together again with a pair of pliers. Glue the arm into the column. At this stage the base, column and skittles are all varnished with a couple of coats of acrylic varnish.

In the past, the village carpenter would turn the post to show off his skills

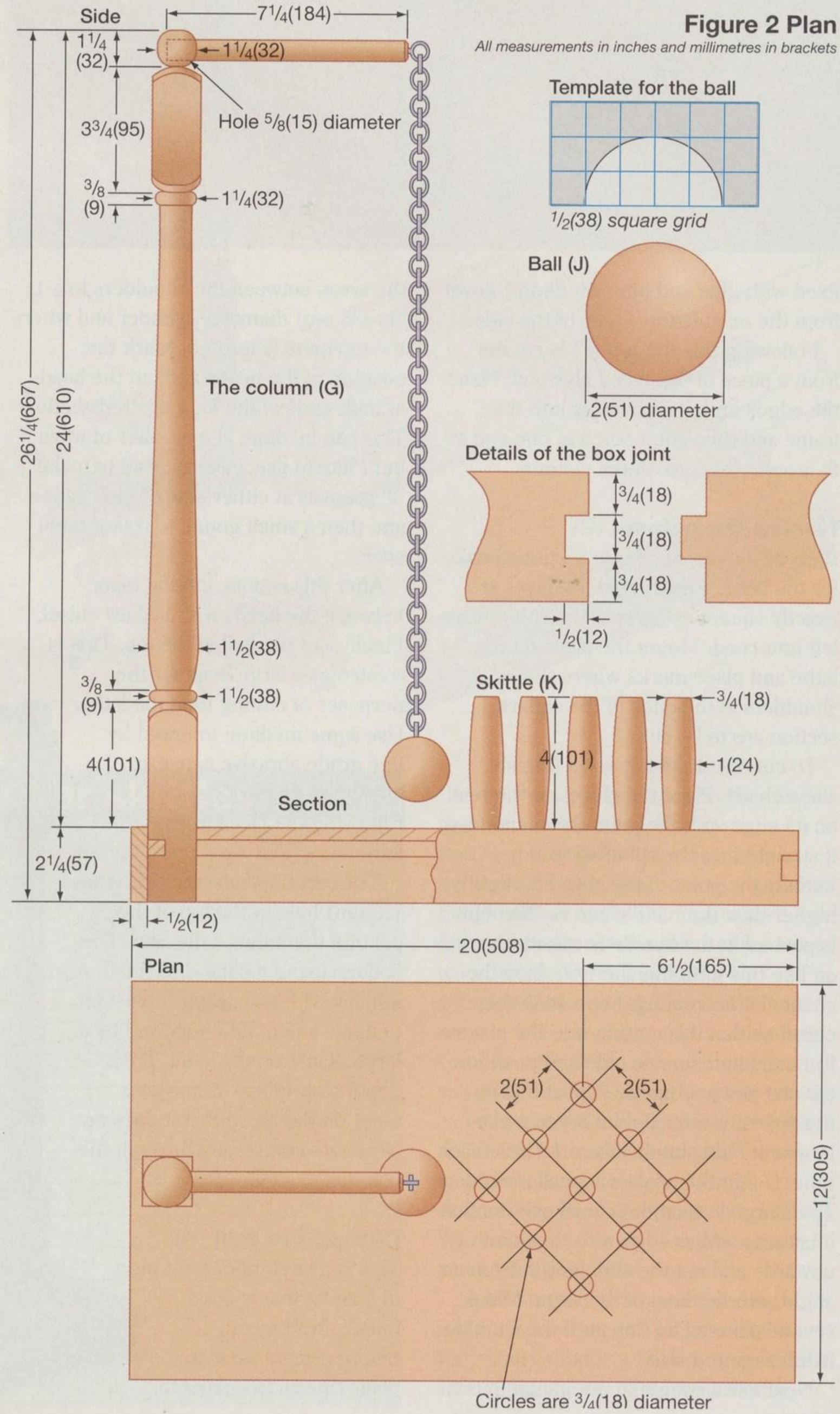
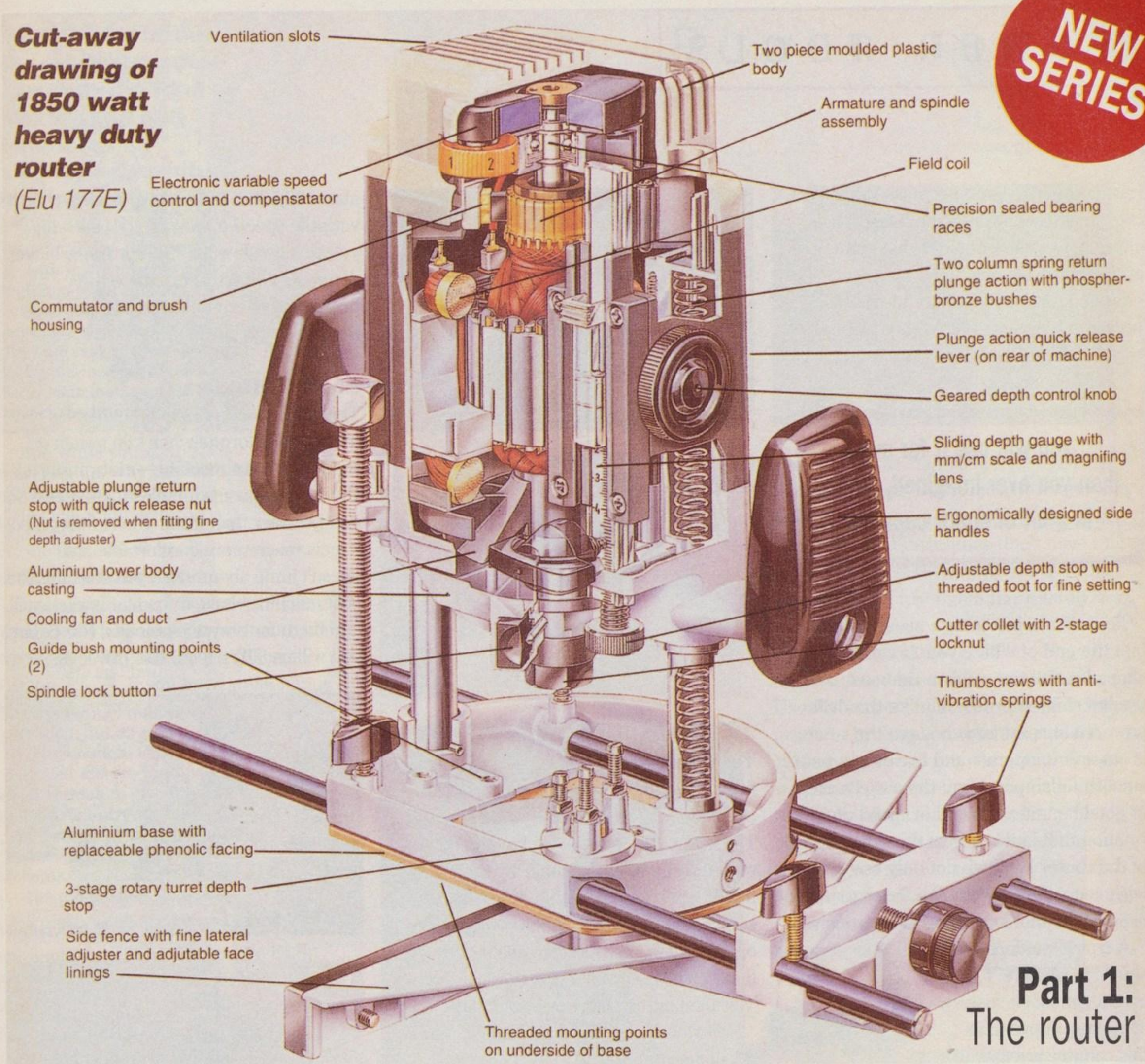


Figure 2 Plan

All measurements in inches and millimetres in brackets



Tooling up

We kick off our new series on the basics of choosing and using portable power tools with a look at the router. By Alan Holtham

The development of the small, powerful router has revolutionised home woodworking, bringing previously unattainable techniques and processes comfortably within the grasp of the amateur. Not only does the router make these jobs quick and easy, it does them with such efficiency that the results are seemingly miraculous. Simply running an edge mould around the top of a table transforms it from a homemade DIY project into a piece of furniture.

The router then is a powerful tool in all senses, but the huge range of tools currently on offer must be mind boggling to the budding router owner trying to make a judgement about which model to buy. The first of these power tool guides is intended to talk you through the main features of the router, showing you what to look out for if you are about to part with hard earned cash.

As with any tool there is no escaping the fact that you generally get what you pay for. Apparently cheap routers may initially appear to be a superb bargain, but remember that the spindle is revolving at up to 30,000 rpm so any inaccuracies in bearings or assembly soon become apparent. This will show up as vibration at the cutter which inevitably affects the quality of the finish. In addition these poorly made tools are uncomfortable to handle for long periods and the noise is often unbearable.

Also remember that once you have finally taken the plunge and bought your

router you will use it far more than you ever imagined, so buy in a bit of spare capacity as well. Consider that some jigs and accessories may need a more powerful tool or the ability to take a bigger cutter, so try and think through to your ultimate work requirements.

...you will use it far more than you ever imagined, so buy in a bit of spare capacity

Routers are just a high speed motor into the end of which you fit various shaped cutters to remove timber to a predetermined profile. Unlike the drill powered shapers of years ago the router is smooth to operate and leaves a super smooth finish providing the cutters are in good condition. It is this speed of rotation that is the key to the efficiency of the router because not only does it leave a good surface finish, but it also prevents to tool snatching dangerously.

A typical modern router is shown in **picture 1**, typical in that almost exclusively all routers supplied in this country are now of the plunge type. i.e. the motor slides up and down on the support arms of the base and can be locked in place to determine the depth of cut.

1

1 Capacity

The cutter is held in a type of chuck called a collet, **Pic 2**, which can only accommodate one size of cutter shank. By far the majority of cutters are supplied with ¼in shanks and most machines are supplied with this size of collet. Some larger routers are powerful enough to take big cutters which may then have 8mm or ½in shanks. These larger machines will also take the smaller collets, but you cannot fit big cutters in small routers.

2

3

2 Check the collet

The collet construction varies enormously from manufacturer to manufacturer, **Pic 3**, but they all work on the same principle. The sleeve of the collet is clamped down onto the shank of the cutter by the locking nut. It is the quality of this collet that to some extent determines the performance of the router. Badly made collets or those that don't clamp down properly may set up vibration in the cutter or even keep working loose. As a general rule the longer the sleeve of the collet the better the support will be and the better the cut.

3 Variable speed

Because the cutters can vary so much in diameter it is handy to have some control over the speed of rotation. Bigger diameter cutters obviously have a much higher peripheral speed and hence can easily burn the work if they are not kept on the move. With fixed speed machines usually working at about 28,000 it is handy to have a variable speed option, **Pic 4**, allowing you to slow down a little for these bigger diameter cutters and reduce the possibility of burning and also prolong the life of the cutting edge.

Go for soft-start

This high speed of rotation generates tremendous torque when you switch on, so ideally find a machine with 'soft start', **Pic 5**. This means it builds up to speed gently rather than kicking in at full revs so it feels much more comfortable and doesn't jump about when you start up. The best machines have the on/off switch built into them for easy accessibility, **Pic 6**, but you will usually pay for this privilege.

5

6

Gripping stuff

You control the path of the router with these two side handles so their ergonomic design is obviously important, **Pic 7**. Some are distinctly shaped or raked back, but remember that you are often bending down to peer

4

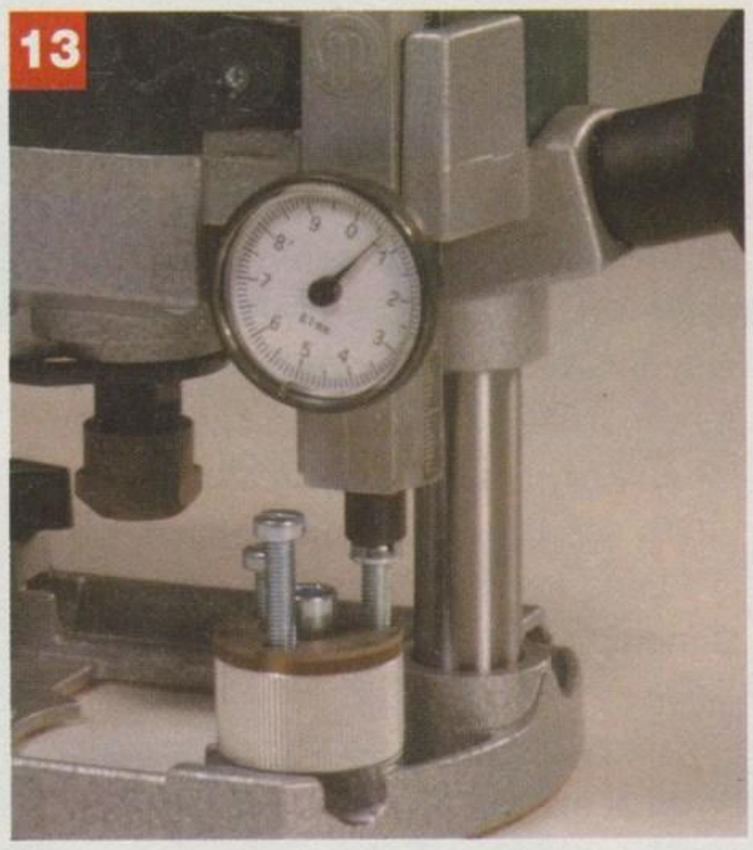
7

at the cutter or maybe standing up to look over the top so round knob type handles are usually better because they feel the same no matter how you are having to hold the router.

Whatever the shape make sure you can reach the various controls without having to remove your hand from a full grip position, **Pic 8**. If you have small hands this may be a problem on some machines so do try them in the flesh first.

Lock it up

Similarly, and possibly more importantly, the lock for the plunge mechanism needs to be accessed in the same way, so it may be a lever mounted behind a handle, **Pic 9**, or better, the lock is activated by twisting the handle itself, **Pic 10**. This ease of locking and release is so important when you are starting a cut in the middle of a piece of work. If you have to wrestle with the lock the chances are that you will move the cutter unintentionally, usually damaging the work in the process.

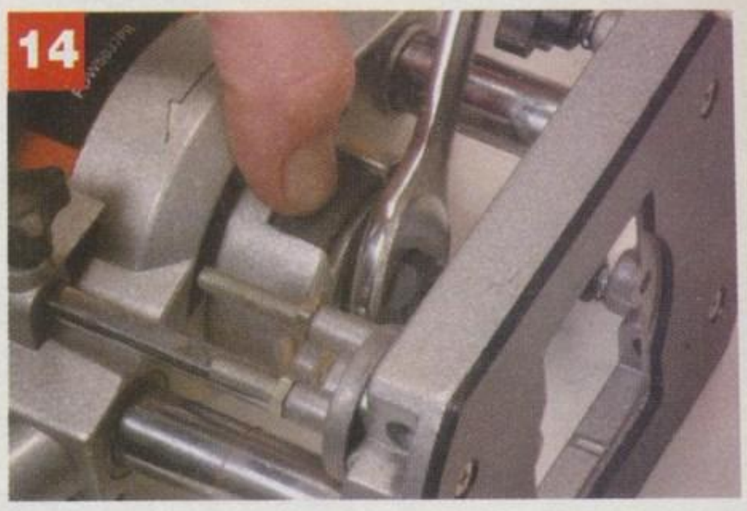


Finest cuts

The depth of plunge is controllable for repeat cuts, normally with a depth stop, **Pic 11**. The graduations on this are nearly always a bit hit and miss so direct measuring is the best bet if the cut is critical. Often you will have to make a cut in a series of stepped passes so a multi-position depth turret is a real asset here, **Pic 12**. This works in conjunction with the stop to give you three possible depth positions at the one setting. Better routers may have a built in fine scale which really comes into its own if you need to take one more pass a whisker deeper, **Pic 13**.

Spindle lock

The mechanism for changing the cutters also needs careful consideration. More recent machines now seem to have a



spindle lock as standard, **Pic 14**. This means that you only need one spanner to tighten up the collet to lock in the cutter. However some machines don't have this feature and you then have to use two spanners which is much more fiddly.

Check the fence quality

A guide fence is used for parallel cuts. Usually supported on twin bars this fence needs to be firm and rigid for smooth cutting and this is the one area that you very much get what you pay for. Cheaper machines often come with a fence that is little more than a folded piece of tin which is not particularly rigid, **Pic 16**. If you pay more the fence should be equally more substantial and may incorporate some form of fine adjuster, **Pic 17**.

What is TBC?

If you intend using the router in a table or any of the commercially made jigs, it has to be attached in some way. The better known makes have tended to adopt the Trend Base Configuration (TBC) which is a standard spacing for screwed holes in the base, **Pic 15**. If your machine has the TBC the chances are that it will fit most jigs without any further modification. Without TBC you may have to drilling fixing holes in the base, sometimes a questionable act as regards guarantee.

16

17

Remember that you may need to screw on false fences for some applications so the more solid the fence the better.

Dust control

Routers generate huge amounts of fine dust, a real health hazard, but almost without exception modern machines come complete with an extraction spout

18

that can be connected to a vacuum cleaner, **Pic 18**. Whilst these may effectively remove the dust some obscure your vision of the cut, particularly when they are covered by statically charged dust. Also, they generally make cutter change much more difficult, so try and fit a cutter with the extraction hood in position before you make your final choice.

Accessories

For template work the router base has to be fitted with a guide bush which simply screws in place. These tend to be of a standard size and most routers have

19

provision for fitting them, but do check to make sure as it is an essential requirement for using a router on a dovetail jig for example.

Other accessories that are useful are fine adjusters both for depth of cut and on the fence. Whilst some machines come with these built in, **Pic 19**, they may be available as extras on others. Again, using a dovetail jig requires minute adjustments of the cutting depth so make sure a fine adjuster is available even if it's not fitted as standard.

What to expect for the money....

So what are the differences and where are the price breaks?

Sub-£50

For this money you will usually get a light duty router of about 500 watts. Many of these have a demountable motor unit, **Pic 21**, which allows for mounting in a drill press, turning it into a handy overhead router.

21

TIP

Although seemingly unimportant, I always consider the length of the cable as a buying factor, **Pic 20**. Cheaper machines tend to have very short cables which make the tool very restrictive. I like at least 4 metres.

20

WW Recommended: Trend T3EK

Or you could try: Power Devil 5038PRA, Ferm FBF-6E, JCB D-PR12

£50-100

In this range internal build quality is better and for comfortable working you should get a machine with at least a 750 watt motor, anything over is a bonus. At this price expect a better fence as well,

WW Recommended Black & Decker KW850E

Or you could try: Ferm FBF8E, Erbauer 1650W, Wickes 900W Professional

£100 plus

The sky's the limit for top-end routers and motor power follows accordingly. Be aware however that this is one tool where biggest is not always best. A huge 2500 watt tool that takes ½in cutters may be fine for heavy work, but for the majority of trimming and moulding a smaller good quality router is much easier to handle. A top quality ¼in model with a 1200 watt motor will cost you about £200 but this will include a lot of extra features. If you are thinking about accessories I have already mentioned fine adjusters as being really useful but after that a trammel of some sort for circular work and a bearing trimmer are as much as you need to start.

WW Recommended: CMT 1E

Or you could try: DeWalt 625, Bosch 2000CE, Triton TRB001

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Clarke CMS254 Pro	254mm	76mm	£149.95	£176.19
Makita LS1040	260mm	90.5mm	£169.95	£199.69
DeWalt DW708	305mm	102mm	£585.00	£687.38

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CTS10PLM H/D	1525w	254mm	£139.95	£164.44

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Skil 5140HJ	DIY	500	£34.95	£41.07
Skil Orca	PRO	1500	£95.95	£112.74
Dewalt DW62	PRO	1150	£109.95	£129.19

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CBG6RSC*	250w	150mm	£26.95	£31.67
CBG6RL*†	250w	150mm	£33.95	£39.89
CBG6SB#	240w	150mm	£24.95	£29.32
CBG8W*	275w	150/200mm	£39.95	£46.94

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CDP151B	13mm	5	£84.95	£99.82
CDP201B	13mm	12	£115.49	£135.70
CDP251F	13mm	12	£134.95	£158.57
CDP301B	16mm	12	£139.95	£164.44
CDP351F	16mm	12	£149.95	£176.19
CDP401B	16mm	16	£159.95	£187.94
CDP451F*	16mm	16	£189.95	£223.19
CDP501F*	20mm	12	£379.95	£446.44

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CD400T	135w	90x187mm	£14.99	£17.61
CROS1	420w	125mm Ø	£19.95	£23.44
PEX400	400w	125mm Ø	£49.95	£58.69
Detail Sander				
CDS1	280w	90x90x90mm	£11.49	£13.50

REDUCED

REDUCED! CD400T WAS £18.79 INC VAT

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*CJS350 includes 3 free blades for wood, metal and plastic

†4mm steel

MODEL	POWER	CUT DEPTH	EX VAT	INC VAT
Clarke CJS2	420w	55mm	£11.95	£14.04
B&D KS633T	400w	60mm	£27.95	£32.84
Bosch PST650E	450w	65mm†	£29.95	£35.19

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CCD18T	Drill/driver	18v	1hr	£69.95	£82.19
DW927K2	Drill/driver	12v	1hr	£94.95	£111.57
DV12DV*	Combi/hammer	12v	1hr	£149.95	£176.19
DS14DVF#	Drill/driver	14.4v	1hr	£109.95	£129.19
DV14DV*	Combi/hammer	14.4v	50mins	£189.95	£223.19
DV18DV°	Combi/hammer	18v	50mins	£234.95	£276.07

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freud / DEWALT / Clarke ROUTERS

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*110v available

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Bosch POF500A	500	52mm	-	£59.49	£69.90
DeWalt DW615*	900	0-55mm	-	£139.95	£164.44
Freud FT2000VCM*	1900	50mm	£199.69	£159.95	£187.94

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B&D KA85EK†	600w	280	£79.84	£50.20	£58.99
Makita 9911*	650w	75-270	£96.29	£79.95	£93.94
Makita 9404*4"	1010w	210-440	-	£161.95	£190.29

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* Dust Extraction facility †Supplied with kit box

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Makita 1902	PRO	550w	£79.95	£93.94

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*CSS400 WAS £50.47 INC VAT

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SWITCH

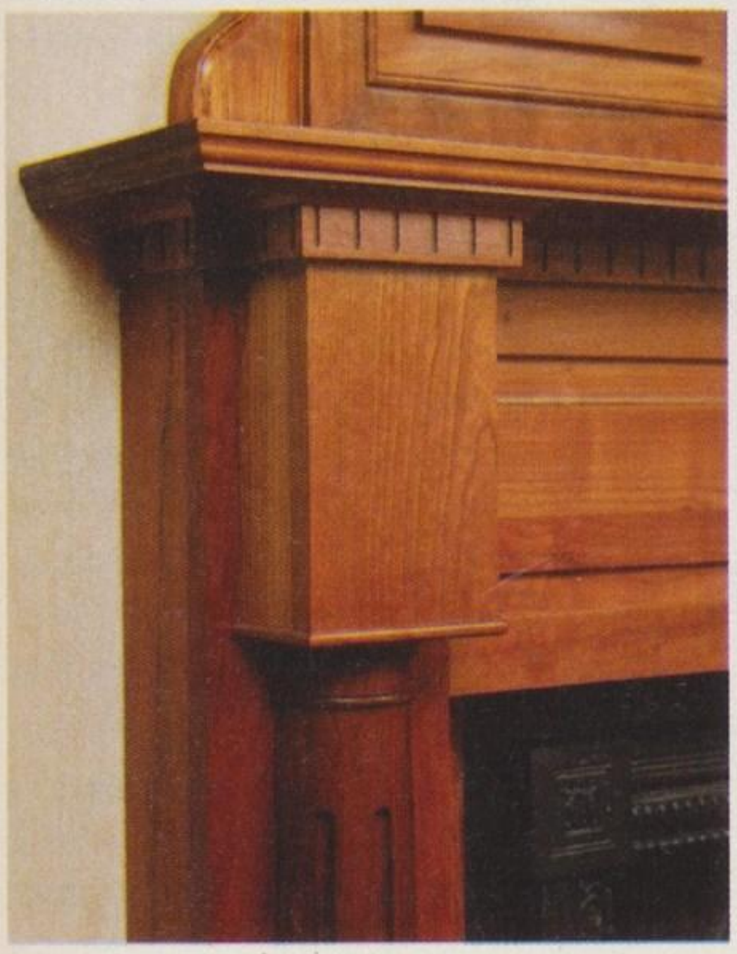
A strong bold fire surround can really set off an original fireplace and become the centrepiece of a room. Eric Taylor's example, which also incorporates a mirror above the mantle, certainly does both

Fire frame

Over the years I have made quite a few fire surrounds, mainly for family and friends. They have all been constructed from solid timber, and giving their living conditions the construction methods have stood the test of time. Most of the surrounds were embellished with carvings, some direct into the wood, others planted on and carved. It was my wife's idea, that when I got around to making our surround, the carving would be quite elaborate, something special, and I was really looking forward to the challenge. The trouble was, I think she had to wait just a little too long and her ideas had changed. She now wanted something simple, but with a strong bold appearance also incorporating an over-mantle mirror. A few sketches were made and this was the one that passed the test.

Basically, the surround is just three boxes, two pillars joined together by a lintel. The half-turned columns could easily be replaced with full turnings if desired. As many other pieces of furniture in our room are made from American cherry, this was the choice for this project. I bought one inch sawn planks for the surround and some two inch sawn for the columns and hearth surround. My usual practice is to keep the boards in stick in my workshop for about one month before starting any work. My dehumidifier keeps the workshop at a relative humidity of around 45-48 degrees. The theory being, after this time the wood will be stable enough for household conditions.

Strong lines and mouldings make this an imposing feature fireplace



Construction

All the main pieces are marked out on the boards, and cut slightly oversize, smaller length pieces are cut together and to length after dressing. All boards are planed and thicknessed to finished size. I started on the pillars first, working on both at the same time. The sides are screwed and glued to the fronts, through counter-bored holes, checking for depth with the length of screw being used. Screw positions are marked through the holes, and a pilot hole drilled. This achieves accurate edge alignment, with little to clean up afterwards. A couple of blocks are cut and glued in from behind, this helps to keep things square and rigid.

Lintel

The front of the lintel is a framework, made up as an upper and lower rail and two muntins to separate the panels. The ends of the outer panels are held in a groove, routed in the pillar sides. A 6mm

groove is cut in the rails and muntins to hold the panels. The muntins are tenoned into the rails, mortises being cut in line with the grooves. A groove and two mortises are cut on the inside faces of the pillars to take the lintel frame and panels. I cut these with a router, squaring up the comers of the mortise with a chisel. The tenons on the lintel front are marked from these mortises and cut on the WoodRat. Dimensions for the panels are taken from the frame, cutting a few millimetres undersize to allow for any movement.

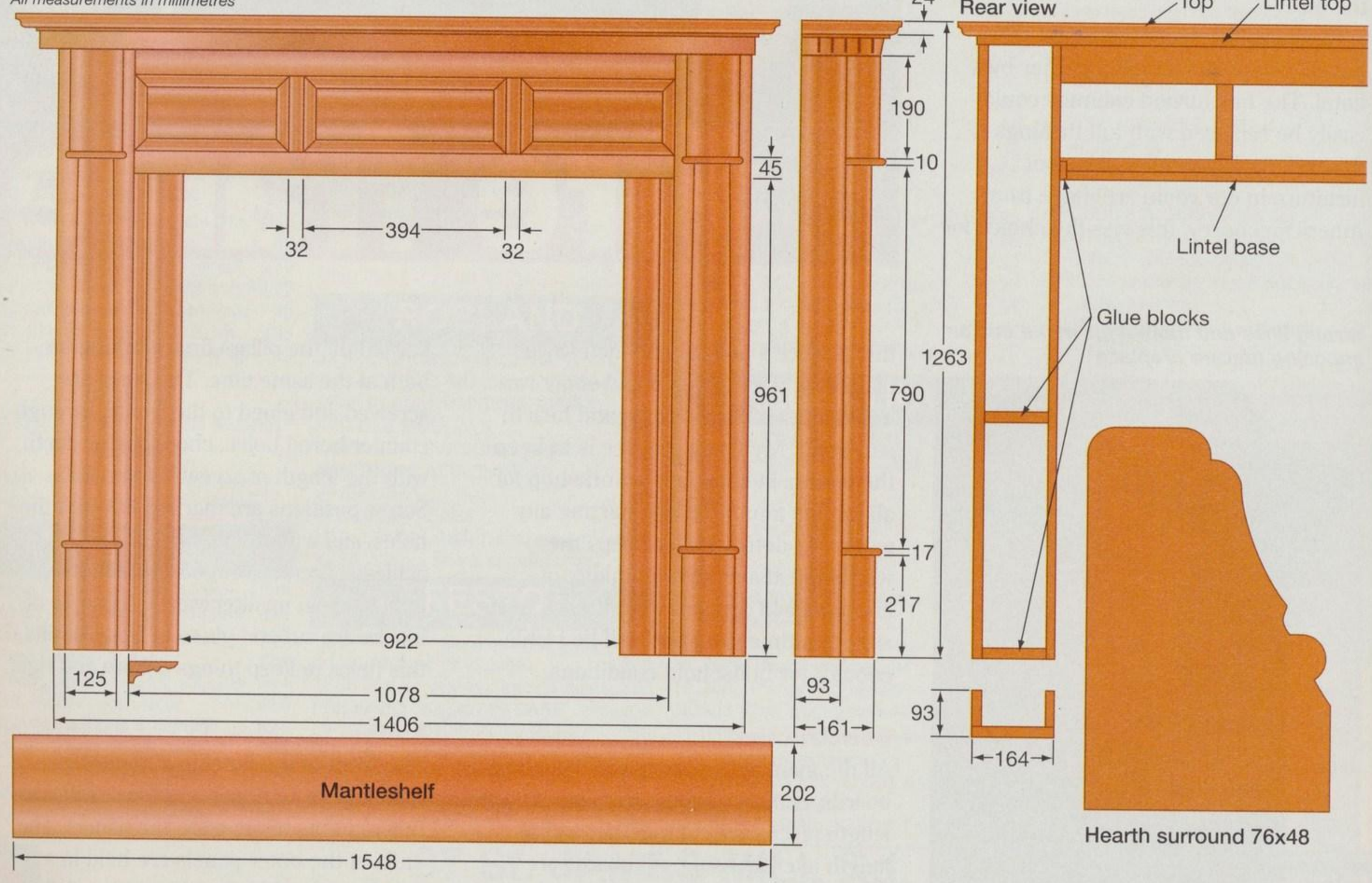
The panels are fielded on the spindle moulder to be a snug fit in the grooves. They are sanded and finished with oil before fitting into the framework. If the panels did move, I didn't want any unfinished timber to be visible. As work progresses all pieces are sanded through the grits with 120,180,and 240 papers. The pillars and lintel can now be butt jointed. The boxes are finished with a rebated, moulded, capping. The columns fit between these caps. The boxes/pediments are glued and screwed to the pillars from behind. Measurements for the columns can now be taken. The timber for the columns is dimensioned to size, but left a little over length. The two sections are glued together with hot melt glue and clamped together quickly. The waste is taped up with insulating tape, as a precaution against pressure from the lathe centres. I have previously used this method when making split newel post turnings and everything has been fine. If required the components can be glued up with a paper separator. The columns are turned to a round between a four-prong drive and ring centres using the slowest speed. As the columns are fluted, there is only a little turned detail with a gentle taper from bottom to top. The beading detail is cut with a ⅜in beading/parting tool and the taper finished off with a skew chisel. Length is cut part way with a parting tool, and the whole piece sanded to finish.

As previously mentioned, I had made some newel posts and these were fluted in a similar way. I still had the router box so once again it was pressed into service.

Shelf columns echo the style of the surround's side turnings

Figure 2 Fire surround main components

All measurements in millimetres



Fire surround cutting list

Piece	Number	Size	Comments
Pillar font	2	1222 x 164 x 19	
Pillar sides	4	1222 x 74 x 19	
Lintel frame top	1	1078 x 80 x 19	Plus tenons
Lintel frame bottom	1	1078 x 45 x 19	Plus tenons
Lintel frame muntin	2	152 x 32 19	Plus tenons
Lintel top	1	1406 x 93 x 19	
Lintel base	1	1078 x 74 x 19	Plus glue blocks
Raised panel outer	2	330 x 172 x 17	Cut to fit
Raised panel mid	1	414 x 172 x 17	Cut to fit
Mantle shelf	1	1548 x 202 x 24	
Box front top	2	230 x 125 x 19	
Box front bottom	2	200 x 125 x 19	
Box sides top	4	230 x 49 x 19	
Box sides bottom	4	200 x 49 x 19	
Box caps top	2	132 x 72 x 10	
Box caps bottom	2	132 x 72 x 17	
Rear glue blocks	4		Cut to fit
Moulding	1	10 x 10 x 2.4m	Inc. allowance for mitres
Dentil mould	1	37 x 10 x 2.4m	Inc. allowance for mitres
Shelf top	1	620 x 62 x 19	Cut to shape
Shelf top glue block	1	440 x 19 x 19	
Shelf base	1	558 x 59 x 20	Cut to shape
Main columns	2	790 x 94 x 45	Finish size
Shelf columns	2	200 x 25 x 25	Turn to size
Fillets	2	961 x 78 x 19	
Fillet return	2	961 x 25 x 25	
Hearth surround	1	76 x 48 x 3m	Inc. allowance for mitres
Top rail	1	1180 x 93 x 19	
Bottom rail	1	1180 x 51 x 19	
Outer styles	2	756 x 51 x 19	
Mid vertical dividers	2	654 x 51 x 19	
Cross rails	2	300 x 51 x 19	
Frame in-fill	1	11 x 19 x 3.9m	To increase depth of frame
Base	1	1365 x 44 20	
Panels	2	325 x 145 x 17	Cut to fit
Cheeks	2	180 x 80 x 27	Cut to shape
Dentil moulding	1	1300 x 42 x 4	Inc. allowance for mitres
Ogee moulding	1	1320 x 18 x 18	Inc. allowance for mitres
Top cornice	1	1520 x 60 x 19	Inc. allowance for mitres
Mirror backs	3	3mm plywood	Cut to size

The box is made up from MDF, with a height adjustable top. It has a clamping piece at the bottom to suit my lathe and a slot cut on centre to take the guide bush of my router. Indexing is achieved by a circular piece of ply screwed to the outboard faceplate. This is divided off around the circumference and holes drilled into it to take the barrel of a small bolt, screwed to a table on the outboard tool rest. Length stops are simply pieces of scrap clamped in place to stop the travel of the router. The flutes are cut using several passes to the finished depth. I set the columns up to cut a groove equally across the glue line, this gives a nice shadow line to the column when fitted in place. The columns are separated, I used a thin bronze wedge and carefully trimmed to length. Again these are screwed through from the back of the pillars and also glued.

Mantle shelf

This is dimensioned to size and undercut with an ogee router cutter. The mantle shelf is held in place screwing through from the lintel top plate. With the mantle

STEP-BY-STEP

1

The surround is basically three boxes - two pillars joined by a cross lintel

2

Ian decided to finish the fielded panels before assembly so that no bare timber would show if the piece moved with humidity changes

3

A corner bead cutter was used for the mirror frame detailing, with 8mm dowels strengthening the joints

4

Dry assembly of the mirror framework. The mirror was cushioned with foam pads to deaden any vibration

You must always have a non-combustible hearth in front of a working fireplace

shelf in place, the lower shelf can be made up and fitted. The shelf base is cut out on the bandsaw, cleaned up and the lower edge cut with a smaller ogee profile.

The top frame is cut out, a stopped edge beading routed and the corners mitred. Two small pillars are turned to fit the gap, these are left with a 6mm diameter spigot at either end. These are glued into matching holes, drilled into the shelf and top frame. The shelf assembly is glued and screwed in place. The dentil style moulding is another feature that is repeated on other pieces of furniture in the room and the stopped grooves are cut using a simple holding jig in the WoodRat. The moulding is mitred to fit and glued in place. A final beading is mitred and fitted between the dentil moulding and the mantle shelf, this was formed with a cove cutter on the router table.

The remaining task is the fitting of the closing fillets, these fit between the inside of the legs and the fireplace. The cast fireplace had been previously set in place and dimensions taken from it. I wanted to keep the wooden surround as big as possible to suit the chimney breast whilst still keeping the pillar/lintel proportions looking right. The bottom of the lintel overlaps the top of the cast surround by approximately ¼in so I thought of doing the same with the side fillets. The moulding shape was drawn on the end grain to match the cutters I had available and the shape was then formed on the spindle moulder. The fillets were glued and screwed to the inside legs and just to bulk up the moulding, I cut and fitted a cove/scotia type moulding between the leg and closing fillet.

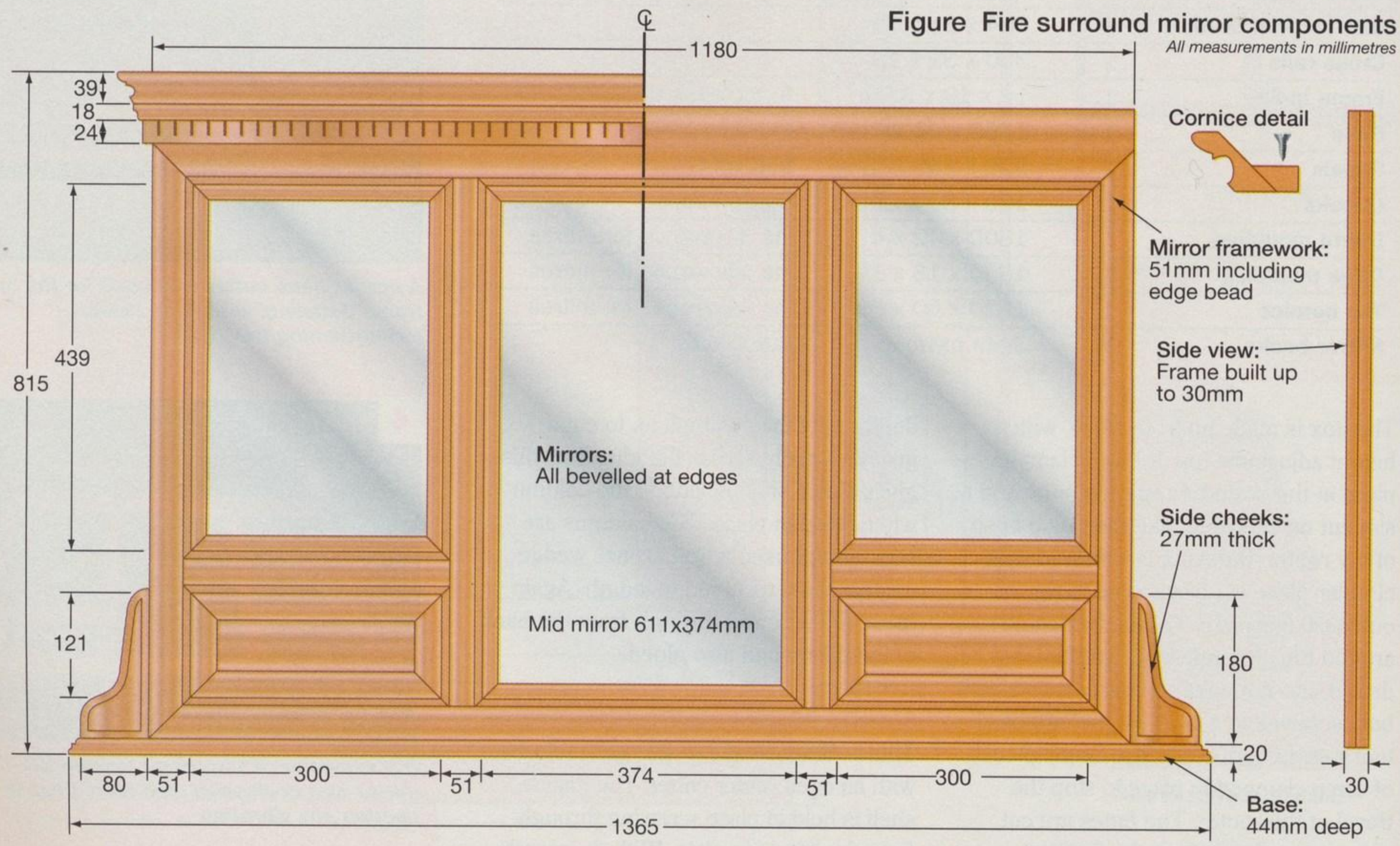
The fender for the tiled hearth was made up from 4 x 2in finishing at 76 x 48mm. Again working with the cutters I have for my moulding block, a profile was drawn on the end grain and then cut to shape on the spindle moulder. Mitres, cut on the sawbench, were glued with biscuits and these were also reinforced with an L-shaped bracket, screwed to the bottom face, the bracket being recessed in a groove cut with he router. All parts were given a final clean up with 240 grit sandpaper.

Mirror

The lines of the fire surround are echoed through into the mirror. The outer panels line up and match and the full length middle mirror reflects (every pun

Figure Fire surround mirror components

All measurements in millimetres



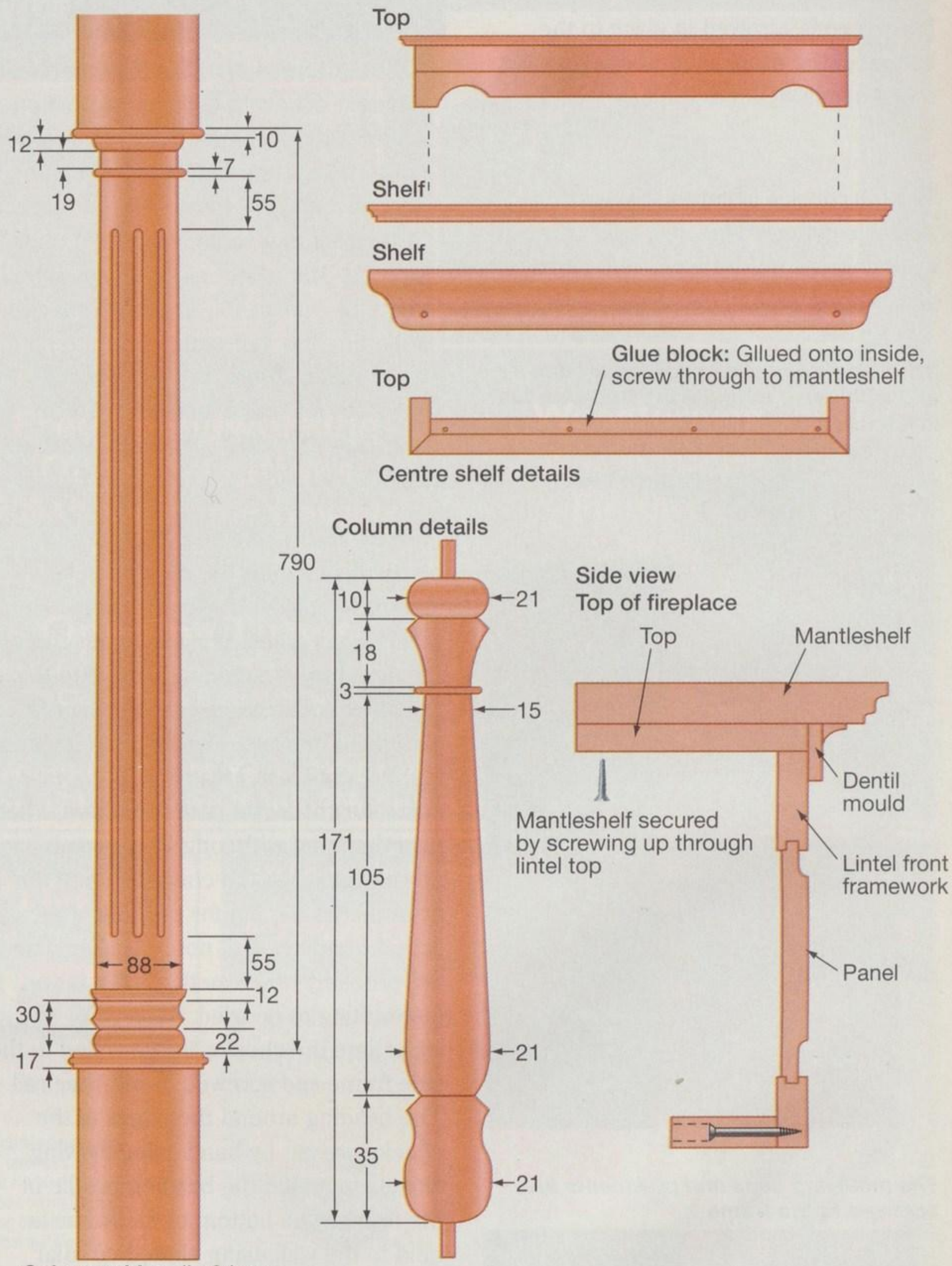
The fielded panels of the mirror frame are made to match those of the fire surround

intended) the extension of the lower shelf of the mid-panel on the fire surround. The inner edge of the outer frame follows the lines of the inner edge of the pillars, so the dimensions for width are already set.

Timber for the framing is planed and thicknessed to the required dimensions. The pieces are then passed over the router table and the beading cut using a corner bead cutter (Perform Ref 319041). The top and bottom rails are marked out for the vertical dividing stiles, similarly the panel cross rail positions are marked on the four stiles. I marked the width with a sharp pencil, scribing down to the beading with a 45 degree line. The pieces for the outer framing are cut to length, mitring at the corners. With a fine cut sizing blade in the sawbench, the intersecting tiles and rails are cut to fit.

The ends of the stiles and rails are chamfered to follow the lines of the beading. Saw marks are cleaned back to line with a sharp chisel. I used an 8mm dowel at each joint, the holes were drilled on a drillpress alignment achieved using dowel points. The framework is glued up, checking for square when clamping. When dry, the frame is cleaned up around the joints and sanded. As the mirrors sit in rebates cut in the back of the frames, I decided to hold the panels in the same way. The back of the frame was rebated, using a bearing-guided cutter. Measurements were taken for the panels, minus a few millimetres to allow for movement. The panels were cut to size and fielded to match those of the fire surround, the panels would be held in place later with beading and pins.

As with the fire surround, the panels were finished with oil before fitting. A fillet piece was glued in place around the frame, this gives the whole piece a little extra depth, this was cleaned back with a plane when dry. The mirror stands on a piece of timber, this can now be cut to shape and length, the edges were



Columns: Max dia 94mm
Finished: 1/2": 45mm deep
Flutes: Cut with 1/2" round nose cutter

Figure 3 Fire surround components
All measurements in millimetres

Roaring to go... the completed project was finished to match the rest of the room's furniture

moulded with an ogee router cutter. The base piece is screwed in place to the bottom of the frame, countersinking the screw heads well into the base rail.

Top cornice

The top cornice is cut to shape using available cutters. The edges are trimmed to 45 degrees on the sawbench and a glue block cut at 45 degrees is glued in place, this enables the cornice to be screwed in place. Under the cornice a moulding is glued in place, under this the dentil style moulding similar to the fire surround is mitred at the corners and glued in place. The bottom cheeks I had left until last. I was hoping to have some sort of secret recess in them. I had experimented with long Blackwood dowels, glued to the cheeks sliding out from the frame, but for the size of the reveal I had decided not to bother. There are probably other methods out there just waiting to be tried. So for the meantime the cheeks are dowelled to the side frame and screwed to the base rail. The beading around the edges of the cheeks are cut by hand using carving chisels to match the beading profile of the frame. The bottom of the frame is held to the wall using slotted circular brass plates, the recess for these and the screw head clearance are cut using forstner bits. The top is held to the wall using flat brass mirror plates.

Ian used his custom-made router box and an indexer to make the flutes on the columns

The moulding caps and pediments are screwed to the frame

Finishing

As I was intending to use a water-based stain, I raised the grain of the timber by wiping it over with a damp rag. When dry, I cut back the raised grain with a final rub of 240 grit paper. All surfaces were given a diluted coat of bichromate of potash. This has the effect of darkening the cherry, and after experimenting with dilution rates on some scrap, I found the shade to blend with the other pieces of furniture in the room. When the stain had dried, any raised grain was very lightly sanded. The whole piece was cleaned down with a tack rag and I applied six coats of Danish Oil, applying one coat per day and denibbing in-between coats. Following the instructions on the container, I washed the application rags before disposing of them, I didn't want any accidents with fire. After the final coat I waited a few days then finished off, giving all faces two coats of wax polish, applied with 0000 wire wool, buffing up with a clean rag. The surround was fitted to the wall with four L-shaped brackets, sunk into the plaster.

Mirror finish

As with the fire surround, the mirror frame is sanded to finish, the grain raised and cut back and the whole piece given a diluted coat of bichromate of potash to darken the cherry. Once dry any rough grain is denibbed with 240 grit paper and cleaned off. The frame is now given six coats of Danish oil, denibbing and cleaning off between coats. After a few days the oil finish is cut back with wax polish applied with 0000 grade wire wool and given a final buffing.

The mirrors are now ready to fit. The inside faces of the rebates are painted with two coats of matt black blackboard paint and the mirrors fitted in place. These are held in place with a piece of plywood. Foam pads are stuck to the back of the mirrors to stop any rattle between frame and back. The plywood is held in place with brass picture frame plates.

Dentil moulding on the mirror cornice

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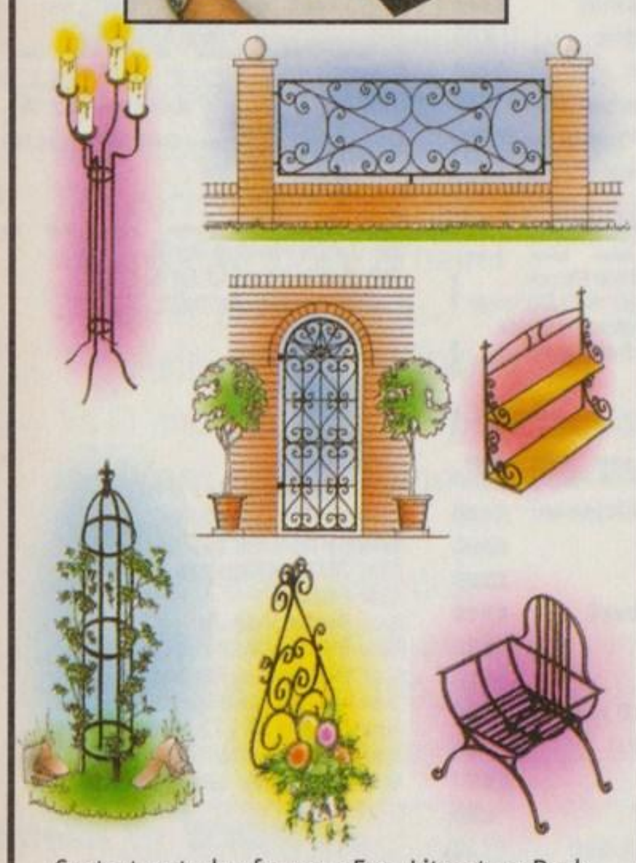

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Woodworker

Judging of this year's *Woodworker of the Year* entries took place last week. The winners will receive £1000 of prizes from Toolbank (Amateur category) and Delta Machinery (Professional). Runners up receive products to value of £100

AMATEUR SECTION

WINNER

B HATFIELD

It was hard to choose which of the three pieces submitted by Mr Hatfield should go through to the finals. All showed exceptional skills. The retired engineer produced all the hardware for this project and likes to introduce elements that would be impossible to reproduce with machinery, such as the double curve on the desk drawer fronts. In between furniture projects he is busy making rocking horses for his local children's hospice and Leeds General Hospital.

RUNNER UP

ME GARNETT

Mr ME Garnett of Grimsby entered two superb pieces, a Davenport and this oak dresser, fashioned from inch thick sawn boards. The timber costs were about £250 but he also treated himself to a planer thicknesser to tackle the project.

RUNNER UP

DAVID SMITH

David is a keen amateur woodworker who made this dresser from American white oak. It had to be stained to match his existing furniture. A router carver attachment was used to form the linenfold panel details.

RUNNER UP

PHIL THOROGOOD

Regular readers may know the name of Phil Thorogood from his success in a previous WW of the Year competition. Phil says 'this is a traditional piece of Welsh furniture, closely based upon a four hundred year old example...to allow the display of the wealth of the owners.' Phil's piece uses home grown oak and took around 300 hours to complete.

RUNNER UP

GERARD CURLEY

Gerard, from Co Galway embarked on this, his first big project, by purchasing himself a table saw. With a little help from his son and brother, all the parts were cut and routed. The shaped front was made with a holesaw and jigsaw as Gerard is still saving for a bandsaw.

RUNNER UP

JONY LONCKE

Jony is an amateur woodworker specialising in small chests decorated with floral marquetry. No prizes for guessing he is one of our Dutch readers. The cabinet shown here is built from 50mm thick reclaimed walnut. Jony devised a router slide jig to scoop out the front face of the timber and the art noveau motif has been entirely hand cut with a jewellers' saw.

of the Year

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PROFESSIONAL SECTION

RUNNER UP

BRIAN BARBER

Brian decided the contrasting colour and grain of spalted beech and sycamore would work well together and this cabinet on stand proves the point.

WINNER

WILLIAM GIBSON

This Humbug coffee table is made up from 24 segments of walnut and sycamore and incorporates a central fruit bowl as well as a lazy susan. William, from Whitby, makes pieces to order and has also recently built a Dali-esque curvy grandfather clock. Well done William.

RUNNER UP

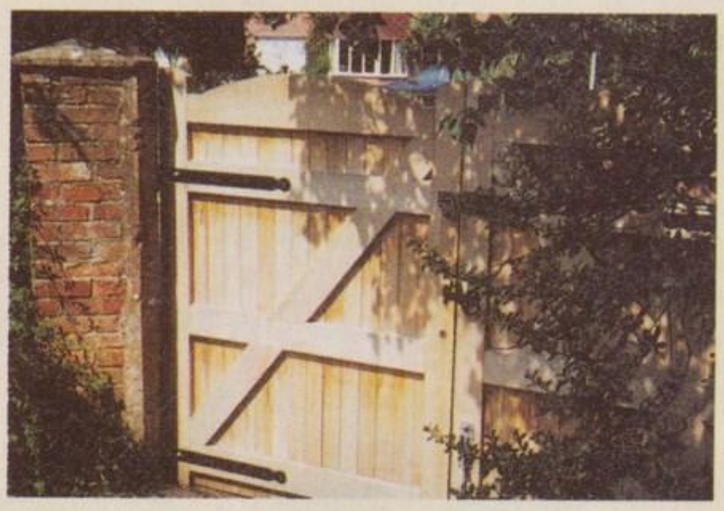
PETER SMITH

Peter's impressive grandfather clock was one of many clock entries this year. Well done Peter.

RUNNER UP

DEREK POWERS

Derek was commissioned by a client to make these handsome 9ft wide gates from European oak. With the help of a welder friend, new hinges were made to match the originals. The result is a great piece of joinery that wins Derek a £100 prize.



RUNNER UP

J MACKENZIE

J Mackenzie submitted several excellent pieces to the competition but this Windsor chair caught the judges' eye. It's based on a Jack Hill design and uses the traditional elm and ash woods. The chair is finished with Danish oil.

RUNNER UP

EIFION MORGAN

Eifion made this stunning 6ft high chair as a commission for the Urdd National Eisteddfod 2003 at Margam Park near Port Talbot. The aim was to keep the traditional themes, such as the tapered back, and introduce modern aspects that capture the many aspects of the Eisteddfod. He hopes to start his own joinery business in the near future.

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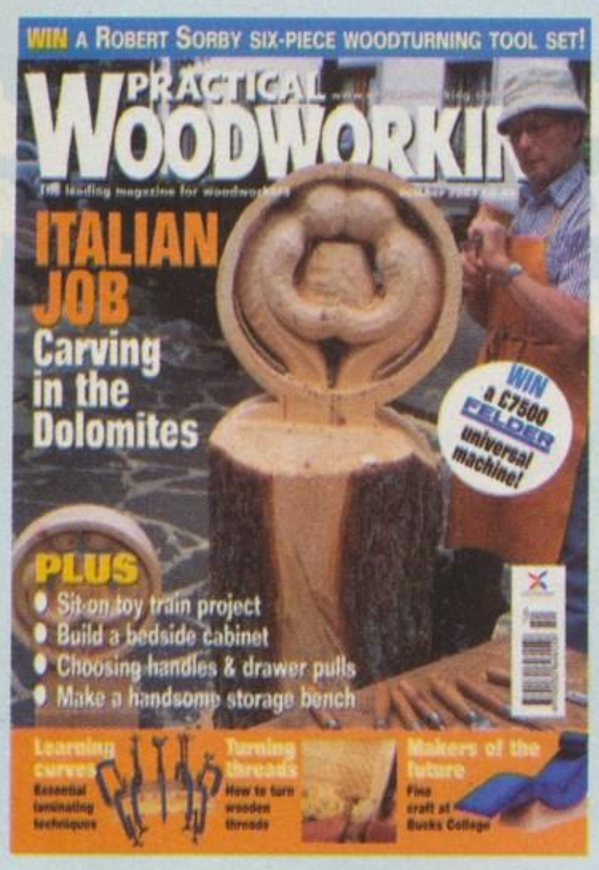

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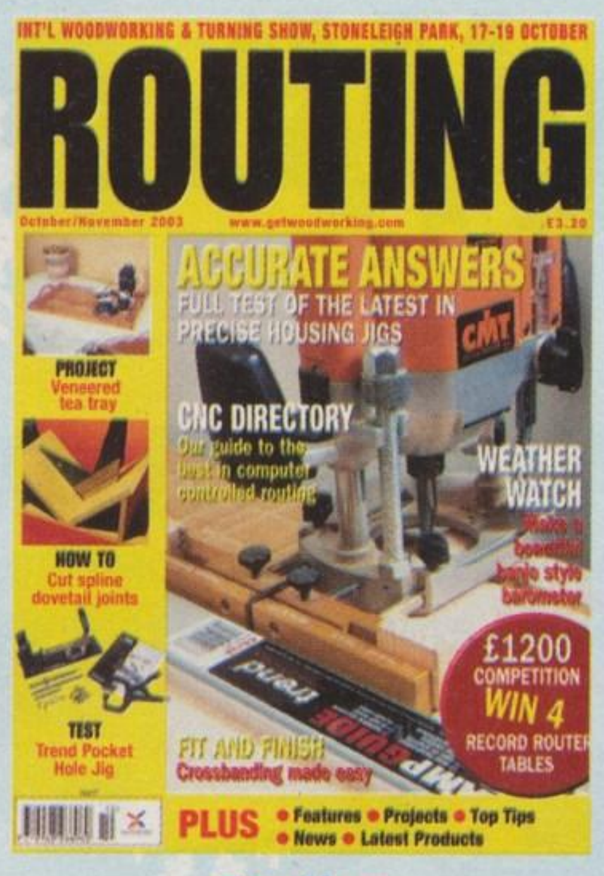

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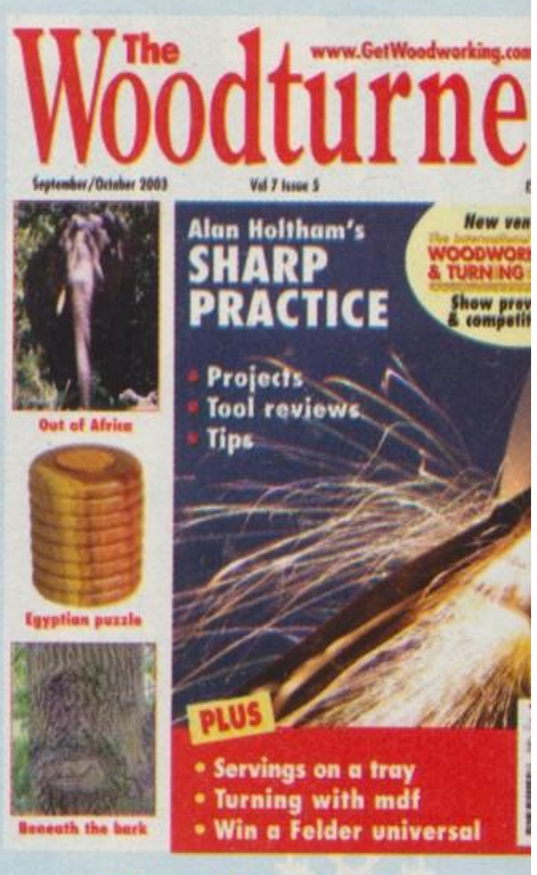

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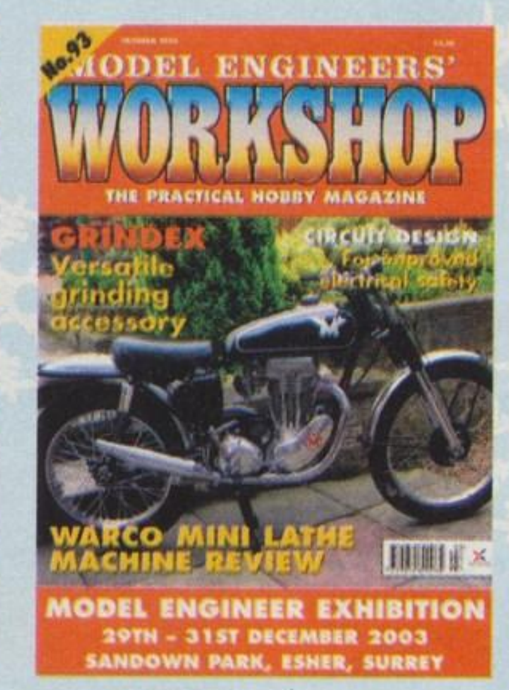

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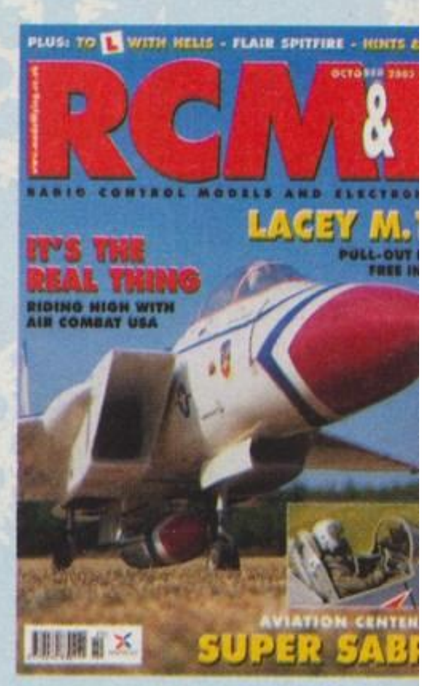

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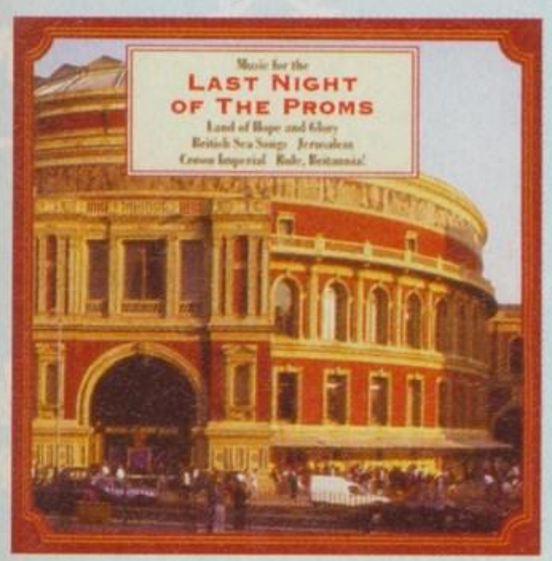

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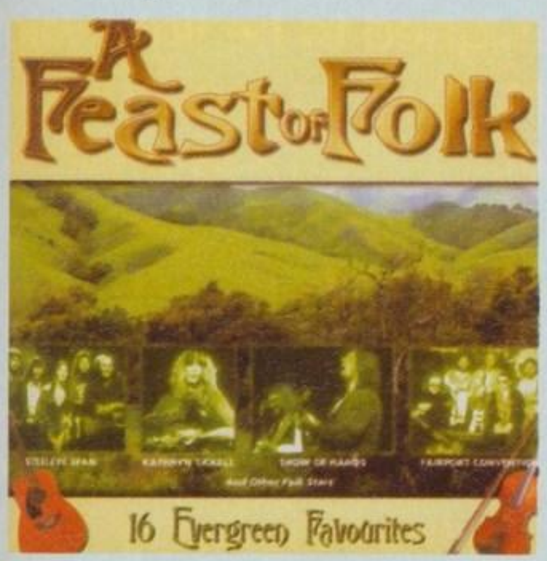

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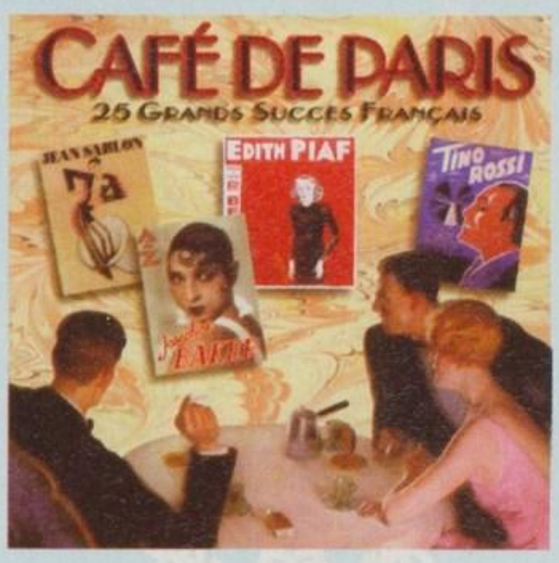

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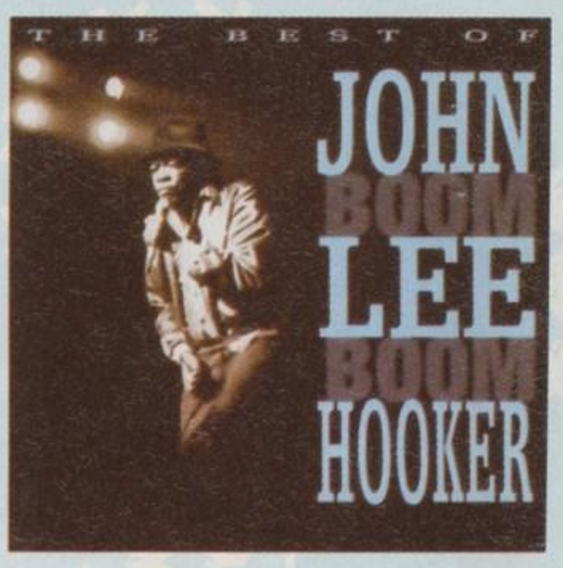

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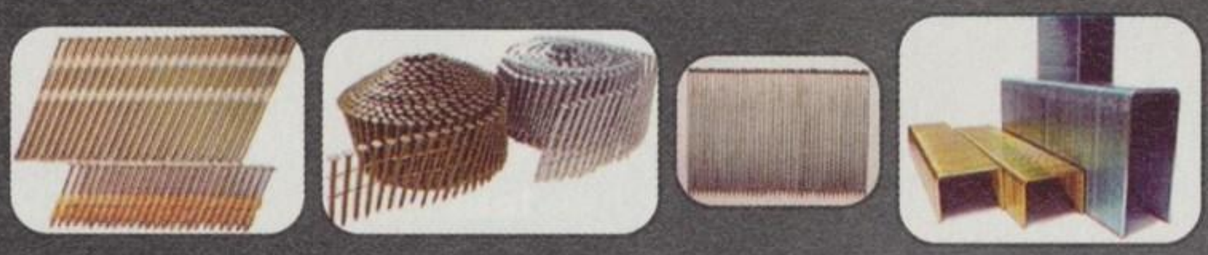

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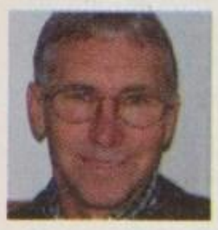
Chest the job



Toy chest or foot locker, Alison and James Hatter's storage box will help get things in order

A friend who has two young daughters was anxious to reclaim a little of his home by organising their toys into a box. He also wants to be able to use the chest as an ordinary piece of furniture in the future when the girls have outgrown toys.

To match the existing pine furniture, we settled on a decorative design involving raised panels and a decorative plinth. The overall size of this box is 1320 x 508 x 405mm, dimensions that allow the box to fit neatly into a specific space, but which you can obviously adjust to suit your own needs. Similarly, although I've used raised panels all around, you can use plain panels or pine board for the back panel instead.

The lid, bottom, and the raised panels are made from two 2400mm lengths of 18mm-thick pine board that's 405mm wide. The sides, meanwhile, are a series of mitred frames reinforced with biscuits, and the raised panels. The sides are joined to each other with a single size 10 biscuit at each mitre joint, and to the bottom panel using screws and glue.

This box assembly is mounted onto a plinth, with castors for ease of mobility when it's fully loaded with the girls' toys.

The lid has a piano hinge at the back and a catch stay, which should help reduce the risk of the lid slamming shut. I have, however, added details of two simple spacer blocks, that can be hooked over the top of the end panels to prevent damage to small fingers in the event of the lid being accidentally closed.

Lid & bottom panels

Each panel requires a 1320 x 405mm piece of 18mm pine board. Using your router, run a 6mm rounding-over around the top front and side edges of the bottom panel and both top and bottom edges of the lid.

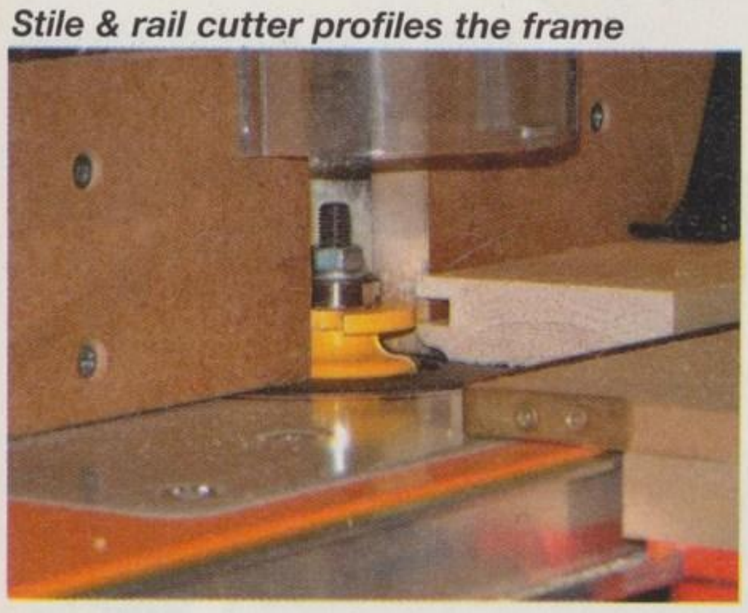
Side frames

The box uses two sizes of frames for the side panels. The larger frame measures 642 x 377mm, and two of these are joined together using size 10 biscuits to form the front panel, and another two for the back. The end panels each use a 353 x 377mm frame.

The frames are made from 20 x 69mm pine with a 6mm-wide groove on their inside edges to take the raised panels. Using a combined rail-and-stile cutter in a table-mounted router, I was able to cut the 10mm-deep groove at the same time as a decorative S profile.

One way to tackle the frames is to cut slightly over-length pieces (eight 660mm, twelve 400mm, and four 370mm lengths. These are run through the router cutter to give the groove and profile, and one end of each piece cut to 45° using a power mitre saw. With the saw's length stop set, you can then

Stile & rail cutter profiles the frame



Mitre the frame corners

Biscuits are used for the joints

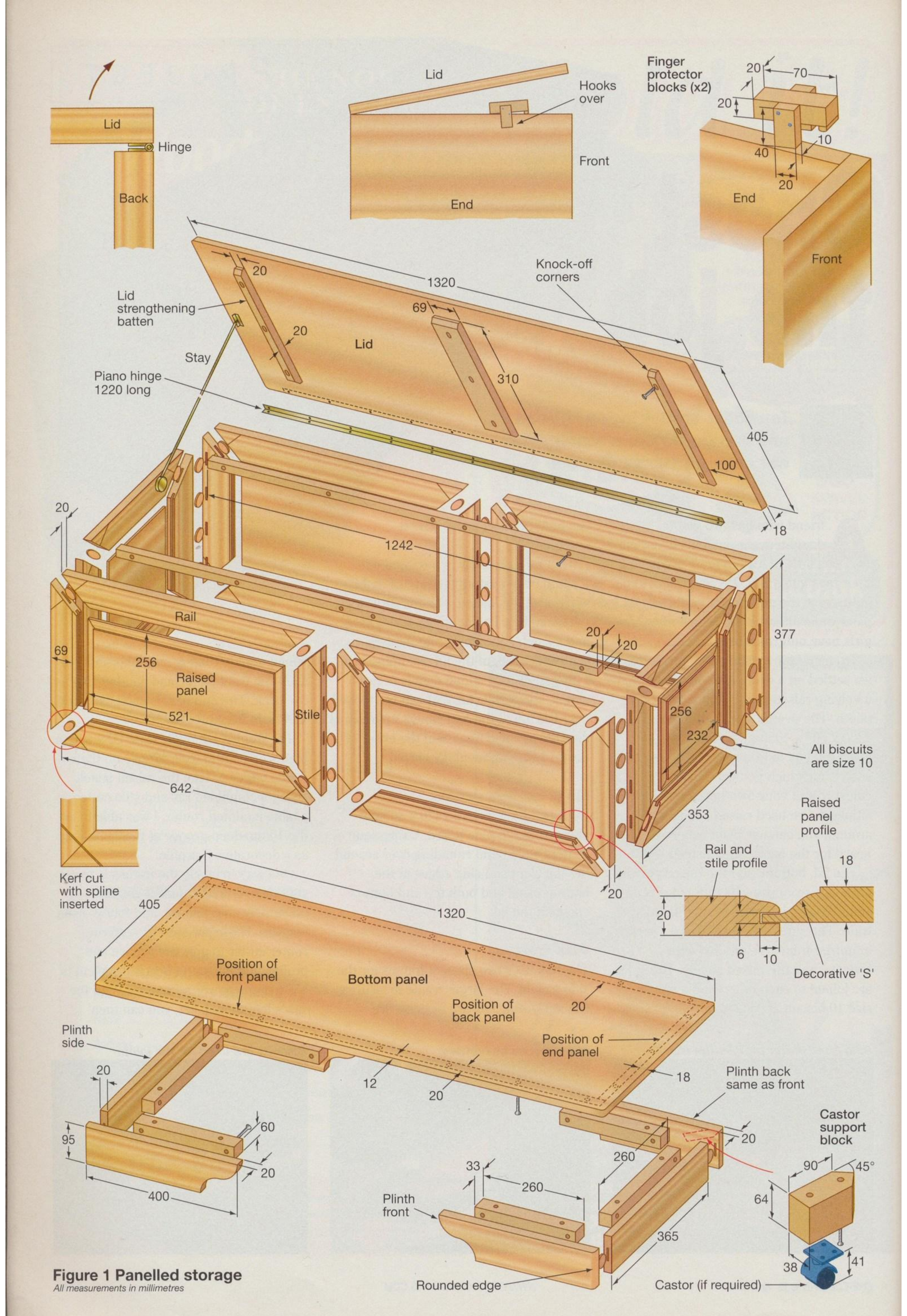


Figure 1 Panelled storage
All measurements in millimetres

Storage chest cutting list

all dimensions in mm

Part		Qty	Material	Length	Width	Thickness
A	Lid and bottom panels	2	Pine board	1320	405	18
B	Frame rails	8	Pine	642	69	20
C	Front and end frame stiles	12	Pine	377	69	20
D	End frame rails	4	Pine	353	69	20
E	Centre lid strengthening batten	1	Pine	310	69	20
F	Lid strengthening battens	2	Pine	310	20	20
G	Front and back raised panels	4	Pine board	521	256	18
H	End raised panels	2	Pine	232	256	18
I	Front and back panel battens	2	Pine	1242	20	20
J	Plinth front and back pieces	4	Pine	400	95	20
K	Plinth side pieces	2	Pine	365	95	20
L	Plinth supports	6	Pine	260	33	33
M	Castor supports	4	Pine	90	64	38

accurately cut the pieces to size while putting a 45° angle at the other end.

When it comes to the biscuit slots, set the jointer to cut the slot at mid-thickness. The centre of the biscuit should be 45mm from the top edge of the 45° angle. A marking guide will make it easier to ensure that the slots all match up.

Raised panels

The large front and back frames require a blank of 521 x 256mm to form the raised panels, while the smaller frames need a 232 x 256mm blank (these sizes allow for movement in the wood). Cut the blanks from the 18mm pine board. You can use pieces of board left over from the previous panels if they're edge-joined to increase their available width.

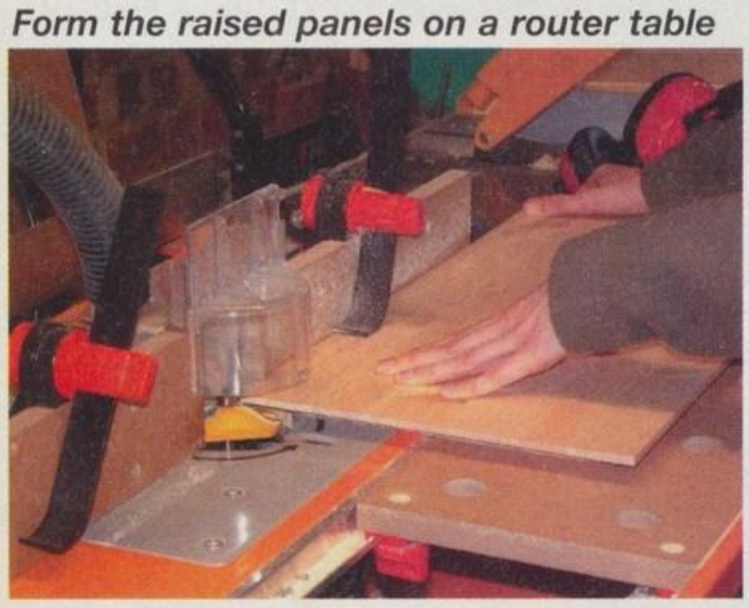
The panels can be raised in a number of ways, but the method that I used involved a large panel-raising cutter with an ogee shape in a table-mounted router. A low router speed is required for this type of bit, and the cut must be made progressively. Run each panel through starting across the end grain and continually test fit the panel after each cut until the raised edge fits snugly in the groove in the frame member. Give the panels a sanding before assembling the frames.

Assembling the frames

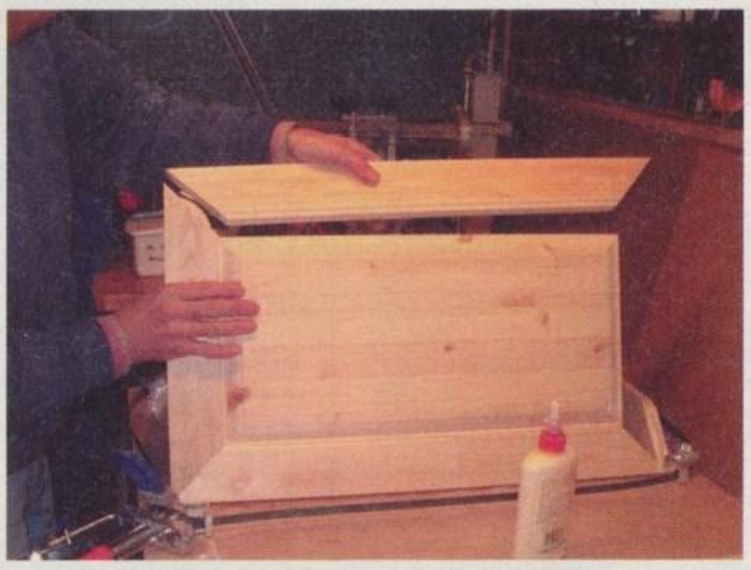
Assemble each frame dry to check that the panels fit and that the mitre joints close. Then glue-up the pieces (I used Titebond original), taking care not to get glue in the panel groove, and assemble the frames using the size 10 biscuits. Finally, clamp each frame and check them for squareness before setting them aside to cure.

You can add a decorative feature by making a 5mm-deep diagonal kerf cut across each mitre joint, then gluing a wood spline into the cut. I used a pine spline, but you could use a contrasting wood to make this feature more

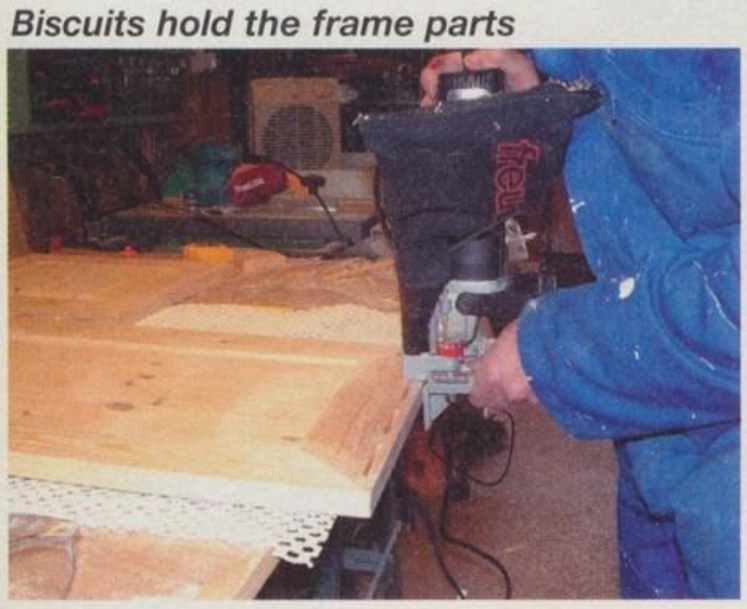
Form the raised panels on a router table



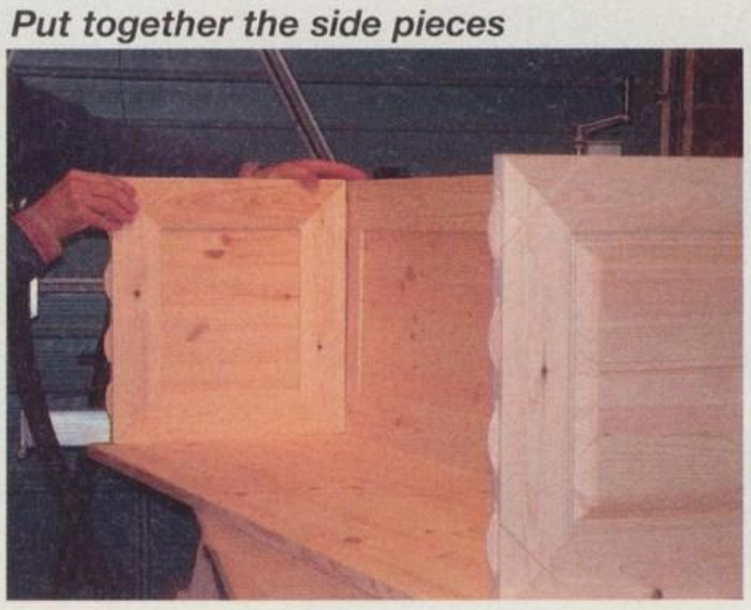
Assemble the frame



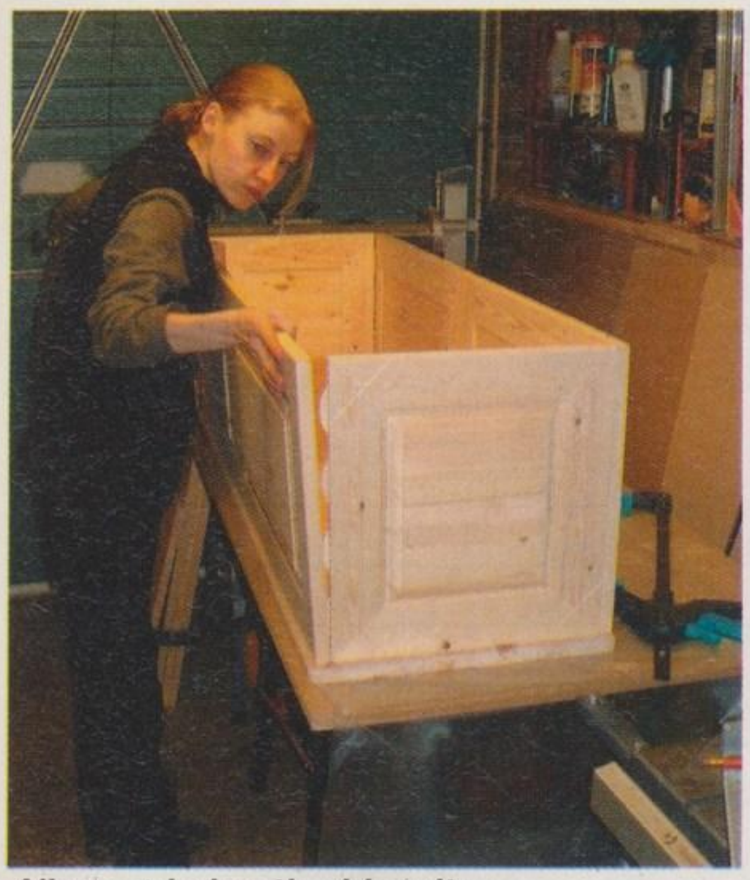
Biscuits hold the frame parts



Put together the side pieces



Add the decorative spline



Align and glue the biscuits

Screw on the plinth boards

prominent. A radial saw is particularly useful for making the kerf cut, but you can use a table saw in conjunction with a mitre gauge.

To make up the front and back panels, butt two frames together and mark for four size 10 biscuits. Cut the slots and join the frames with the biscuits and glue.

Preparation for assembly

Join the front and back panels to the end panels using four size 10 biscuits along each join. Round over the top and side outside edges of the front, the side outside edges of the back, and the top outside edge of the ends. Mark the guidelines for the side panels on the bottom panel, then drill 5mm clearance holes and countersink from beneath.

Assembly

Once again, a dry run is advisable first so that the joints can be checked and the attaching screw positions piloted. Follow this by joining the back panel to the

Round over the corner legs

bottom panel using 4 x 35mm screws and glue. Use glue and biscuits to join one end panel to the back, and glue and 4mm x 35mm screws to attach the bottom panel. Use the guidelines and do not fully tighten the screws. Repeat for the other end panel. Join the front panel to the end panels using size 10 biscuits and glue, and to the bottom panel using 4mm x 35mm screws. Apply clamps to pull in the biscuit joints, and then check the assembly is square before tightening the screws.

Battens are attached along the inside of the front and back panels. These serve two purposes, to add strength to the panels, and to provide runners for a tray if you choose to fit one. Cut the battens to length then attach them to the panels using 3.5mm x 30mm screws, positioning each batten so that its bottom edge lines up with the bottom of the top frame rail.

Plinth

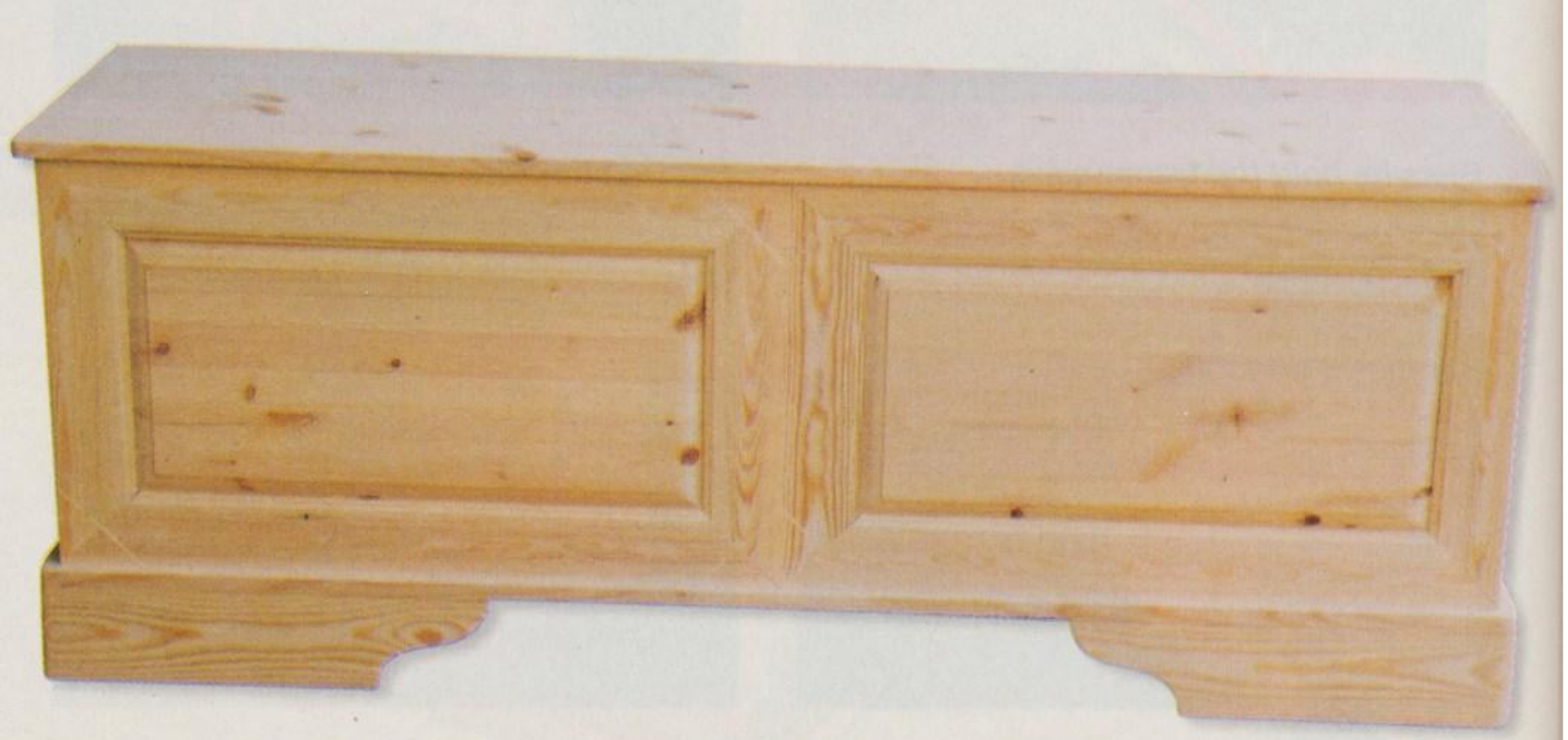
As you can see from the plan, the plinth is made up of two three-piece sections whose pieces are joined together using size 10 biscuits.

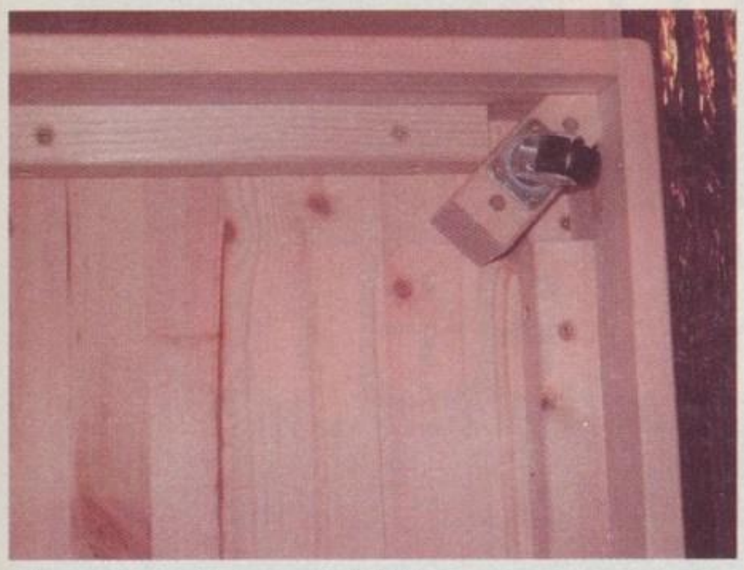
For each of the two sections, cut two 400mm lengths of 20 x 95mm pine for the front and back pieces, and a 365mm length for the side piece. Cut a single matching size 10 biscuit slot to join each front and back piece to the side piece.

Make a cardboard template for the decorative cut-out on the front piece, transfer the shape onto each front and back piece, and cut it out using a bandsaw or jigsaw. Sand the shape smooth: a small drum-sander mounted in a pillar drill comes in handy here.

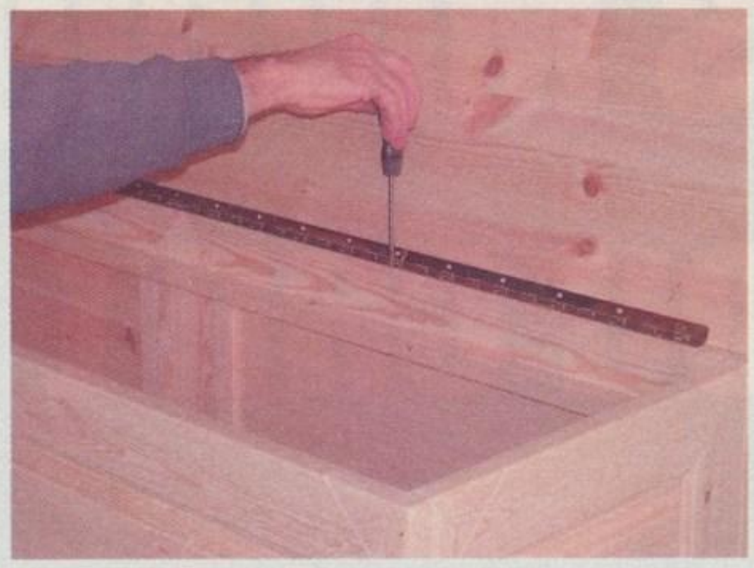
The two plinth sections are joined to the underside of the chest using three 260mm-long wood blocks made from 33 x 33mm pine. Cut these supports to size, drill the 5mm clearance holes, and then glue and screw the rails in place using 4 x 50mm screws, starting with the front piece, which lines up with the front edge of the bottom panel. Next, use a size 10 biscuit and adhesive to join the side piece to the front piece before screwing it into place, and finally attach the back plinth piece. Repeat this procedure for the other plinth section.

To finish, round over the corner edges of the plinth to follow the curve cut to the bottom panel front corners.





Fit castors for portability



Piano hinge is used for the lid

Castors

The castors are mounted on blocks sized so that the wheels of the castors you've chosen protrude about 10mm below the plinth. Cut four 90mm long mounting blocks of the correct thickness, and cut two 45° angles at one end to form an arrowhead. Drill two 5mm clearance holes in each with 29mm counterbores, and attach each block to the underside of the chest using two 4 x 50mm screws and adhesive. Fix the castors onto the blocks using 3.5 x 16mm screws.

Lid fixtures

Attach the three lid-strengthening battens to the underside of the lid with 4 x 35mm screws, remembering to make your clearance holes slightly elongated to allow for natural movement of the panel.

Cut the piano hinge down to 1220mm and attach it to the top of the back frame and the inside face of the lid, ensure that the lid overhang at either side is equal.

Mark all the screw hole positions, but only attach enough screws to position and test the stay so that the lid can be quickly removed for applying the finish.

Finish

Give the whole box a final sanding with a fine grade paper, then dust down. You may want to paint your toy box and add some decorative touches, but in this case in order to match the existing furniture I used Liberon Palate's medium oak colour water-based stain. This is applied using a synthetic brush, then wiped with a cloth to even out the stain. When dry, denib with an abrasive pad, and apply a second coat of stain using a cloth pad. Being a dark finish, you need to take care to avoid a patchy result. Finally, apply a coat of matt varnish (I used Cuprinol's water-based interior varnish) to seal and protect the surface, and refit the lid and the stay.

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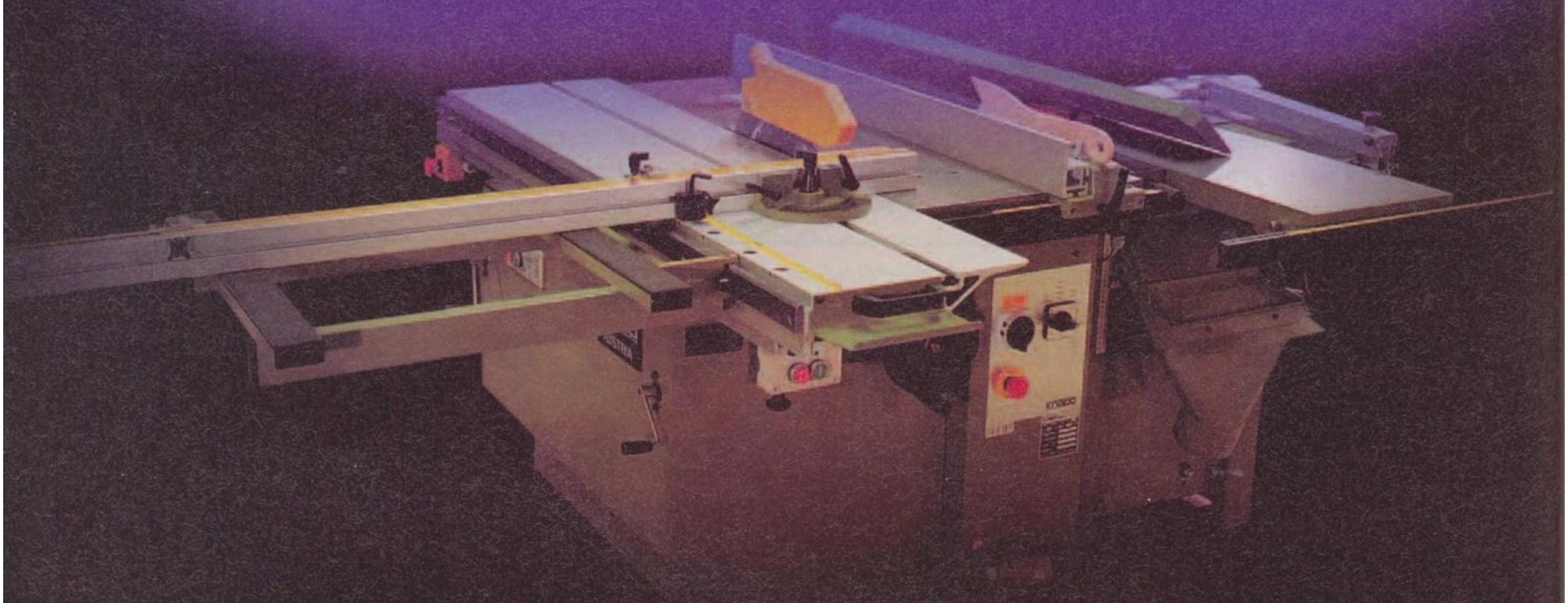

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NEW SERIES

Making templates

Templates and Patterns Part 1

Increase you accuracy and speed with our essential guide to template making. By Dave Mackenzie

I rarely make a woodworking project without creating and using a template of some description, or at least re-using an old one. Templates speed up a project, help you work to a greater degree of accuracy and take some of the repetitiousness out of making a number of components that are all the same shape.

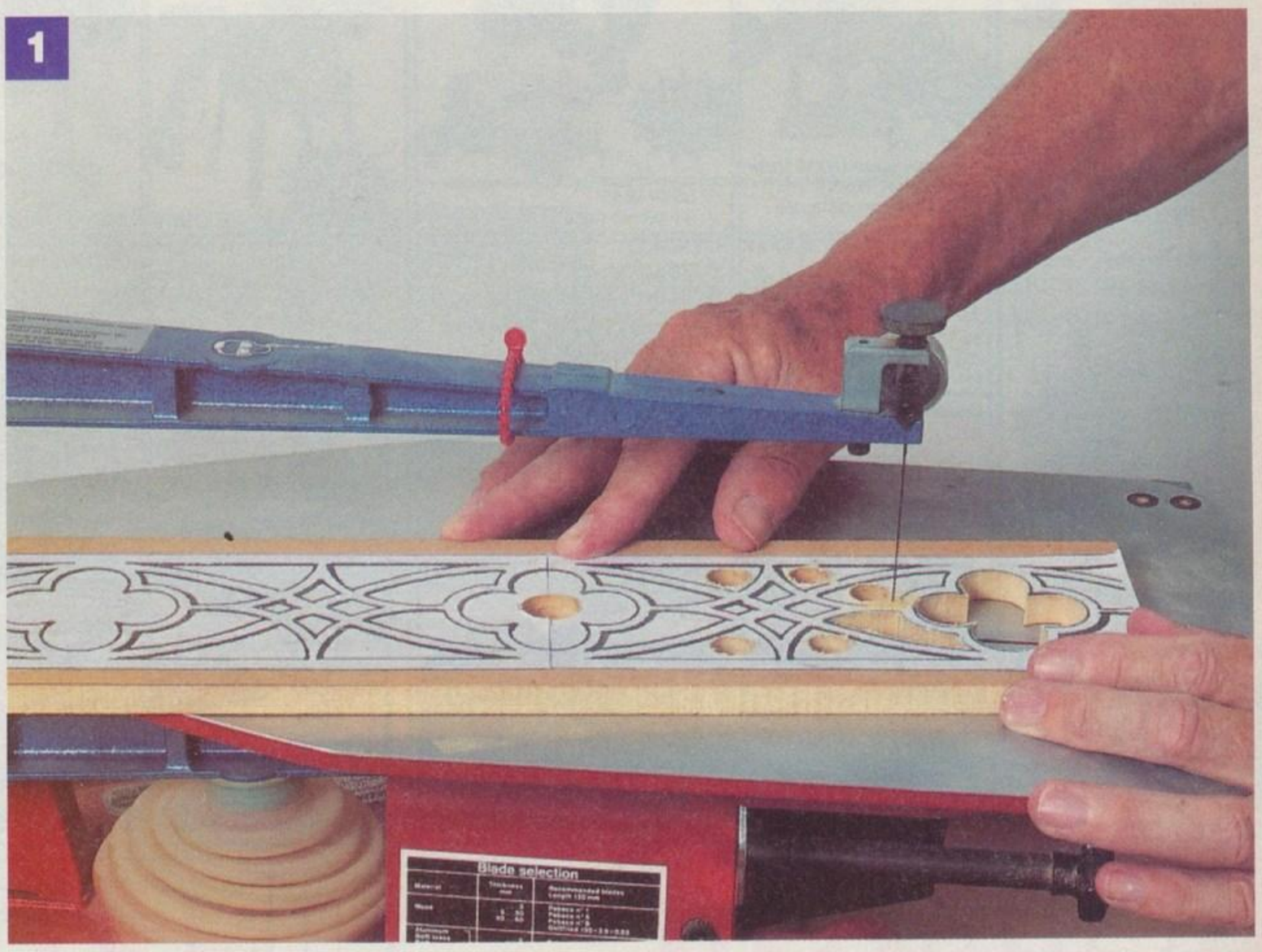
Templates and patterns are made from a number of different materials depending on the use they will be put to. For example no other material works as well as paper if it is being used as a guide for relief carving or fretwork. (**Pic 1**).

Notes on inches and millimetres

When using a computer to make drawings you can enter the dimensions in either inches or millimetres. However when entering a fraction of an inch it will only accept a decimal i.e. 0.5 inch and not ½in. To assist with this here is a table of conversions. Some of the sixteenths are corrected to three figures. Everything larger than a sixteenth is an exact number.

1/16	= 0.063	5/16	= 0.313
9/16	= 0.564	13/16	= 0.813
1/8	= 0.125	3/8	= 0.375
5/8	= 0.625	7/8	= 0.875
3/16	= 0.188	7/16	= 0.438
11/16	= 0.688	15/16	= 0.938
1/4	= 0.25	1/2	= 0.5
3/4	= 0.75		

1



Templates are an ideal way of guiding a router. Plywood or MDF (6 to 9 mm thick) is ideal for this application, because it is stable, has a thick enough edge for the router bush to bear against and complex shapes can be cut with a scroll saw. If the template is to be used repeatedly for heavy-duty work they should be made from tough plastic.

> **Card is thick enough to draw around but still flexible enough to use in a computer printer...**

For marking out complex curves for a one-off furniture making project, such as the plinth for a traditional cupboard (**Pic 2**) I use 140 gram white card. Card is thick enough to draw around but still flexible enough to use in a computer printer (**Pic 3**) which is important if that's how you draw your templates.

To make dovetail templates, card is also good if it is a one off job but for templates that will have repeated use, thin plywood (**Pic 4**) is best. The picture shows some of the templates that I have used over the years, sometimes for several jobs.

2

3

4

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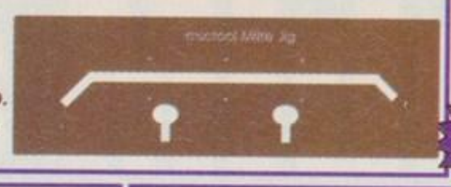

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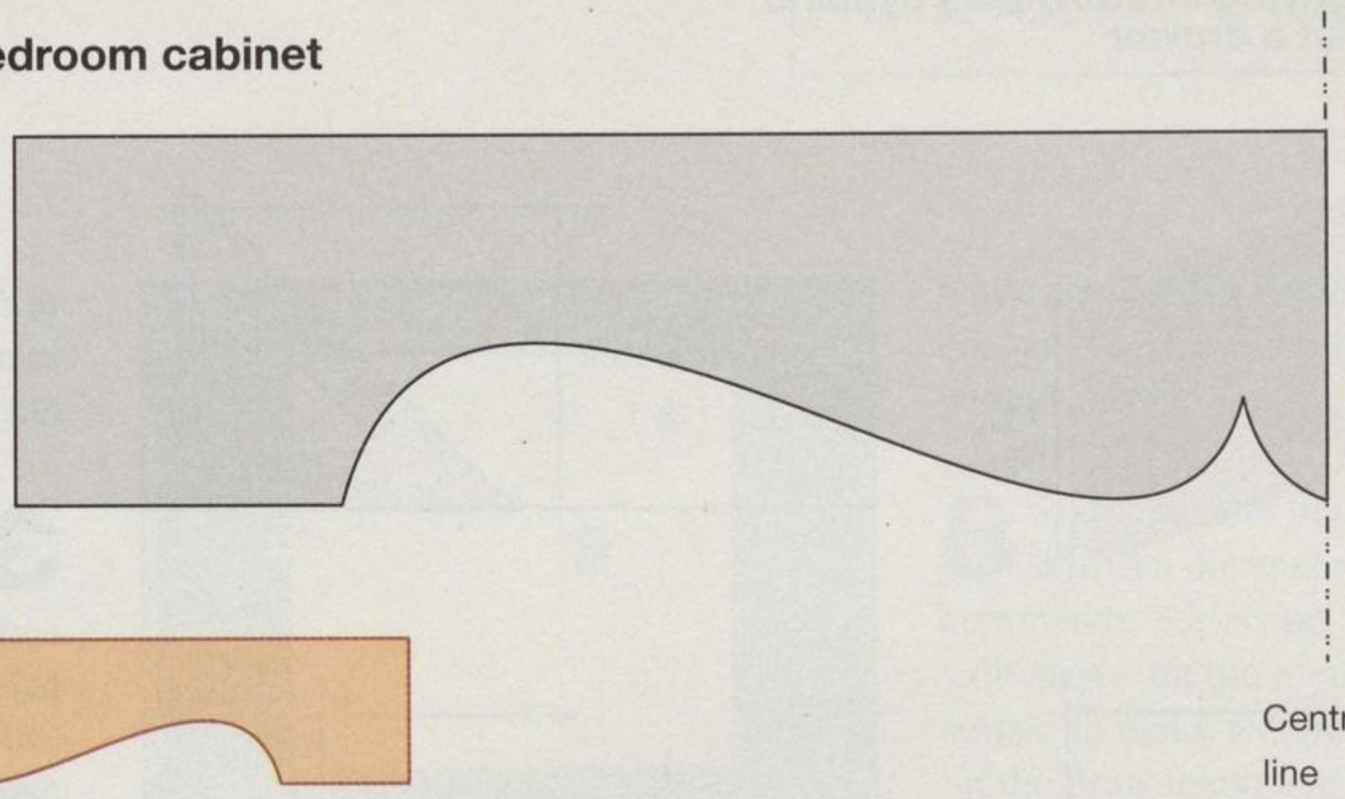
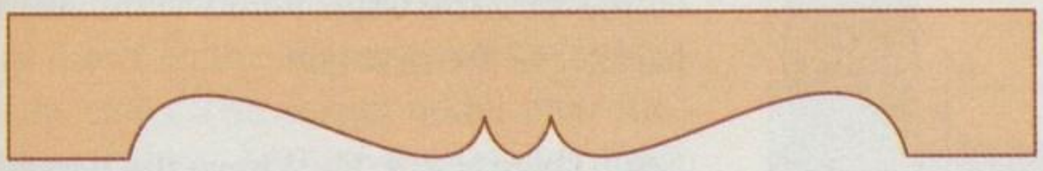
Drawing 1
Template of the plinth for a bedroom cabinet

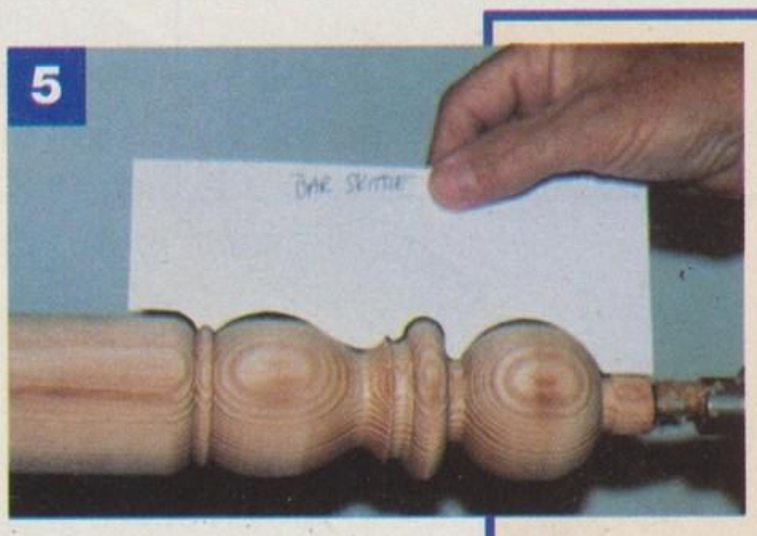
TIP

For a symmetrical design, you only have to draw half the design, then flip it over to create the mirror image on the other side (**Fig 1**).





The template can be flipped to give both halves of the shape for the plinth

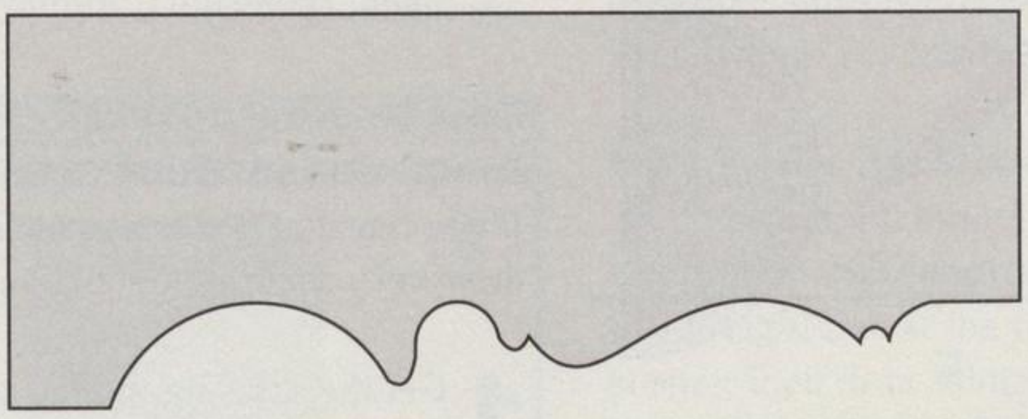


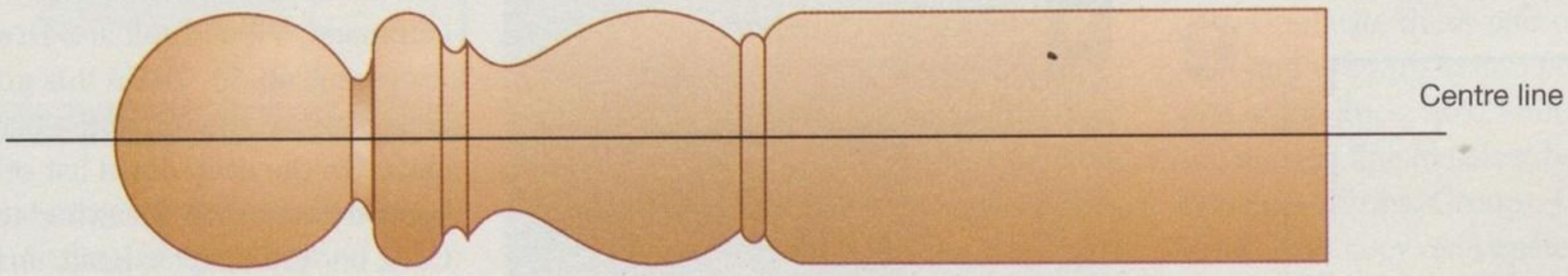
Templates for turning

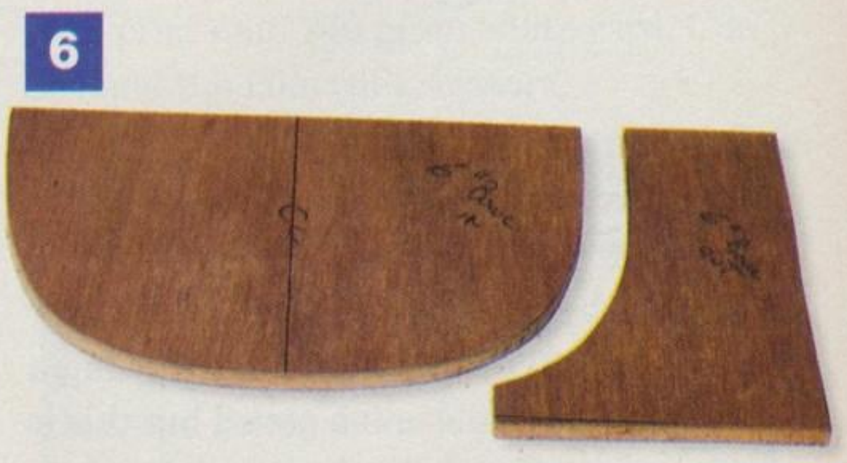
Card is also suitable for making profiles for turning work (**Pic 5**). When turning a project such as the skittles shown in the picture I will work from a two-dimensional drawing to get the various diameters, and a card template for the profile (**Fig 2**). However a profile for a large bowl can be too flimsy if made from card so plywood is more suitable (**Pic 6**).

To make this template, draw a full-sized bowl either by hand or with a computer (**Fig 3**), paste it onto the plywood and cut it out. It's then used on the lathe to finalise the shape (**Pic 7**). Note that the inside template is made for the complete internal shape but for the outside profile only a section of the shape is necessary.

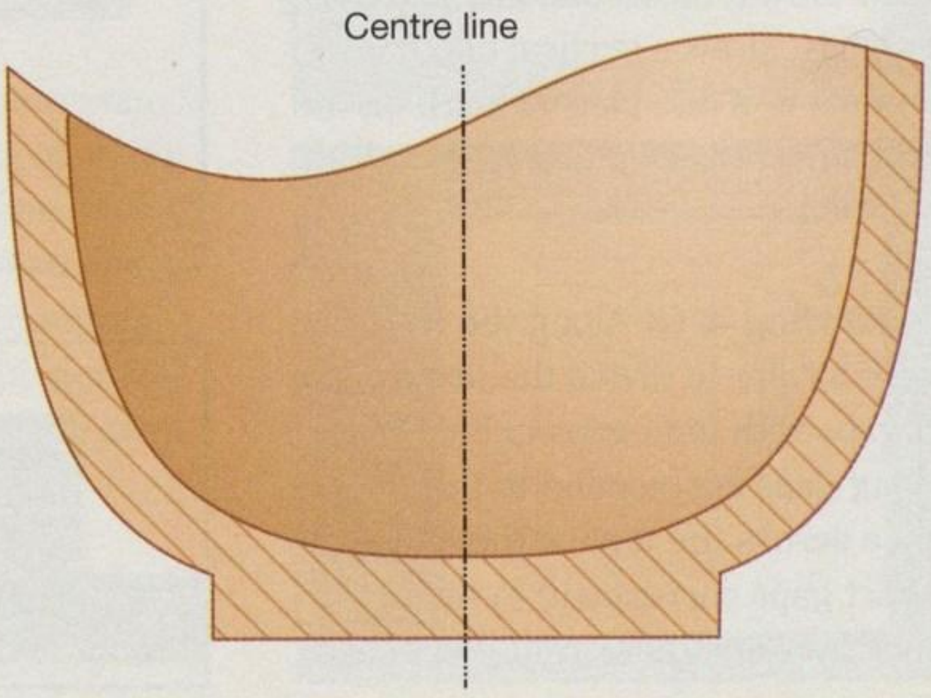
Drawing 2
Profile template for a skittle

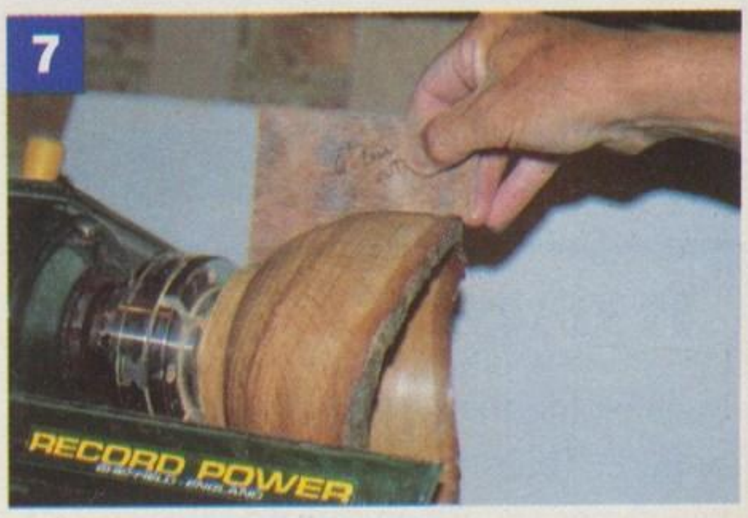




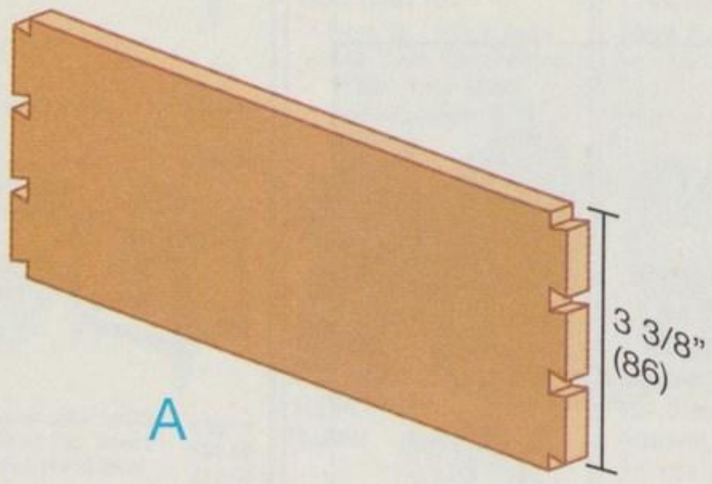


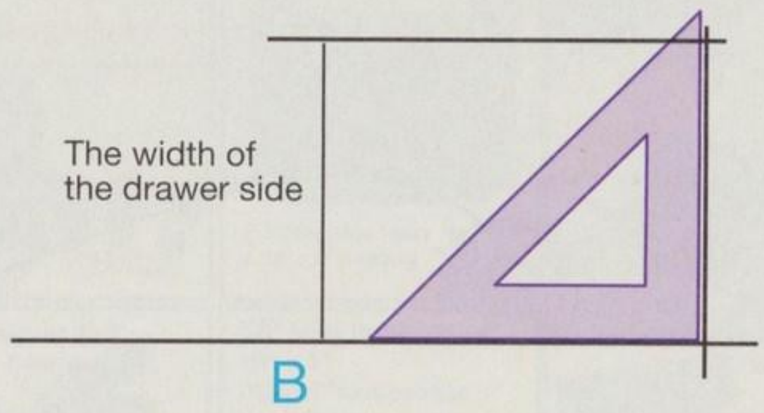
Dawing 3
Drawing of a bowl that the template is made from

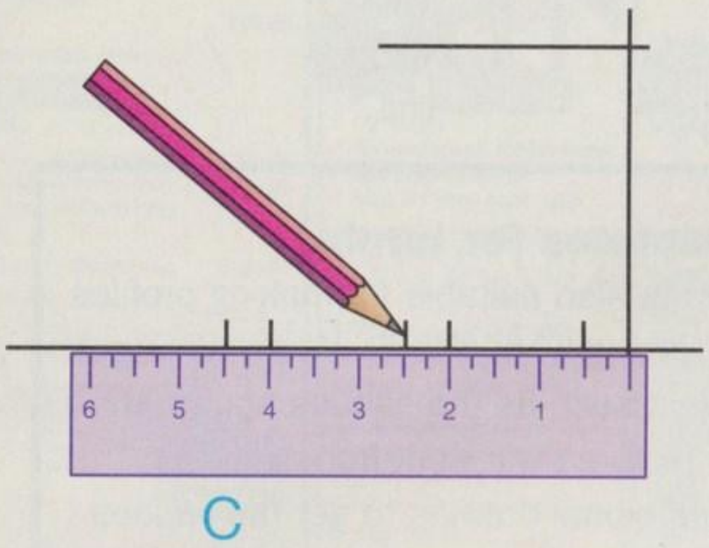


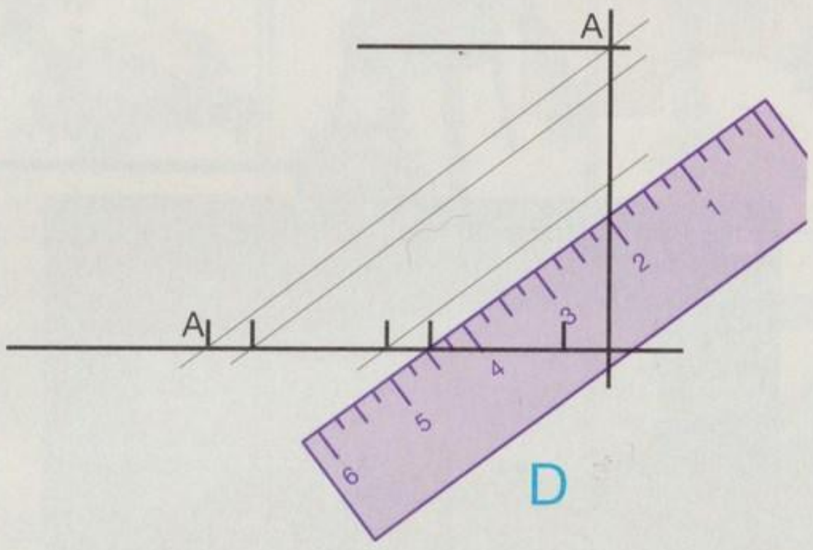


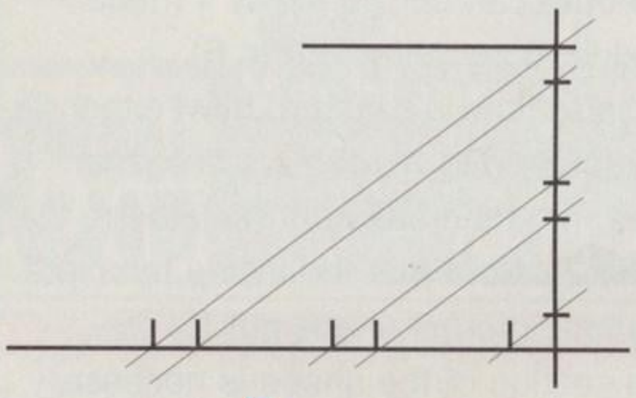
Templates for woodworking
Drawing 4, Laying out dovetails by hand for the side of a drawer

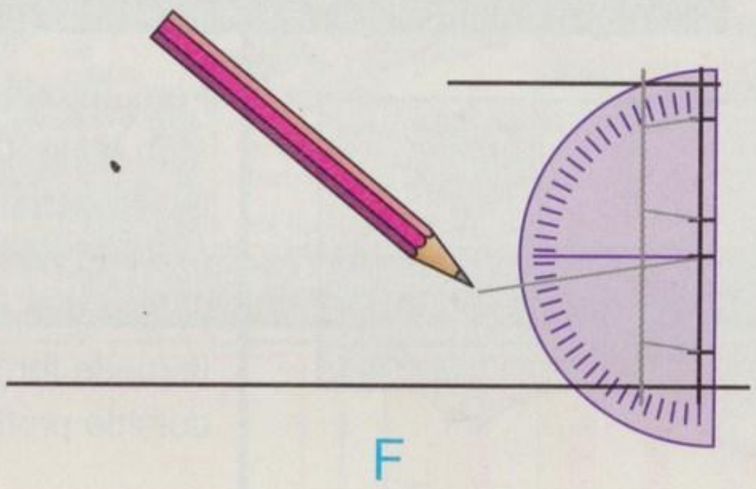


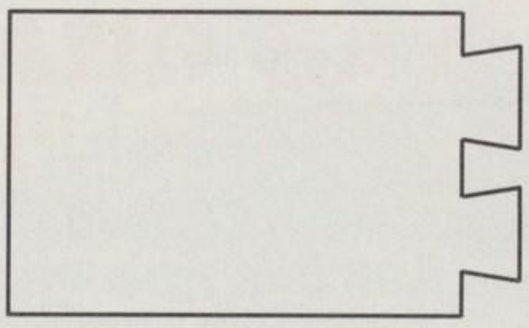


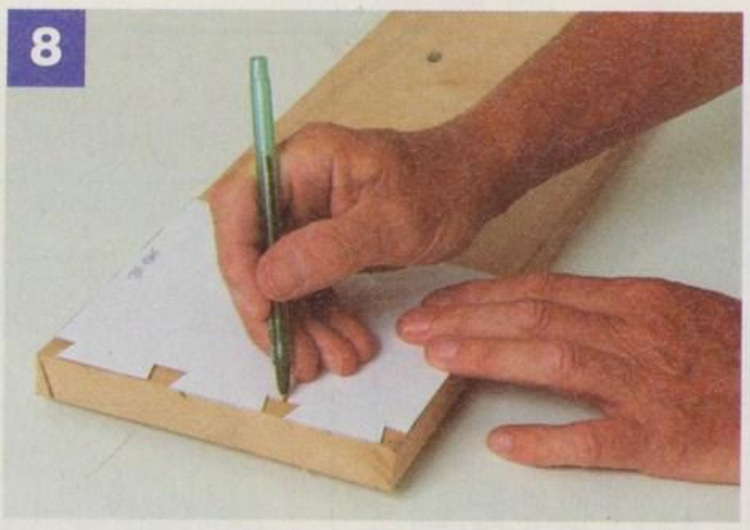












Drawing a dovetail template by hand

It's quite simple to draw a set of dovetails that will be used for the side of a drawer straight onto the drawer material using a sliding bevel, rule and a pencil but this is time consuming for a chest of drawers. It's also difficult to get the tails spaced regularly when the width of the drawer side is a dimension that's not devisable into whole numbers, such as, 3 ⅜in (86 mm). **(Drawing 4 A)**

The trick to getting the spacing correct is using whole numbers and then transferring them to the size you require. To do this you will need a ruler, pencil, set square and protractor.

Spacing dovetails step-by-step

1 **(Drawing 4 B)** On a piece of stiff card draw a horizontal line and using a set square, draw a vertical line orthogonal to it and place a mark on the vertical line corresponding to the width of the wood.

2 **(Drawing 4 C)** Along the base line use a ruler to divide the line up into short gaps with long gaps in between. The long gaps correspond to the distance across the tops of the tails and the short gaps correspond to the distance between them. You don't have to do any tricky division but use simple increments, in this case ½in (12 mm) and ½in (38 mm).

3 **(Drawing 4 D)** Connect up the two points A.A and draw lines connecting the other points with lines parallel to the first one.

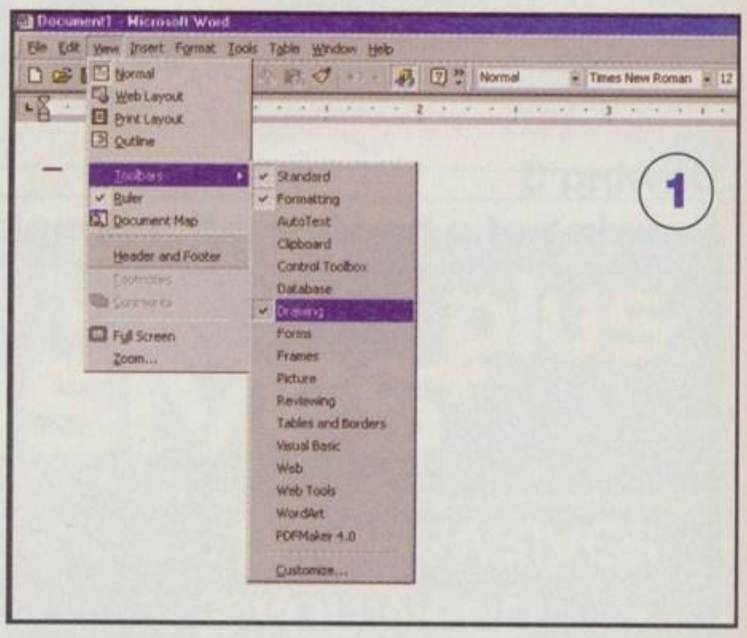
4 **(Drawing 4 E)** Where the parallel lines cross the vertical line make a mark with a pencil.

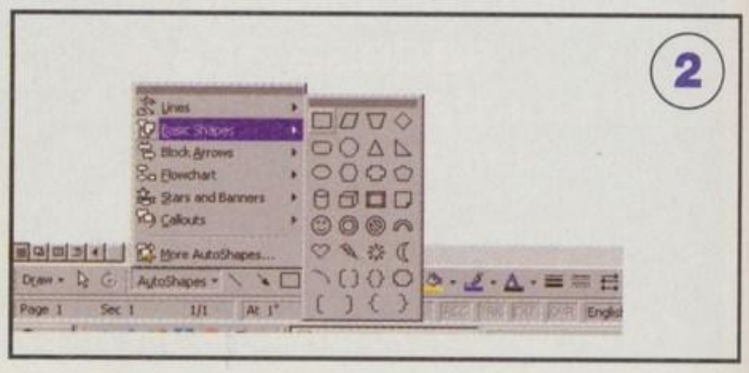
5 **(Drawing 4 F)** Place a protractor with the centre over one of the marks just drawn and mark at either +8 degrees or -8 degrees depending on which side of the tail you are drawing. Eight degrees equals a slope of about 1:6. Repeat on all the marks and the tails are made. **(Pic 8)**.

How to draw dovetail templates in Word

If you have a PC then it's possible to draw very accurate templates in Word.

1 Get the drawing toolbar to appear at the base of the screen, by using the command: View>Toolbars>Drawing **(Screengrab 1)**. To do this go to the view menu at the top of the screen and click. On the drop down list select 'toolbars' and then 'Drawing' toolbar. Click on Autoshapes>Basic shapes and select the rectangle **(Screengrab 2)**.

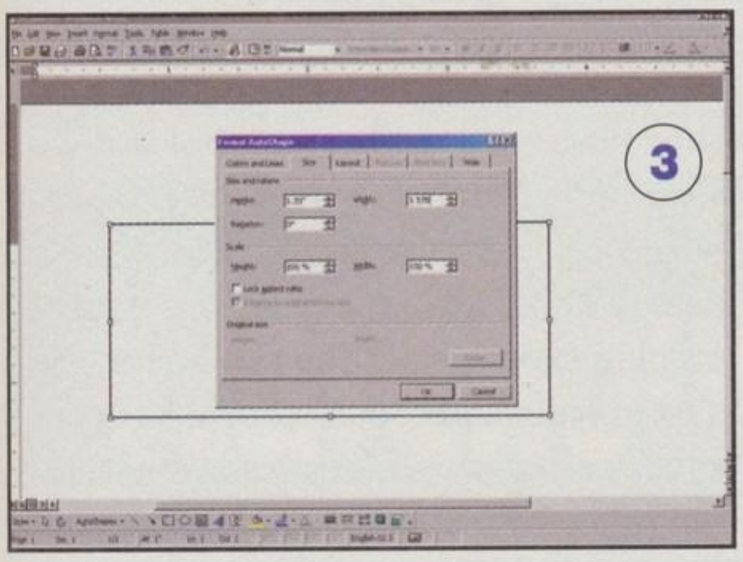




2 Move the cursor onto the screen, click and hold down the mouse button and drag down and to the right. Let go of the mouse button and a rectangle will be drawn on the screen.

Notice the small rectangles (called nodes) on the outline of the rectangle just drawn in the corners and the centre of the sides. The corner nodes alter the size and shape of the rectangle but if you hold down Shift at the same time as dragging the corner node, it will keep the aspect ratio of the rectangle and will alter the size only. However to make the template a specific size (3 ⅜in) we need to use Words' exact sizing facility.

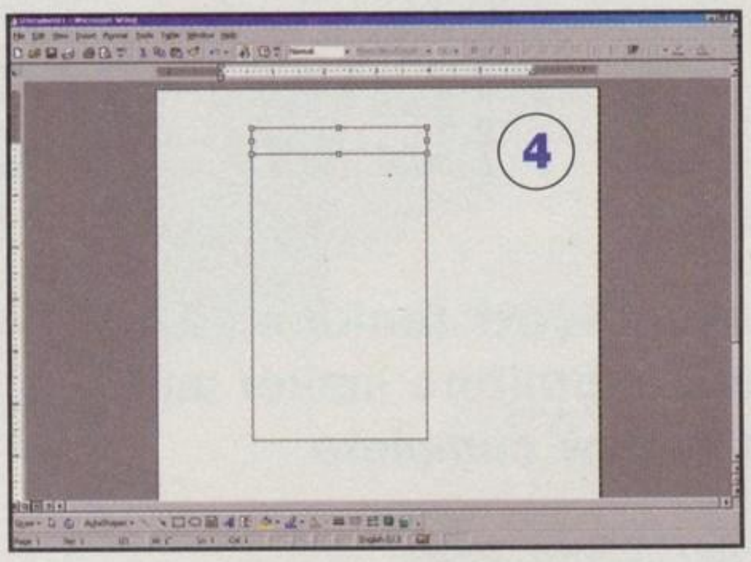
3 Mak sure the rectangle is selected - you'll see the nodes on the side. Move the cursor inside and click the right hand button. This gets a local



menu in the centre of the screen. Go to 'Format Autoshapes' and click and you will get the 'Format Autoshapes' dialogue box. Along the top of the box are six 'tabs' , choose the 'size' tab. Type 6 into the 'Height' box because we want this to be about 6in long. The length of the template is not important but in the width box type 3.375 which is 3 ⅜in and the width of the drawer side (**Screengrab 3**). Click 'ok'.

4 If you only get part of the rectangle shown on the screen, zoom, using the command: view>zoom, then click the 75% button on the dialogues box. If you want to use metric, use the command: Tools>options and click on the general tab. On the box labelled 'measurement units', put in millimetres.

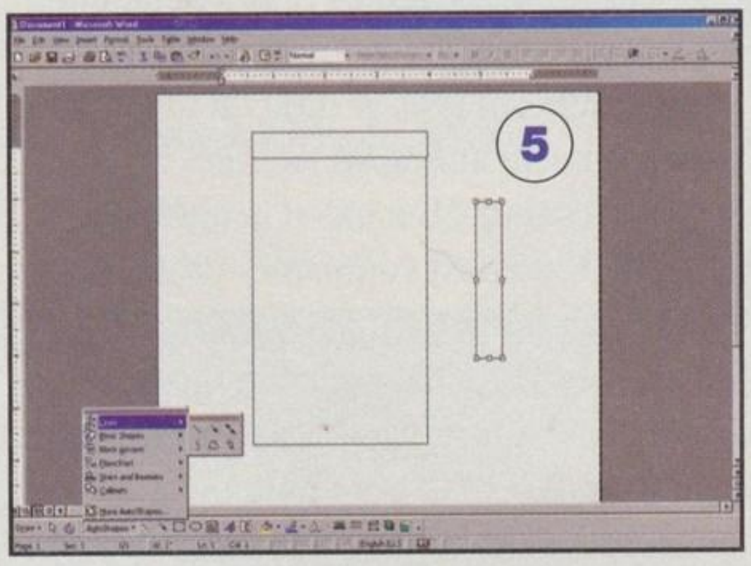
5 Following this draw a second rectangle, make it 3 ⅜ x ½in (86 mm

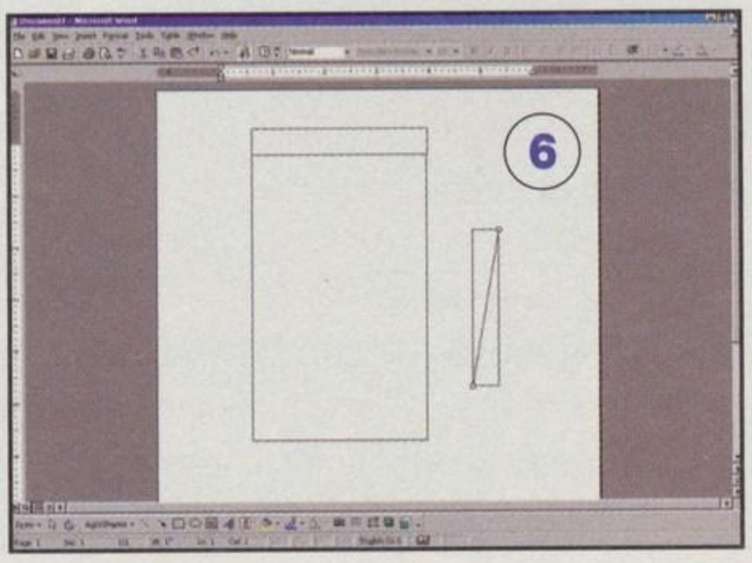


x 12 mm) and drag it across the screen to line it up at the top of the big rectangle (**Screengrab 4**). This gives the depth of the tails.

6 To find the slope angle, draw another rectangle 3 x ½in anywhere on the screen. This could be any size as long as the ratio between the long and the short sides is 6:1, for dovetails made in softwood. For hardwood it is 8:1.

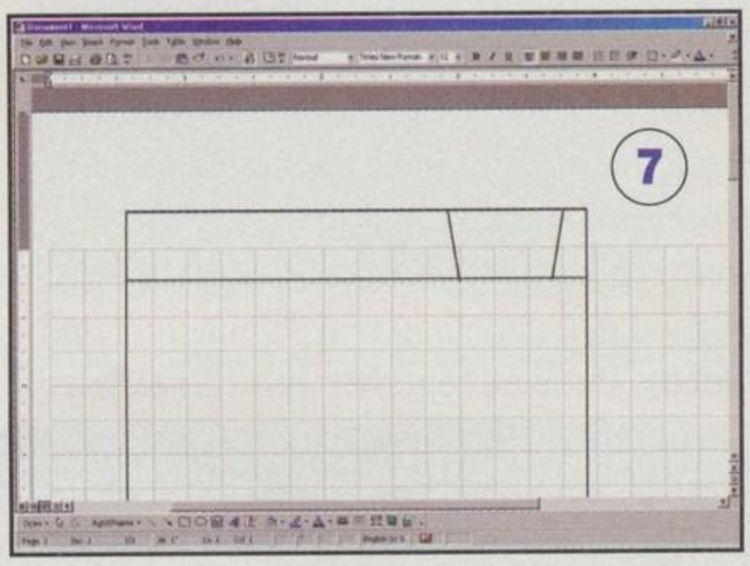
7 Click on 'Autoshapes' on the draw menu at the base of the screen and select 'line' (**Screengrab 5**) and choose the straight line at the top left hand corner, then draw a line between two diagonally opposite corners of your 6:1 rectangle (**Screengrab 6**). Grab the line and drag it between the lines at the top of your original rectangle. While the line is selected grab each node separately on the ends and make them fit between the lines. Hold the shift key on the keyboard



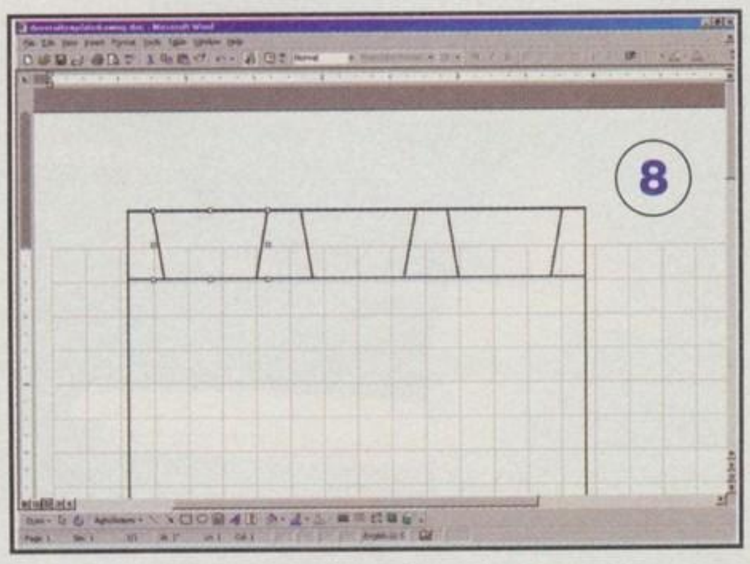


while you do this so the angle remains constant. Select the 6:1 rectangle and press Delete .

8 Select the line that represents one side of a dovetail and use the commands 'edit>copy' followed by 'edit>paste' on the menu at the top of the screen to make a duplicate of it and then on the draw menu use the command 'draw>rotate' and 'flip>flip horizontal'. Move the other half of the dovetail into position at the required distance from the first line. To bring a grid onto the screen use draw>guide and on the box that appears specify the grid size, **Screengrab 7**.



9 Duplicate these pair of lines twice and drag them into position. Select one of the lines, hold Shift and click on the second line to select both. Group the two lines (Draw>Group). Copy the group twice (edit copy>edit paste) and position the three groups to get the spacing between the tails(**Screengrab 8**). Save and print onto 240 gram white card. Cut around the tails with scissors.



NEXT MONTH

Draw curved templates and using templates with a router.

DIARY of a new woodworker

It's been four months since Scott Jenkins gave up his city job to become a furniture maker and his second ever project is now complete

You may remember last month that I was not sure whether the chair I was making would end up looking good or looking awful. The chair is finished and I still can't decide. On one hand I have done what I set out to do by making a very comfortable chair that is sturdy and roomy enough for heavyweights like myself and wouldn't look out of place in an executive office or reception area. I think the burr oak tiles have come out fantastically well and the fumed oak panelling is well matched and pretty. Put it all together and I have learnt a very important lesson in design: keep it simple.

From a design point of view I think there is just too much going on with this chair. The sweeping fumed oak side panels struggle to complement the angular form of the chair and the grain used in these side panels, whilst beautiful, conflicts with the heavily patterned burr. These all seem to be obvious things now that the chair is finished and I suspect that Michael, my course tutor, knew the mistakes I was about to make but let me make them anyway. Which is important, because I will never learn properly without making errors.

Those side panels...

The whole project took much more time than I had allocated (a total of eight weeks) and was considerably more difficult than imagined. The fumed effect is only skin deep and any sanding/cutting after assembly would result in localised lightening of colour. Of course I could have used a wood stain instead of fuming but I think staining makes the wood look unnatural and is more prone to wear.

Simply fuming

Fuming is the process of exposing wood to ammonia. The ammonia fumes react with the natural tannin in the wood and deepen the colour. Woods with a high tannin content, like oak, colour well whereas maple, which has a low tannin content, would barely change colour. Whilst I had heard about fuming before I did not realise it was so hard to achieve. Not because the treatment is difficult (put your wood in a sealed fume cupboard and take the top off the ammonia, wait between 30 mins and 24 hours depending on surface area and colour required - voila!), rather it is very difficult to get your hands on neat ammonia solution in Devon. It's lethal if inhaled in sufficient quantities so most companies prefer not to handle it. Chemist's may stock it, but try walking up to a pharmacist in dusty work clothes and a mad woodworker's stare and asking for a litre of pure ammonia - you'll be on the *Crimewatch* 'do not approach this man' slot before you know it. Luckily Michael had a little left over from his professional days (don't ask) and it was still strong enough to do the job.

Seat of learning

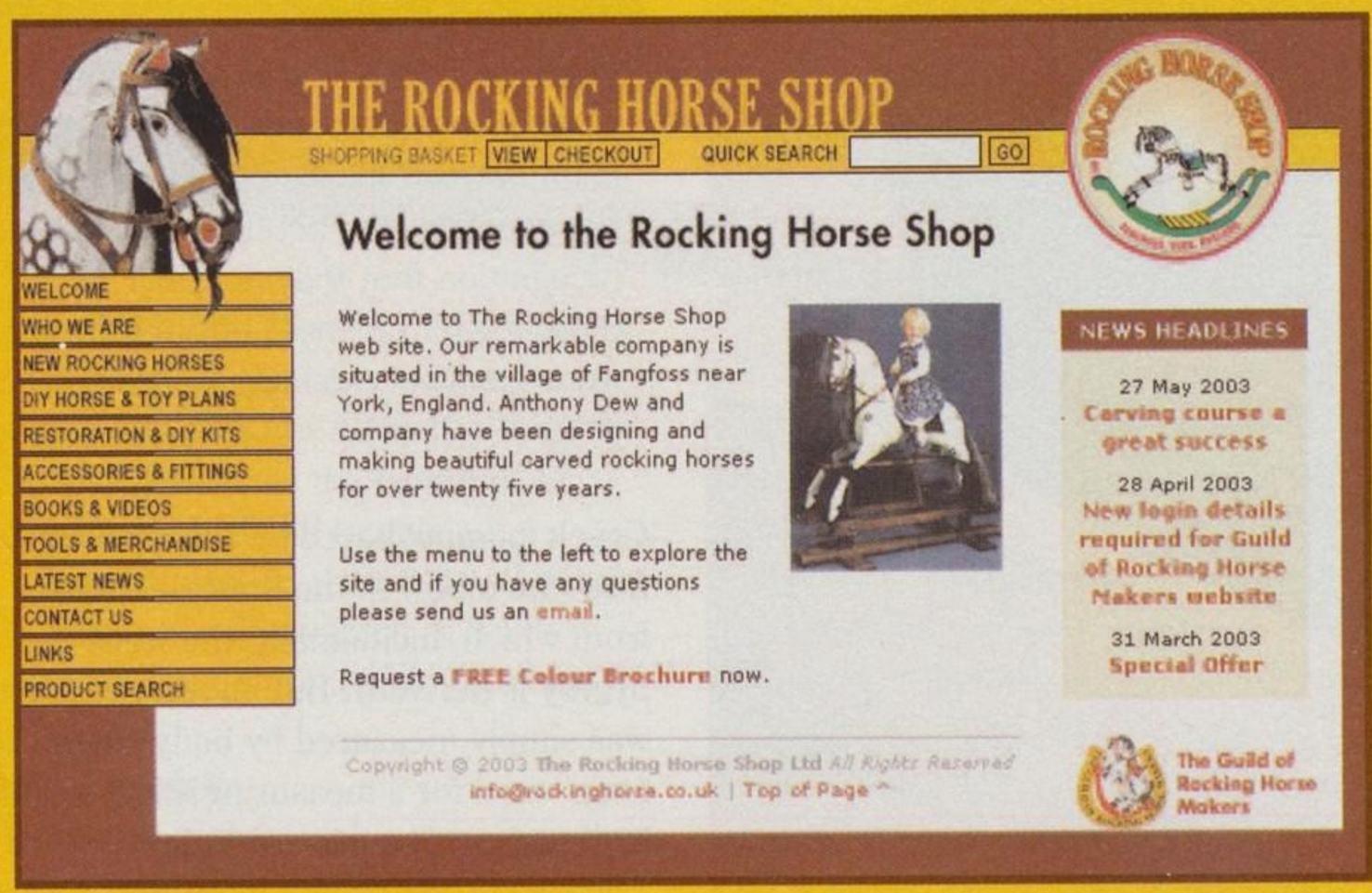
Webbed and with the fumed panels in place, the chair was spray finished with a pre-catalysed lacquer no. 8 to give a reasonable level of protection whilst maintaining a matt finish. The seat base is webbed with foam glued over. Since my sewing skills have not been tested for some time (well at all actually!), I had the cushions and leather covers made up by a local master upholsterer.

Chair man's message

All in all, making this chair was a great learning experience. The finished article is interesting and usually provokes some sort of response, good or bad, which is important for me as I would hate to think anything I made could look like it came from Knock-down Furniture Superstore's Inc. Sometimes I like the chair, sometimes I don't, maybe I am becoming hypercritical of my own work. After all, it is only my second piece of furniture and not everything can turn out to be a design classic.

Having spent so much time on the chair and with only two months of my six month course left, I have started to think about business again. To succeed in my goal of earning a living from woodworking within one year I must find a workshop and get it fully equipped by mid-October. I've started looking at property and surveying the different machinery manufacturers but pretty soon I will have to put my hand in my pocket and invest some hard cash in my future.

In the meantime, I have the most technical challenge to come - doors, drawers and dovetails. Can I really become a cabinetmaker?



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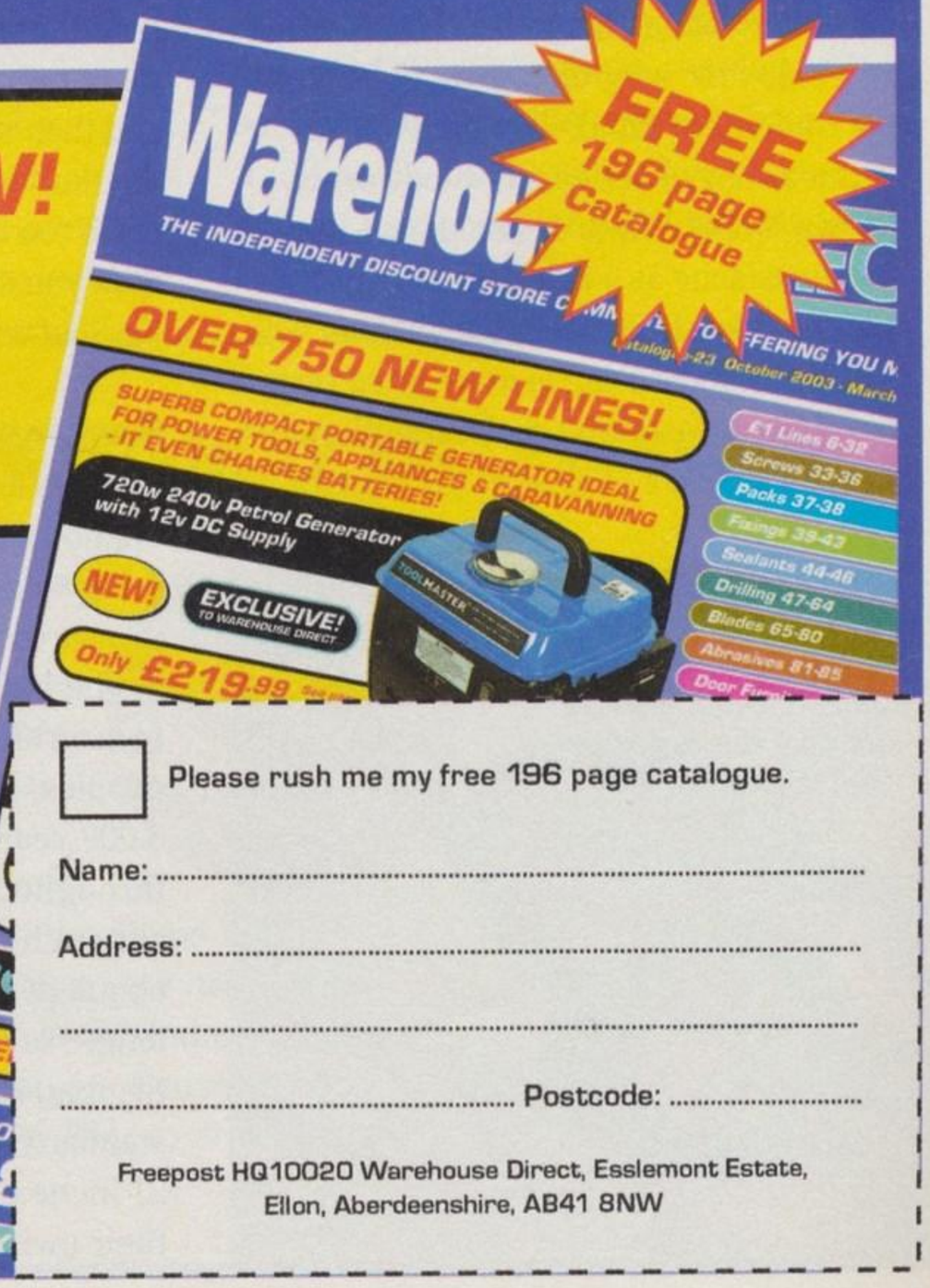

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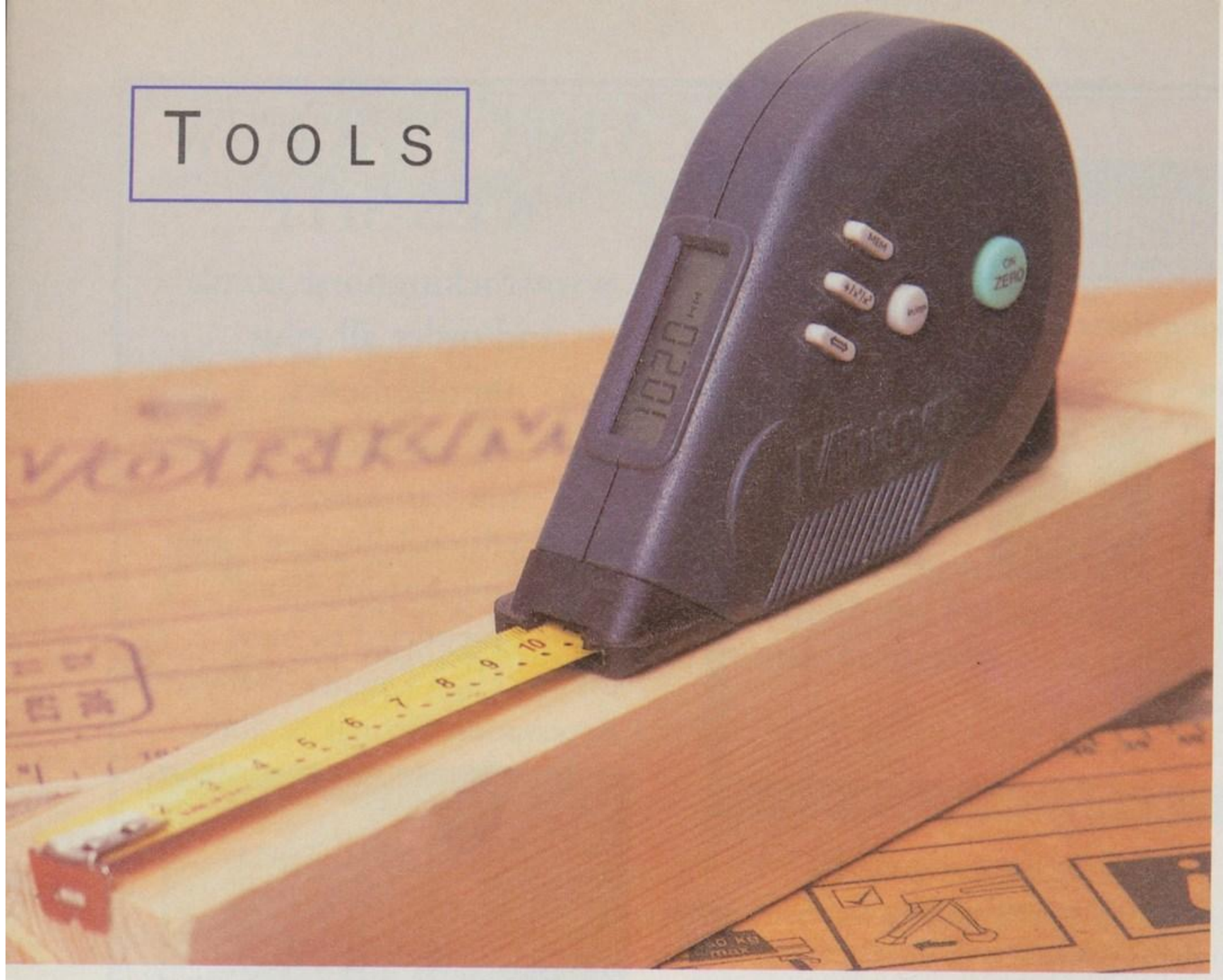

Get It Taped

Steve Ainsworth gets the measure of every woodworker's friend, the retractable tape, and tells the story of the inch in history

It was a comedian, the late Jimmy Edwards, who first said 'Mine's twelve inches long - but I don't use it as a rule'. He was, of course, referring to his trademark handlebar moustache.

But as any experienced woodworker knows Jimmy Edwards could have used his moustache as a ruler - though not without a few interesting contortions. The fact is that measuring is more often than not about measuring relative length rather than millimetres or inches. If a piece of wood needs to be fitted into a particular space it's as easy, and more accurate, to hold the wood in the hole and mark it right there rather than measure up with a tape and then transfer those measurements to the timber. And if the piece of wood to be cut is too large to be held against the space then you can always simply use a smaller piece of wood and mark that instead.

The Fisco BIG T was launched this year and has a satin finish. It can survive up to a 6m drop. Tel: 01268 747074

Past measures

In times long past a standardised ruler was unknown to most of those who made their living working with wood. Yet standard measures were sometimes called for.

The biblical cubit was a unit of measurement used by many ancient peoples. It probably originated in Egypt 5,000 years ago, and it eventually spread throughout the ancient world. Yet although the cubit was usually equal to about 18 inches - being based on the length of a man's arm from his elbow to his finger tips - in some countries the standard cubit was as long as 21 inches. Other cultures had their own variants, such as the Greek 'pugme' based on the distance from the elbow to the knuckles (and from which, incidentally, the word pygmy is derived). But not everything was simply measured by body parts: the Latin word for a measuring stick, 'regula' is the origin of our word 'ruler'

For most tradesmen however a foot remained quite literally one of those things on the end of your leg. The woodworking Davids and Goliaths of those far off times didn't see eye to eye in more than one sense: though the foot was used throughout the world its local standard length was anything between10 and 13 inches.

Did you know...?

Until the 1950s it was still common to refer to centimetres as 'French centimetres', not because there were any other sort of centimetres, but in recognition that they not only had their origin in France, but that they were also, very definitely, foreign.

Since 1959, the inch has been officially defined as 2.54 centimetres, and the foot as 30.48 cm

Pinching an inch

Around 1150 a law of King David I of Scotland first legally defined the inch in Britain as the width of a man's thumb at the base of the nail. To maintain the consistency of the official inch, a 'precise' measure was usually obtained by adding together the thumb breadths of a small, an average, and a large man, then using a third of the total. In the early 14th century, in the reign of King Edward II, the English inch was

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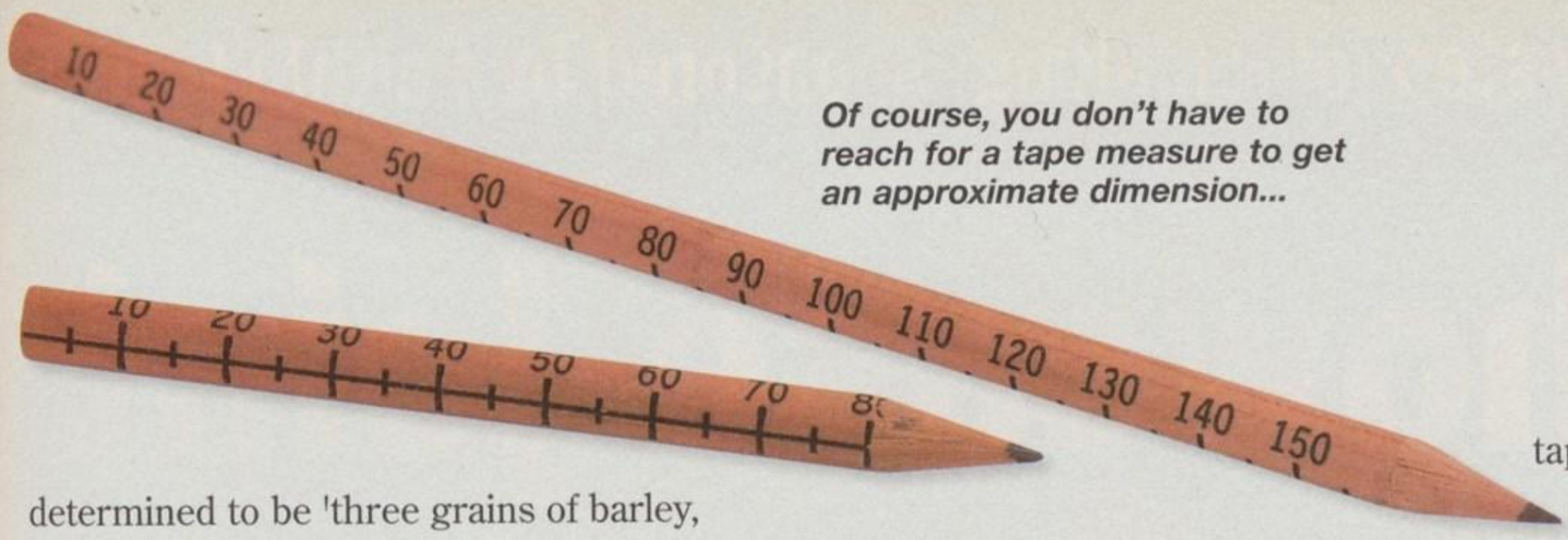


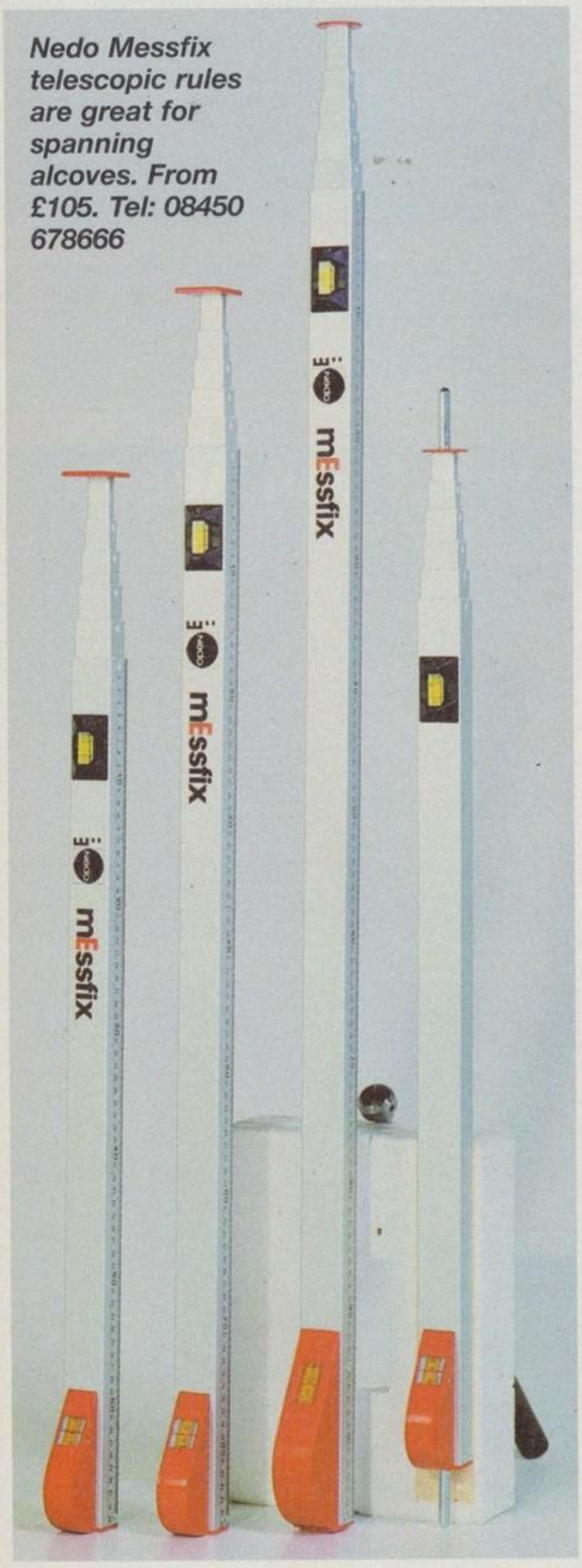
Of course, you don't have to reach for a tape measure to get an approximate dimension...

determined to be 'three grains of barley, dry and round, placed end to end lengthwise.' At other times the English inch was defined as the length of 12 poppy seeds laid end to end.

Less confusingly, since 1959, the inch has been officially defined as 2.54 centimetres, and the foot as 30.48 cm.

Going metric

The metric system took a very long time to catch on in the English-speaking world. It was as far back as 1791 that the French National Assembly had instructed the French Academy of Sciences to do something about the non-standardised state of the country's weights and measures.



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The Academy decided that its new 'metric' system should be based on unchanging, and unchangeable, naturally occurring physical units. A new unit of measurement called the metre, from Greek metron, meaning 'measure' was decided on - its length to be one ten millionth of a quadrant of the Earth's circumference measured through the poles on the meridian passing through Paris. Easier said than done however: it took six-years to survey the meridian and to finally come up with the definitive metre. We insular British happily stuck with our 39.37 inches to the metre, and our rather handier twelve inch rulers.

But, though marked one-foot wooden rulers may have remained a standard item for centuries, one item found in every woodworker's toolbox today is a retractable metal tape measure.

Spring action

Alvin J Fellows, vital statistics reportedly 40-46-42in, is the man universally credited with introducing this indispensable piece of equipment. Fellows, of New Haven, Connecticut was granted US patent number 79965 on 14th July 1868.

In fact however, as anyone who examines Fellows' original patent application will see, he did not invent the tape measure - or 'spring measuring tape' as he referred to it as - nor did he ever claim to be its inventor.

In Fellows' own words 'My improvement consists in the manner of fitting the spring-click which detains the main or primary spring to the central part of the main-spring barrel, so as to hold the tape at any desired position...the click, acting against the projection on the barrel, will prevent the recoil of the mainspring, and hold the tape at any desired position, and let it back at pleasure.'

By Fellows' time the spring tape had probably already been in existence for a hundred years or more, invented by some other, unsung, hero who, unlike Fellows, did not have the foresight to make his name by applying for a patent. What Fellows did was invent and patent a better catch, not the spring tape measure itself.

Today it's tempting to speculate what the 19th century inventor would have said if he had been told that in the 20th century the metre would be redefined as the distance travelled by light in 1/299,792,458 of a second. Fellows would probably have found that definition almost as incomprehensible as the information that top-secret laser range-finding equipment, originally fitted to US tanks, would one day be sold as a hi-tech alternative to his now-traditional tape measure: I've even bought one myself: but I don't use it as a rule.

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Showcase joint

Andy Standing continues his series with a simplified version of the impressive looking and notoriously difficult to make showcase joint

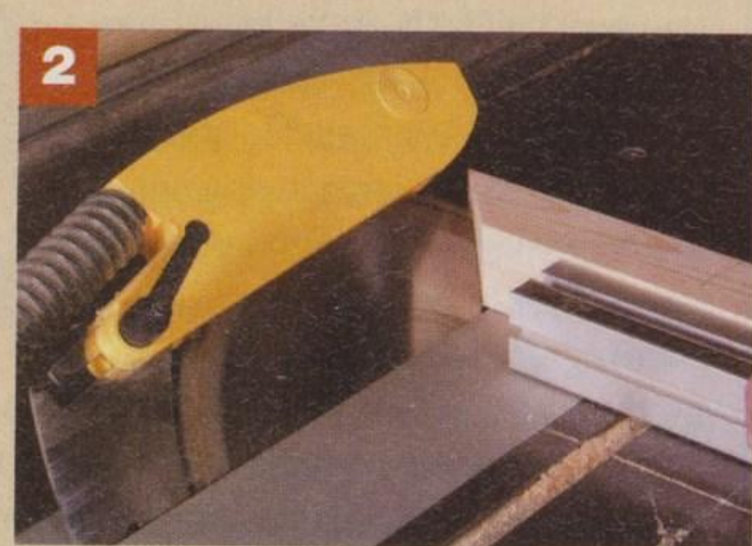
The showcase joint, as its name suggests, was originally devised for use in the timber frames of glazed display cabinets. It was designed to overcome the difficulty of joining three components at a corner without showing any end grain, so all three must be mitred on two sides. The original joint was rebated to hold the glass panels and it was fiendishly difficult to make as it relied on a combination of concealed dovetails and mortise and tenons to hold it together. Here is a simplified version which achieves a neat three way corner and could perhaps be used in lightweight furniture construction. Should you wish to make a rebated version, machine the rebates before setting the loose tenons, to ensure there is no overlap.

What you need...

- Router
- Bench or handsaw
- Bevel-edged chisel
- MDF scraps
- PVA adhesive
- Tape and ruler
- Cramps

1

Start by cutting a clean mitre on the end of each component. A circular saw with a high quality blade will produce a fine finish, though the job may equally be done by hand with a mitre saw.



2

Cut a second mitre on the face adjacent to the first

3

Your components should now look like this

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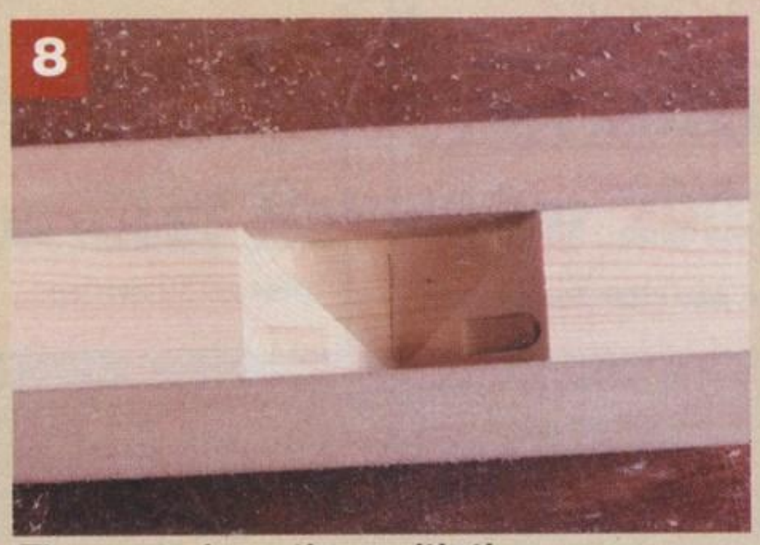
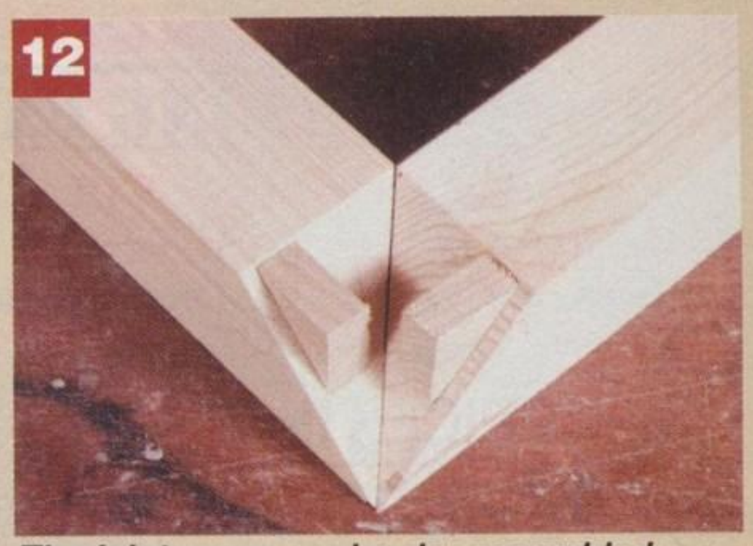
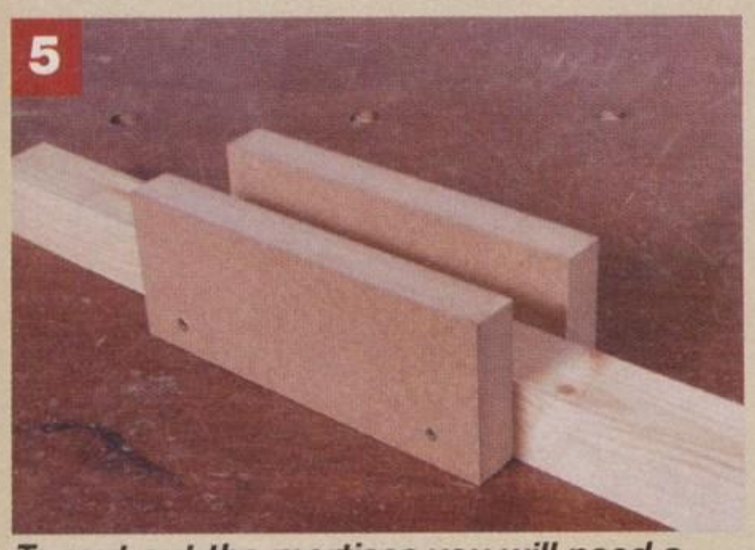
Test fit the components and use a try square to check the accuracy



The routed mortises with the components held in the jig

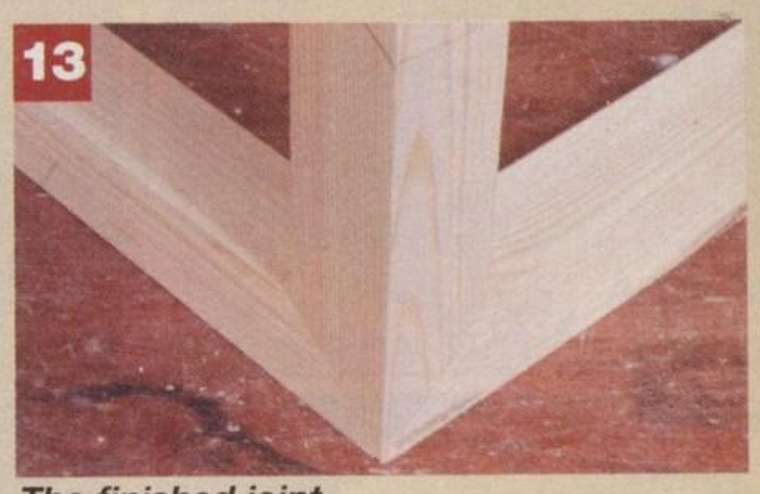


The joint may now be dry assembled. Check that all the faces mate together tightly. If necessary reduce the size of the loose tenons slightly to allow the joints to close up. When satisfied, glue up the joint. It is actually easier to assemble in two stages. Glue two components together first and clamp up until set, then the clamp may be removed and the third piece may be fitted and clamped

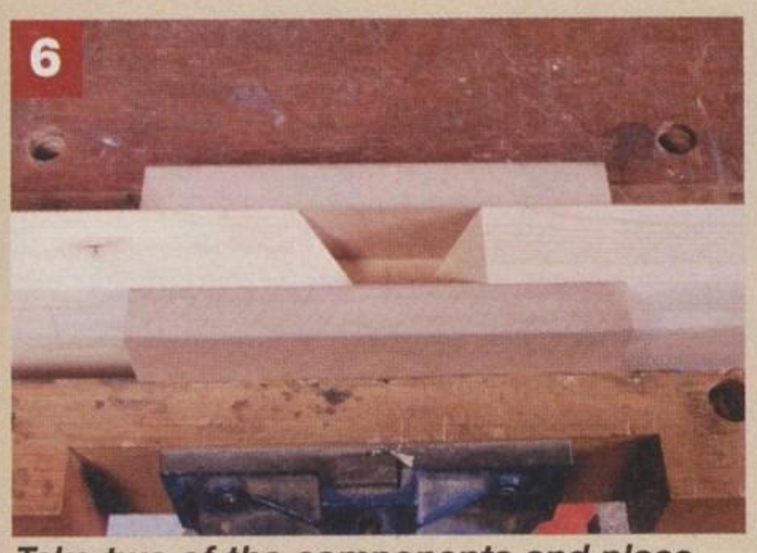


To rout out the mortises you will need a simple jig. Use an offcut of the same size as the components for the base and screw a piece of 18mm or 25mm thick MDF to each side. The MDF should be exactly double the height of the base, so that when a workpiece is fitted into the gap, the sides are exactly flush with the top

The three parts with their routed mortises

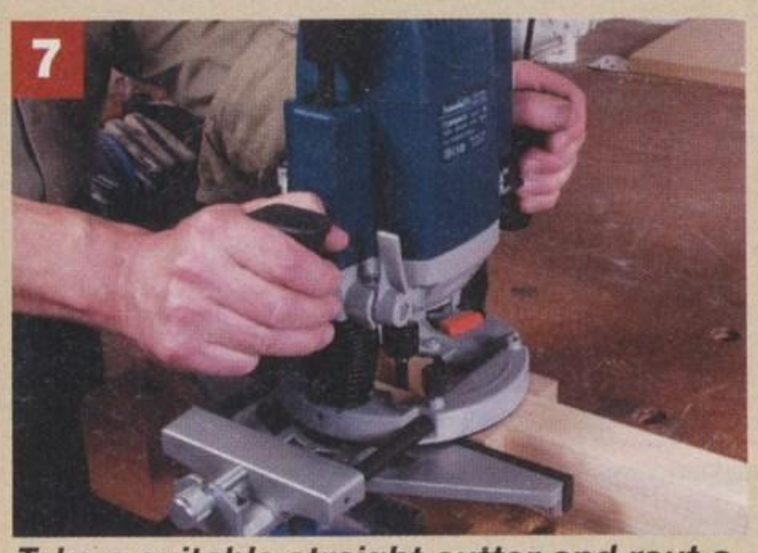


The finished joint

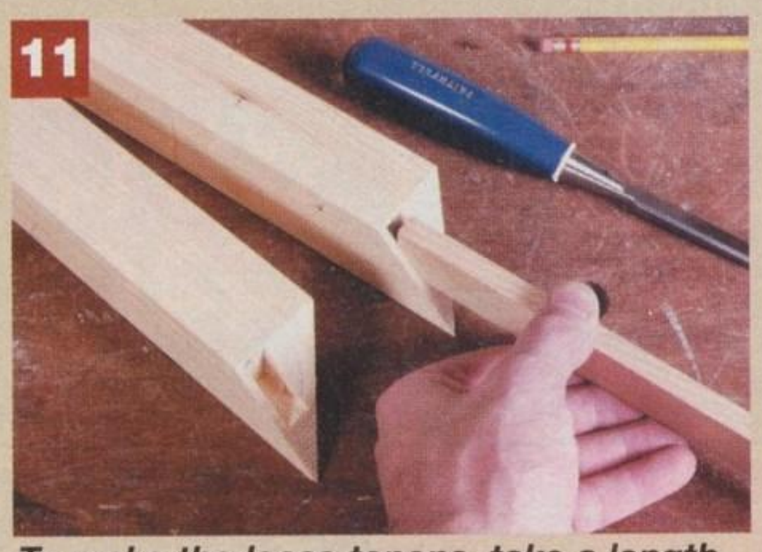


Take two of the components and place them in the jig so that their points are both facing each other. Clamp the jig in a vice, but raise it up enough to allow the router side fence to run on it unimpeded

Square off the rounded end of the mortise with a chisel



Take a suitable straight cutter and rout a mortise in the angled part of the workpiece. Be careful to stop before the cutter reaches the top surface. In this case the timber was 40mm wide, a 10mm straight cutter was used, plunged to a depth of 24mm, and set in 4mm from the outer edge. Turn the pieces over and rout a mortise on each face



To make the loose tenons, take a length of timber and machine it so that it is a snug fit in the mortise. A rip saw is ideal for this job, though obviously you can do it by hand with a plane. When you are satisfied with the fit, cut the timber into three squares to suit the mortises

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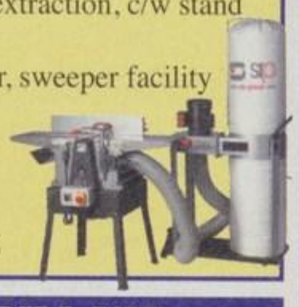

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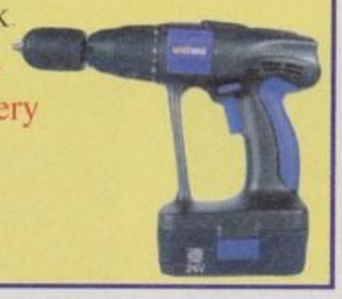

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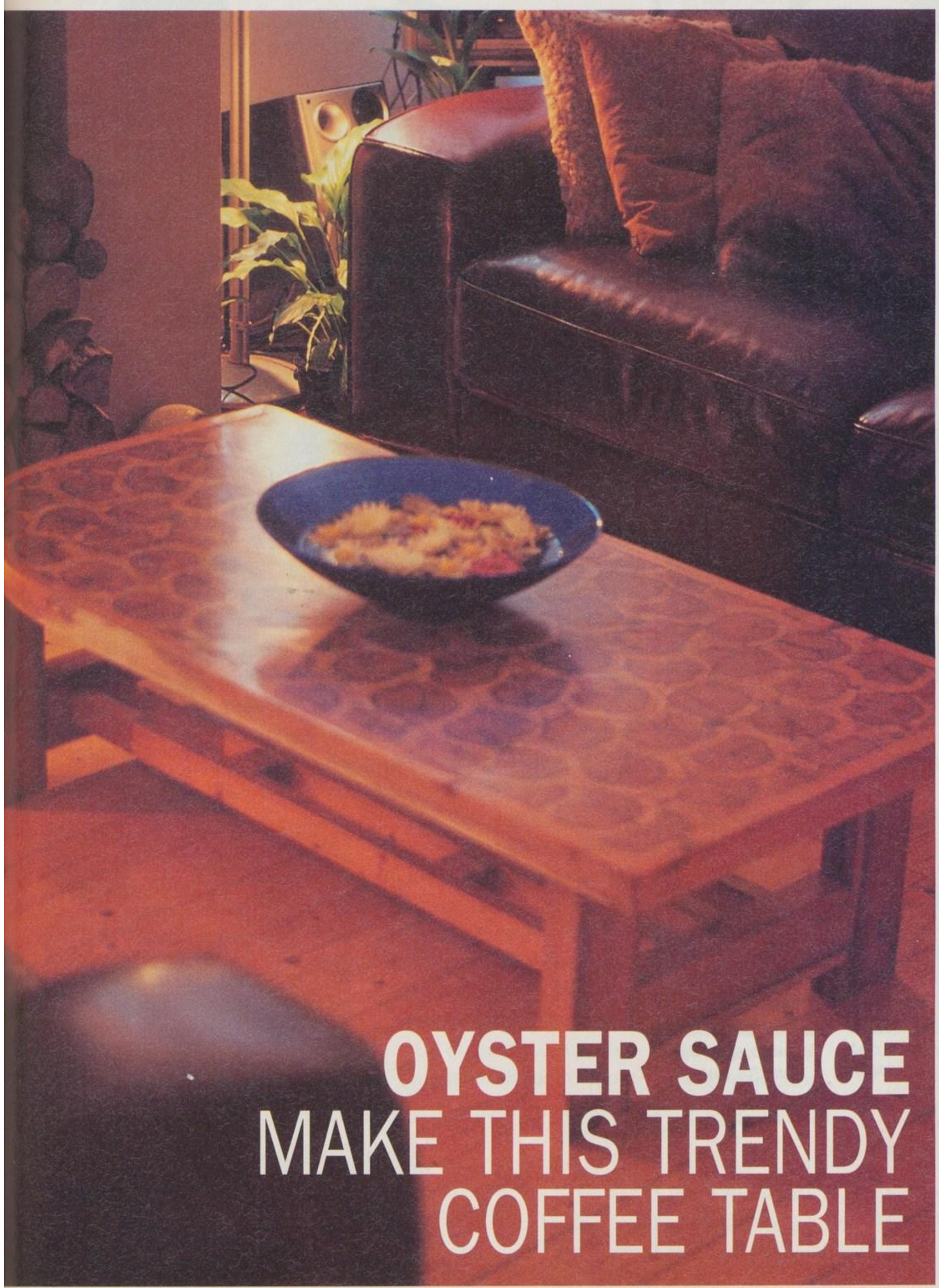

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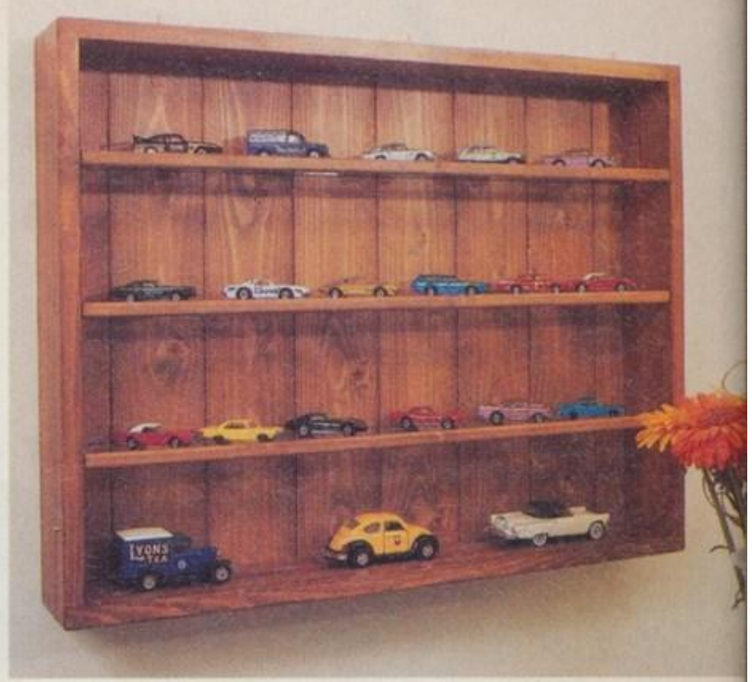
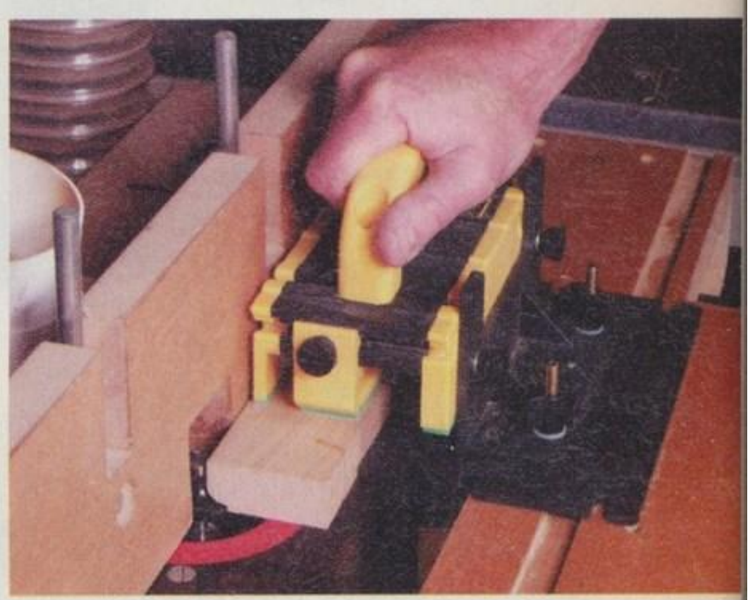
MAKE THIS TRENDY COFFEE TABLE

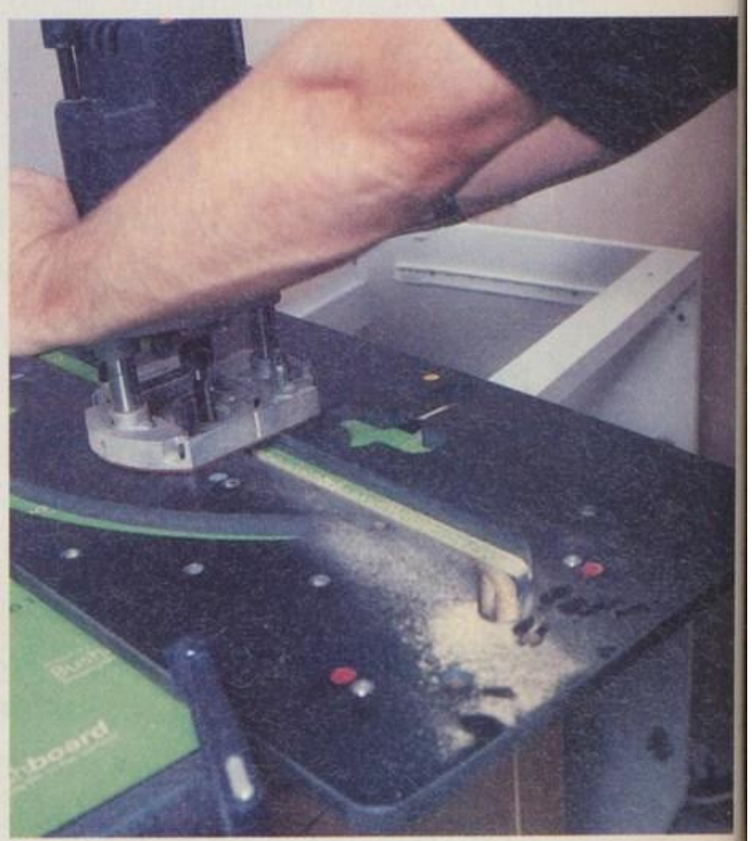


HOW TO BUILD A DISPLAY CASE



WE TEST A NEW BATCH OF ROUTER JIGS FROM THE STATES

FOLLOW OUR PROJECT WORKSHOP BUILD



STEP-BY-STEP GUIDE TO WORKTOP JIGS

The Woodworker

Details correct at time of going to press and are subject to change without notice.

Budget Routers Part 2

To round off our November Giant Test of budget routers, Andy Standing looks at the final four and gives his verdict

Einhell BOF 700

This is a machine designed for occasional use and is really only capable of the simpler jobs. The left handle houses the variable speed control and the right has the power switch on top. This must be permanently pressed to keep the motor running. On the rear is a crude depth of cut adjuster which is just a piece of slotted metal held with a locking knob. The body is supported on a spindly pair of columns with external springs, and the plunge lock lever is mounted on the front left of the body. Though the plunging action is smooth, there's too much play and the body rocks about alarmingly. In use the motor runs smoothly and the variable speed is good. However it's uncomfortable to use, with the poorly placed switch soon causing problems.

Depth scale on Einhell

Depth of cut adjuster

Variable speed is on the handle

✔ **Pros**
- Low price

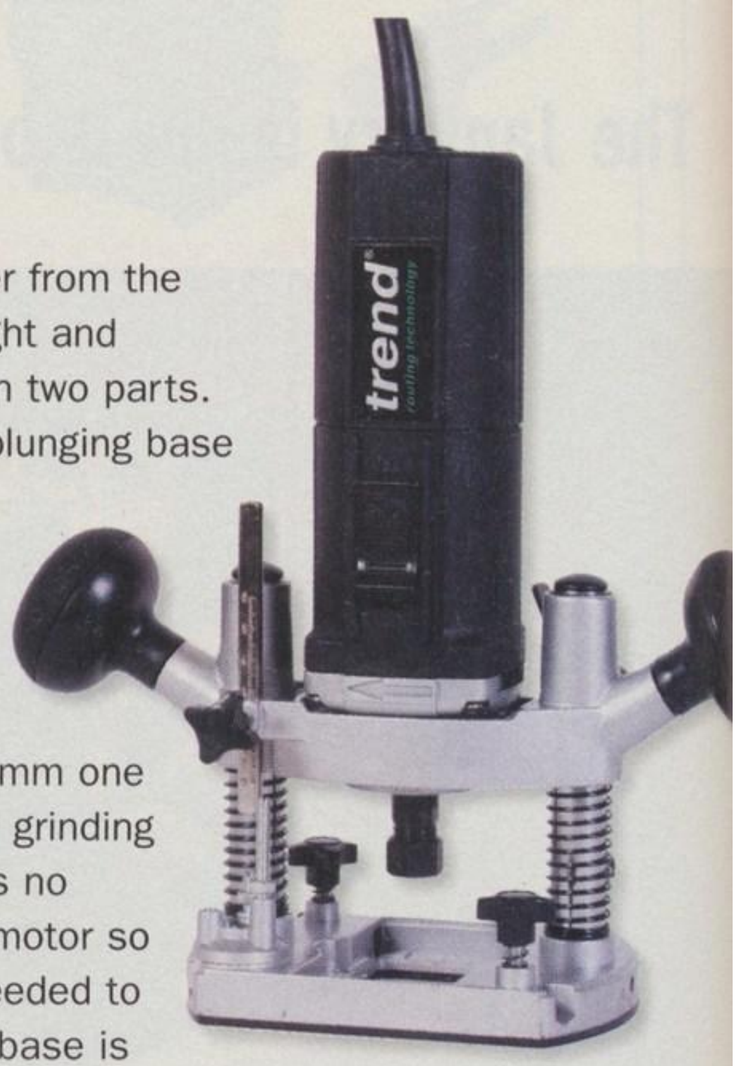
✘ **Cons**
- Poor design
- Inaccurate plunging
- Uncomfortable to use

Spec sheet

Motor power	700watts
Collets supplied	1/4in, 8mm
Speed	16,000-28,000
Weight	3.3kg
Accessories supplied	side fence, guide bush, roller guide, dust extraction adapter, trammel point, five piece cutter set.
List price	£24.99

Toolbank
☎ 01322 321400

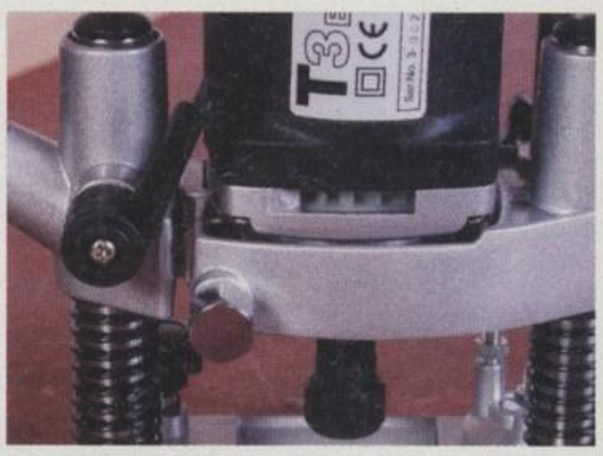
Trend T3



This is the smallest router from the Trend range and it is a light and versatile tool. It's made in two parts. The motor body and the plunging base may be split to allow the motor unit to be used freehand or fitted in a stand for overhead routing. It's supplied with three collets, the 6mm one being good for freehand grinding and polishing. There's no spindle lock on the motor so two spanners are needed to change cutters. The base is all alloy and has a pair of mushroom handles on the sides and a simple rod type depth adjuster. There's a three position turret on the base and a fine height adjuster is available as an accessory. The two steel columns have external springs and the plunging action is very smooth and easy. The locking lever must be firmly pressed, to ensure it does not spring open. The base is drilled to accept Trend's accessories and guidebushes.

In use the Trend is a good performer within its limitations. Its motor may not be very powerful, but its light weight makes it ideal for use in difficult situations such as machining vertical surfaces, or sinking hinges in cabinets. Its removable motor also opens up a range of possibilities.

Both Ferm FBF6E and Trend T3 have removable motors



Plunge lock lever and motor clamping bolt on Trend

✔ **Pros**
- Versatile
- Light weigh
- Large range of accessories

✘ **Cons**
- Limited power

Spec sheet

Motor power	550watts
Collets supplied	1/4in, 6mm, 8mm
Speed	8,000-32,000 rpm variable
Weight	2.4kg
Accessories supplied	storage case, side fence, dust extraction adapter, guidebush
List price	£46.94

Trend
☎ 0800487363
www.trendmachinery.co.uk

Ferm FBF-6E

What review of budget priced tools would be complete without a representative of the Ferm range from Screwfix Direct. Here is one of two. The FBF-6E is almost identical to the Trend T3. All the functions are the same and the castings are identical. The only obvious differences are that the Trend has more comfortable rubberised knobs and its base is drilled to accept all the Trend accessories whereas the Ferm's isn't. However it can still take the Trend guidebushes. Another difference between the two is in the motor. The Ferm seemed to be considerably less smooth and rather noisier than the Trend, but its performance was acceptable. The Trend is supplied with a good storage case and accessories lacking on the Ferm.

Depth of cut adjuster on Ferm FBF6E

✔ Pros
- Cheap price
- Versatile design

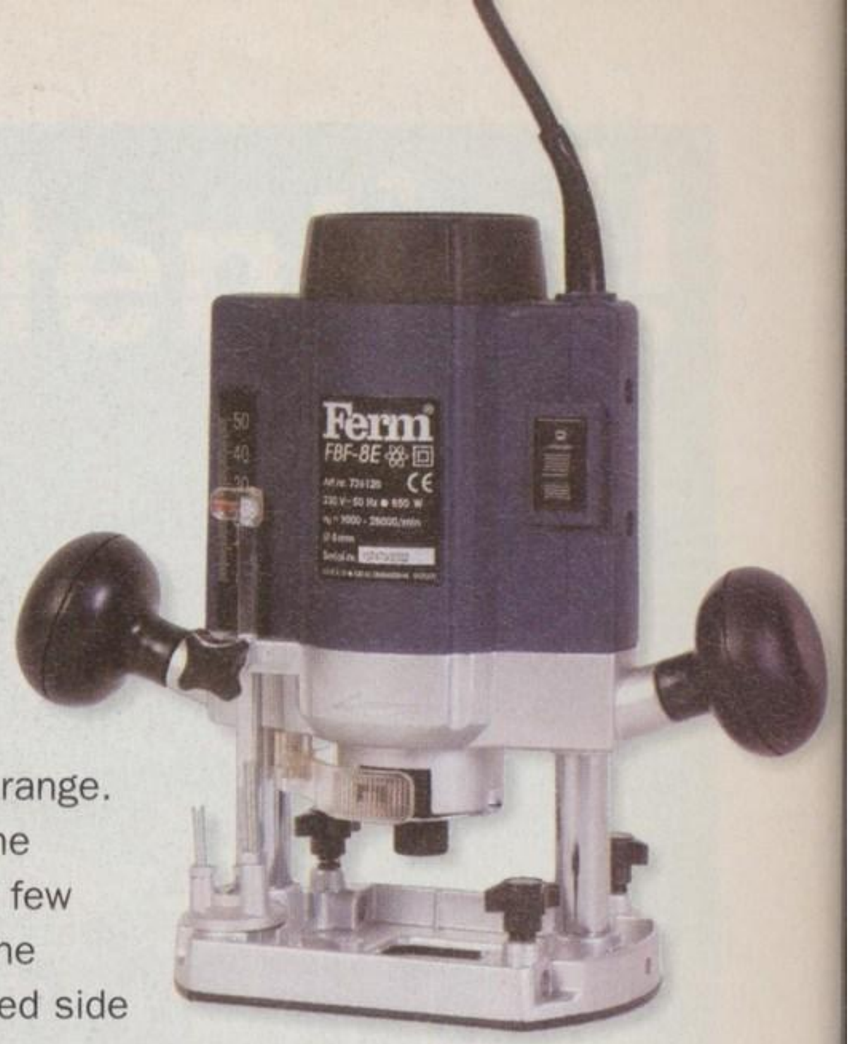
✘ Cons
- Noisy motor
- Limited power

Spec sheet

Motor power	550watts
Collets supplied	1/4in, 6mm, 8mm
Speed	8,000-32,000 rpm variable
Weight	2.4kg
Accessories supplied	side fence, dust extraction adapter
List price	£23.39

Screwfix Direct
☎ 0500 414141

Ferm FBF8E



Here is the second offering from the Ferm range. This one is similar to the Axminster router with a few detail changes. Again the Axminster has rubberised side handles where the Ferm has not. The Ferm also has a large perspex lever over the spindle lock button to make it easier to press. Though they both have the same sized motor, they each claim a different speed range with the Ferm covering 9,000-28,000 rpm and the Axminster covering 8,000-27,000 rpm. This makes little real difference to the user. The major difference between the two is in the plunging mechanism. The Axminster is smooth and easy whereas the Ferm is not nearly so controllable, though this may ease up in time.

Variable speed on Ferm FBF8E

Spindle lock button on Ferm FBF8E

✔ Pros
- Cheap price
- Good design

✘ Cons
- Rather stiff plunging action

Spec sheet

Motor power	850watts
Collets supplied	1/4in, 6mm, 8mm
Speed	9,000-28,000 rpm variable
Weight	3.2kg
Accessories supplied	side fence, guidebush, dust extraction adapter
List price	£35.99

Screwfix Direct
☎ 0500 414141

WW verdict

It is remarkable that you can now buy a variable speed plunging router for under £25. It is perhaps even more surprising that you can buy an 1800watt ½in collet router for under £45. However be aware that these are not comparable, and do not pretend to be comparable to the higher priced more professional machines. The standard of construction and the level of accuracy are considerably lower. If you are only using them occasionally and don't put excessive demands on the motors, they will produce acceptable results. The best of the bunch is the **Black & Decker**, but then it is the most expensive. It is well made and comfortable to use, with good performance. It's hard to ignore the **Power Devil**. Though it is crude and lacks any fine height adjuster, it has the collet and the power to handle the larger jobs and at an unbeatable price. Of the rest the **Trend** is a competent machine, particularly when you consider the vast range of accessories available. Finally the two **Ferms** are worthy of consideration, with their simple design, low price and three year guarantee.

No 39: Edge lipping

Accurate sizing and a radius bit are the best way to tackle edging jobs, says Alan Holtham

How do they do that?

If you have ever tried to accurately lip a thinly veneered board then you'll know that it's not a straightforward job. If you make the lipping exactly the same thickness as the board, then it's very difficult to fix in place with all the edges perfectly aligned. But if you cut it oversized and then try and trim back to the board there's a danger of damaging the thin veneer. However, with a router the job becomes almost foolproof and there's no need for any special tools or jigs.

1 In this example, I am lipping some melamine-faced contiboard with oak strips to fit inside a kitchen cabinet, **Pic 1**.

2 Machine the lipping to the correct thickness but leave it a few millimetres over width, compared to the board, **Pic 2**.

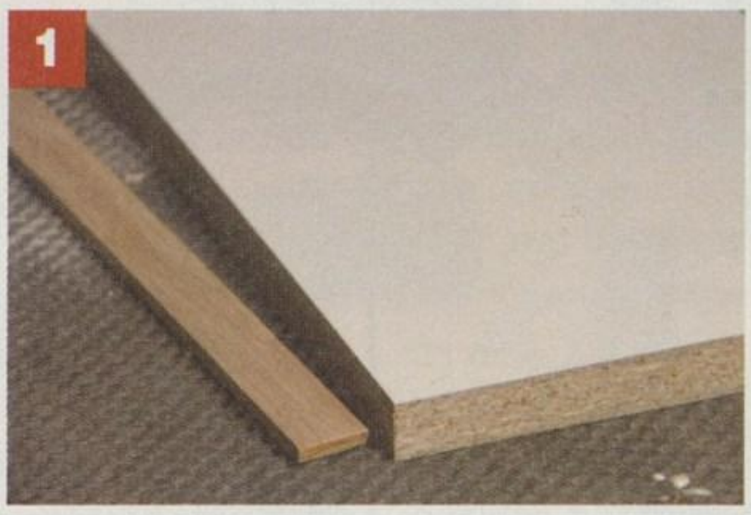
3 Glue the strip in place and clamp thoroughly. With the extra width you do not have to be too fussy about lining up. Try and get a millimetre or so of overhang from each face, **Pic 3**.

4 Choose the type of cutter you need, to either radius or chamfer the lipping, **Pic 4**.

5 If you try and use the router straight on the board the overhang from the lipping will tip it at an angle and the cut will be wobbly, **Pic 5**. Instead either lay a thin piece of packing down the length of the board or fix a small piece to half the router base to lift it clear of the lipping, **Pic 6**.

6 Use the fine height adjuster on the router to set the cutter precisely so that it removes the overhang but doesn't damage the face, **Pic 7**, and carefully rout along the full length of the lipping.

The joint between the two should now be perfectly flush. Turn the board over and repeat the process, **Pic 8**. After trimming the first edge the procedure is repeated on adjacent edges if necessary, the corners can either be but jointed or mitred, *see main pic*.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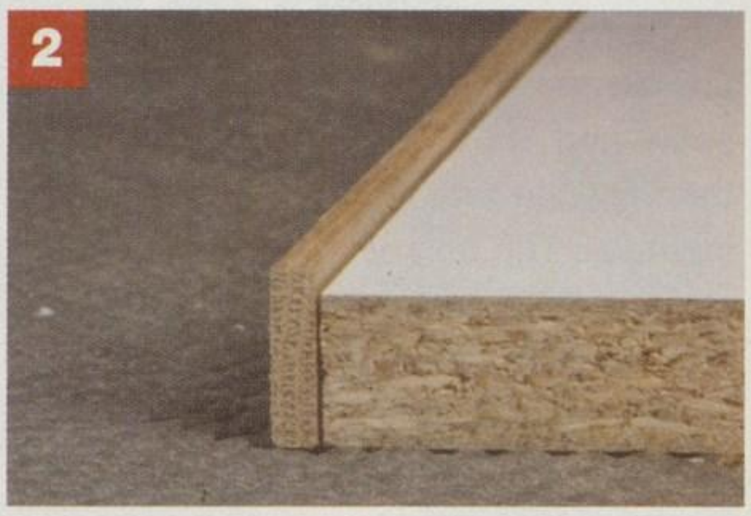
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Drill bit sets

Andy Standing puts half a dozen of the latest drill bit sets through the drill

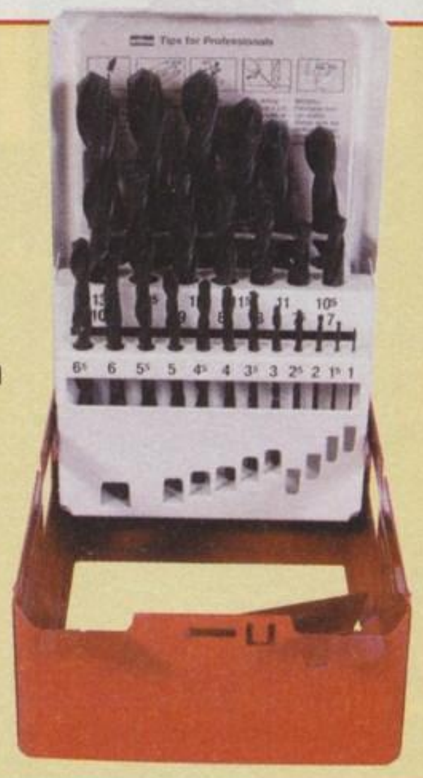
Using blunt drills or the wrong type of drill can ruin your work. It is worth investing in a good set of twist drills and looking after them. There are many different types on the market, some specifically for boring wood and others for drilling a variety of materials. When drilling wood a fairly high speed is used to achieve a good finish, however when drilling metal the speed should be slowed right down, and lubricant such as WD40 should be sprayed on the drill tip to prevent it from overheating. For drilling Perspex, again a low speed should be used otherwise the friction can melt the material and spoil the finish. Here is a selection of both large and small drill sets for universal use and for timber alone.

Faithfull 25 Piece HSS Drill Bit Set

Price: £52.45

Toolbank 01322 321400

Substantial professional bit set. Sizes from 1mm to 13mm in 0.5mm increments. Supplied in robust metal case with three tiers. Suitable for wood, metal and plastics. Traditional black finish to prevent corrosion. Ideal for the site worker.



Der Finest DFRS SET

The Woodworker BEST ON TEST

Price: £7.00

Brimarc 0845 3309100

This set is from a new range from Germany being imported by Brimarc. It is a five bit set with sizes 4mm, 5mm, 6mm, 8mm, and 10mm. These are lip and spur drills and are only suitable for use in timber. Central point makes precise location easy and razor sharp cutting faces produce super clean hole. Double flute design leaves both clean entry and exit holes. Ideal for cabinetmakers needing a fine finish.

Screwfix Titanium Coated Drill Set

The Woodworker EDITOR'S CHOICE

Price: from £9.99

Screwfix Direct 0500 414141

This set is available with either 19 or 25 bits. Size range is 19 piece from 1mm to 10mm in 0.5mm increments. The 25 piece set goes up to 13mm. Drills are stored in robust metal box that folds open for easy access. High speed steel bits are titanium coated which extends their life by 3 or 4 times. Produces clean holes in range of materials. Keen price.

Axminster Lip and Spur Set

Price: £7.29

Axminster 0800 371822

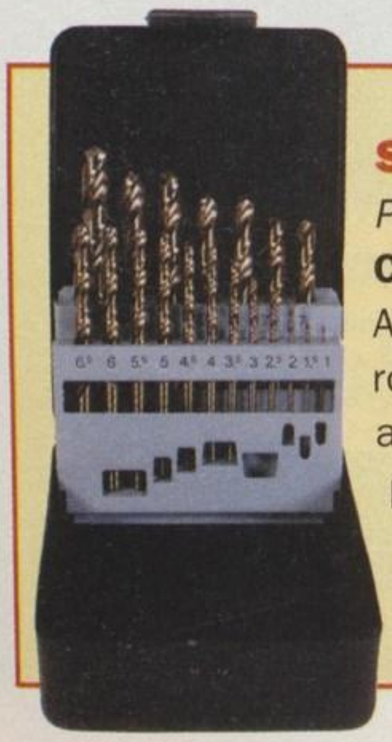
This is a similar set to the Der Finest, and is purely intended for wood use. Again produces a very clean cut without any wandering. Supplied in small plastic folding case providing good protection. A good set for the serious woodworker.

Black and Decker Piranha Bullet Set

Price: £19.99

Black & Decker 01753 574277

A set of 10 high-tech drill bits from 1mm to 10mm in 1mm increments. Multi-purpose bits in high speed steel. Unusually designed tip with small central bit to lead in the main bit. Similar idea to the lip and spur drill but suitable for all materials. Easy to use particularly good for metal as wandering is reduced. Good finish but steep spiral tends to pull the bit into the wood rather fast. Supplied in infuriating plastic box that is impossible to open and doesn't hold the bits properly.



Screwfix Standard Drill Set

Price: from £6.19

Contact: Screwfix Direct 0500 414141

Another good quality set supplied in robust metal box. High speed steel bits are suitable for wood, metal and plastics. Traditional design makes them easy to sharpen. Good all round performance.

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600-503 This set includes 12 of the most popular router bit profiles on 1/4" shanks. Including 12.7mm diam. mortising, 12.7mm diam. flush trim, 6.35mm diam. straight, 19mm diam. straight, 6.35mm diam. round nose, 90-degree V-groove, 14-degree dovetail, 12.7mm high rabbeting, 45-degree chamfer, 12.7mm radius cove, 9.5mm radius roundover and 19mm high Roman ogee. Supplied in a solid hardwood case.

Thirteen-Piece 1/2" Shank Set

£219.61 inc. VAT

600-505 This set includes 13 of the most popular router bit profiles on 1/2" shanks. Including 12.7mm diam. mortising, 12.7mm diam. flush trim, 6.3mm diam. straight, 12.7mm diam. straight, 19mm diam. straight, 6.3mm diam. round nose, 90-degree V-groove, 14-degree dovetail, 12.7mm high rabbeting, 45-degree chamfer, 12.7mm radius cove, 9.5mm radius roundover and 19mm high Roman ogee. Supplied in a solid hardwood case.

3-Bit Edge Beading Set

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1/2" Shank Doormaker's Set

£146.75 inc. VAT

600-509 Build beautiful doors and kitchens with this top quality set of router bits. These Sets are available in four different profiles to suit all needs. They include matched Rail & Stile Bits and a horizontal Raised Panel Bit. Supplied with 1/2" shanks and in a solid hardwood case.

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Kitchen fitting

Pt 2: Base units

After planning the perfect lay-out for the units, it's time to fit the base cabinets in our project workshop. Here's our step-by-step guide to installation

With the cabinet positions planned, the units can be installed. It's generally better to fit the base units and worktop first. Wall cabinets are easy to fit but can be damaged as you lift the worktop into position.

Step-by-step

1 Measure one metre up the wall and mark with a pencil. This is the position of your datum line across the entire wall to be fitted with cabinets.

2 You may need to knock away some of the old tiles if you're tackling a re-fit of an old kitchen. Use a cold chisel and wear gloves and goggles.

3 Draw a line around the wall at the marked 1m level, using a spirit level to make sure the line is exactly horizontal.

4 Now measure down to the floor at regular one metre intervals all around the wall to find the shortest measurement - this is the highest point of the floor. You may be lucky and have a perfectly flat floor but most older houses will have lumps and bumps.

You can now measure up, at this high point and mark the position for the line that marks the worktop surface. In this case it is 920mm. Use the level to make a line at this height around the room and any cabinets or appliances will always fit under the worktop.

Figure 1 Kitchen shelf and cabinet heights

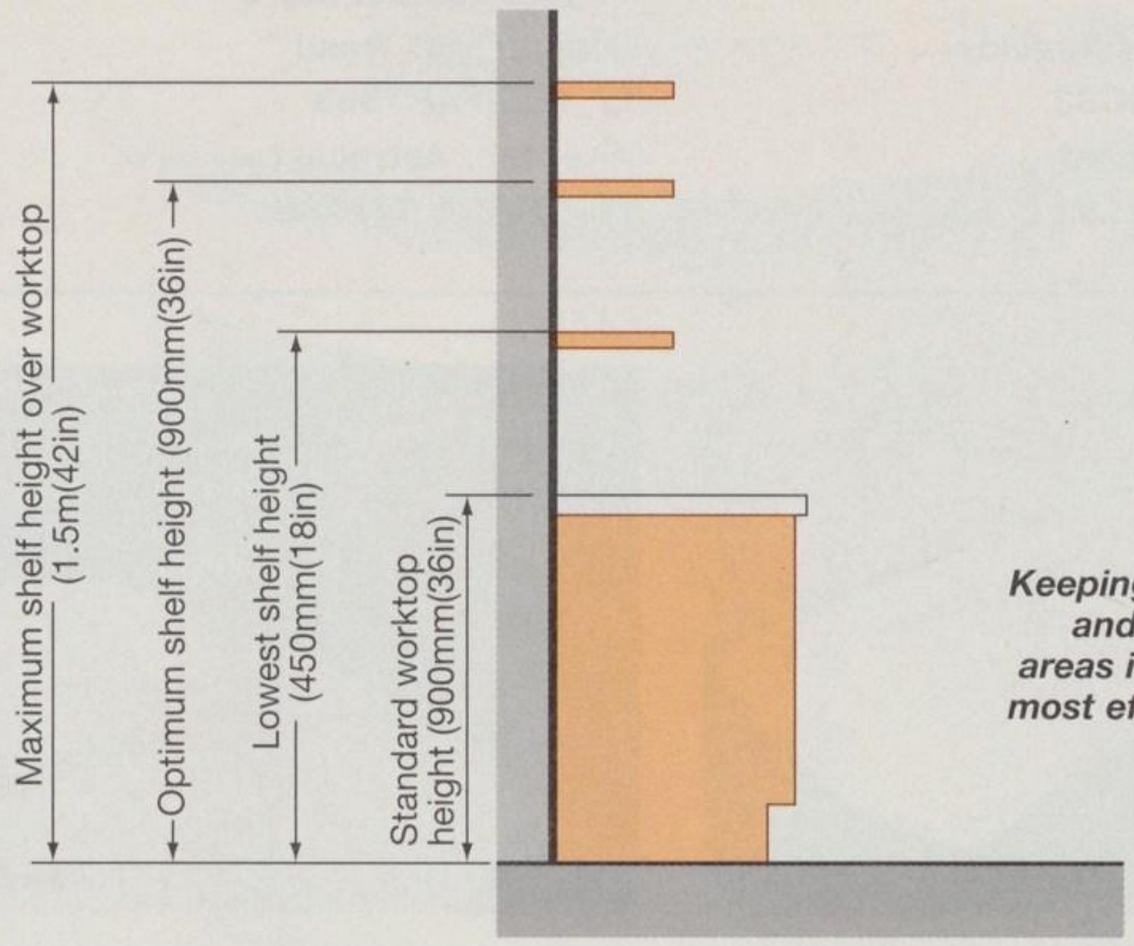
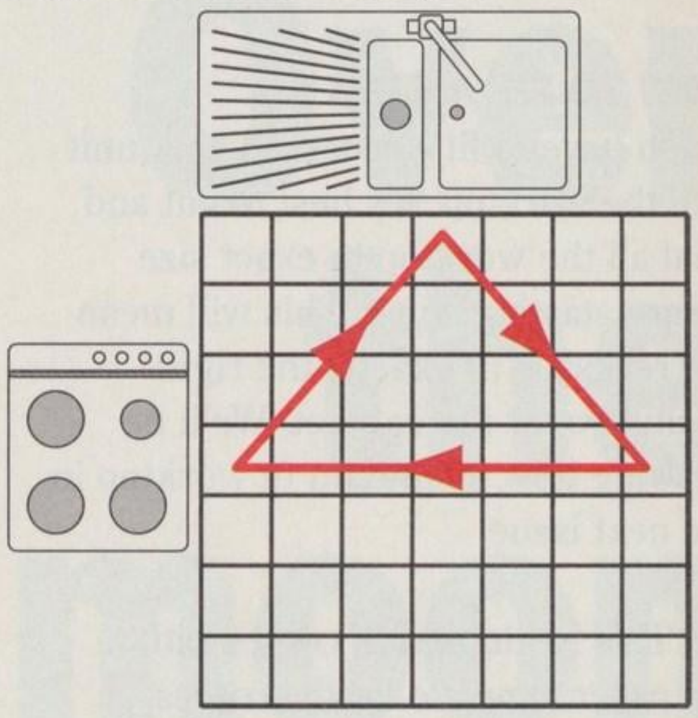


Figure 2 Work triangle



Keeping the cooker, sink and food preparation areas in a triangle is the most efficient lay-out for a kitchen

5 Fit planed timber batten along the wall. Remember that you are fixing the batten to support the worktop underside, so allow for the thickness of your worktop when positioning the batten. Fix at 60mm centres.

6 If there are any protruding pipes or obstructions around the room, you will have to cut the back of each cabinet so that it will fit. Here, a hole is being cut with a jigsaw to allow an electricity meter to be accessed from inside the first cabinet to be fitted.

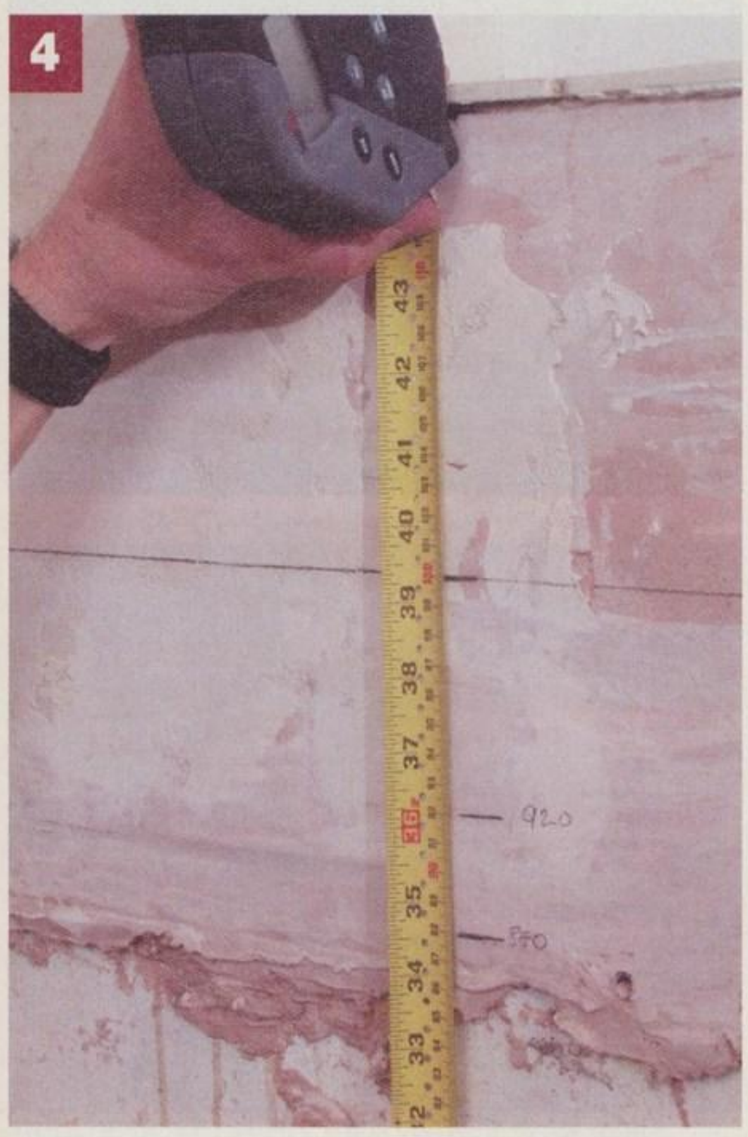
7 Fit in the first cabinet. Don't rely on the side wall to be perfectly vertical, work to the wooden batten.

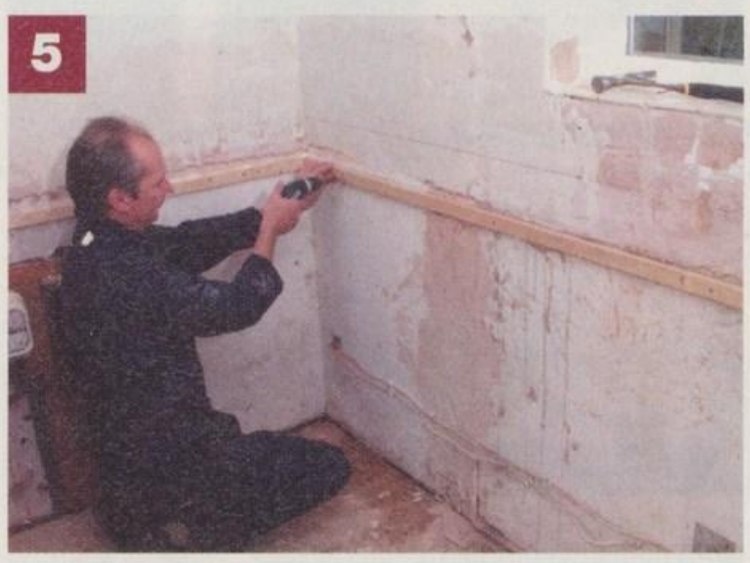
8 Adjust the feet so that it is level from back to front and from side to side. The top should be flush with the top of the batten but you can make fine adjustments later.

9 The first unit positioned and read for the next cabinet. As this is a corner position, the first unit has the corner post cramped to the front to help align the rest of the units.

Work around the room, fitting in the rest of the wall units. in our main picture, a single base unit and a 'handed' sink unit are cramped together and levelled relative to the wooden batten. Note waste pipes are tucked into the correct position at this stage so that the cabinets don't have to be disturbed later. Screw blocks of wood or plastic blocks to the batten and use these to hold the back and sides of the worktop firmly in place. The cabinets should also be screwed to the underside of the worktop.

TIP: Use plastic clips to fix pipes to the wall. One of the most common causes of leaks is pipework vibrating loose.





Useful information

Sink and waste: **Reginox**
☎ **01260 280033**
Fittings: **Isaac Lord**
☎ **01494 459191**

Cabinets and worktop:
Magnet Trade, www.magnet.co.uk for your nearest store
Worktop jigs: **Trend**
☎ **0800 487363**
Mixer tap: **Astracast**
☎ **01924 477466**

HOW TO FIT A SINK

If you have to fit a recessed sink unit into the worktop, it's best to cut and joint all the worktop to exact size before starting work. This will mean the recess is in exactly the right position over the cabinet. We'll be showing how to cut and fit worktop in the next issue.

1 This Reginox sink comes with a paper template for the recess. Carefully cut this out and place it over the sink cabinet. Check there is room for tap plumbing at the back of the worktop.

2 Tape the pattern to the top of the worktop. Use a tape measure to check the front is parallel with the worktop front.

3 To make a starter hole for the jigsaw blade, drill into the worktop, around 10mm in from the edge of the pattern.

4 Now carefully cut around the sink recess pattern with a jigsaw, fitted with a new downward-cutting blade. The line will be hidden by the lip of the sink but you must still work carefully.

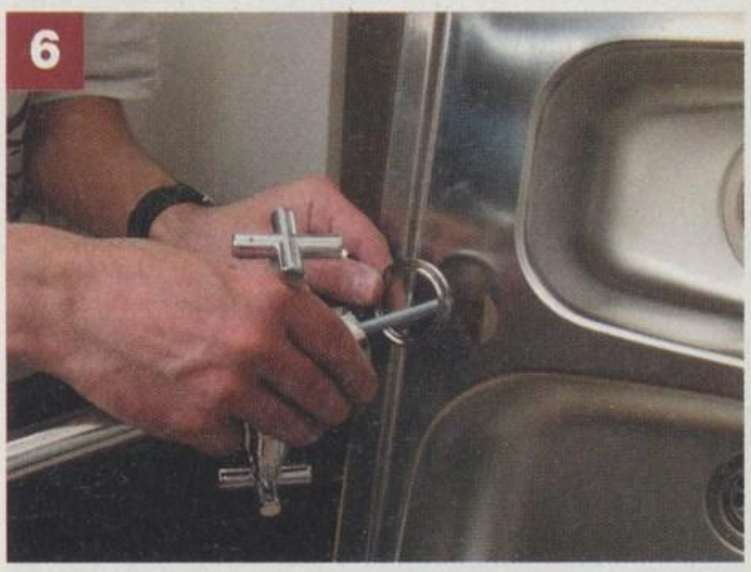
5 Check the sink fits in the hole and make any minor corrections by cutting or filing the edges of the worktop. Remove to fit the taps and waste.

6 Now you can fit the tap and secure it under the sink.

7 Tighten with an adjustable wrench and assemble waste pipes

8 This sink is supplied with a foam water-restant tape to fit around the lip of the steel drainer and sink. Stick in position around the rim.

9 To give the chipboard core of the worktop some extra protection against water penetration, use a clear silicone sealant around the upper edge. Screw the sink in place with the retainer clips provided.



PROJECT

Over the moon

John Barton's demi-lune design provides the perfect opportunity to practice veneer and crossbanding techniques and produce a tradition Georgian style hall table

Like many of you I suspect, I find the beauty and texture of veneers a humbling experience: they give you access to woods that are exotic, and often rare. What's more, they demand great respect and care in the way that they're presented. So last year, when I had the opportunity to undertake a year-long full-time course on marquetry and veneering at Suffolk College, I seized the chance with both hands. I wanted to know more about the way in which recent developments in veneering technologies and adhesives have extended the boundaries of what can be achieved, particularly in the home workshop.

As luck would have it, the first project on the course involved a console table, and as I'd just received a commission to design a hall table, the two projects neatly dovetailed into one. I was also fortunate in that the design of the hall table was a traditional Georgian-style demi-lune console design, whose straightforward construction freed me to concentrate on using its surfaces as a canvas for my new-found skills.

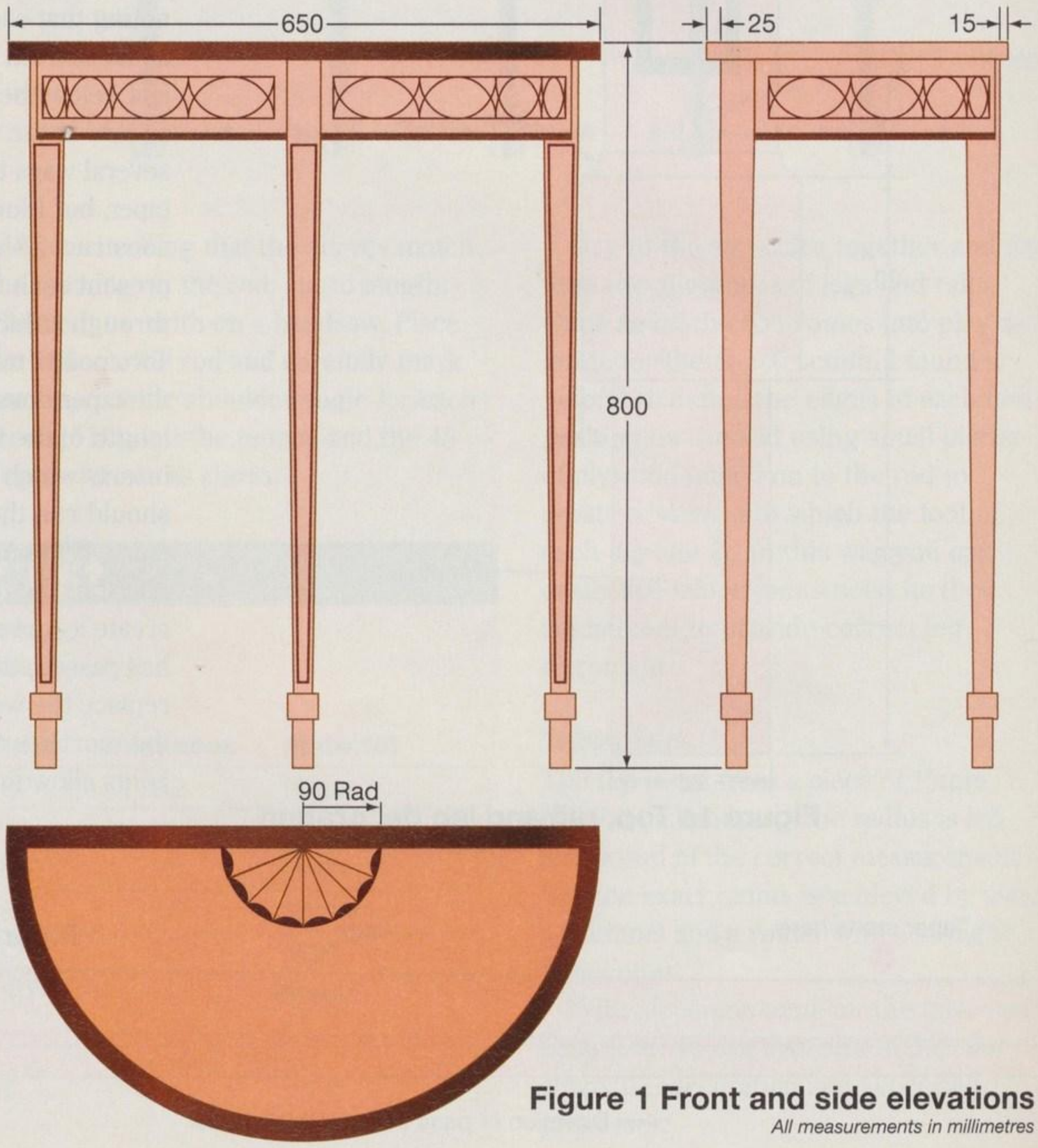


Figure 1 Front and side elevations
All measurements in millimetres

Design

Knowing that the table would live in a light and airy space, I chose to construct

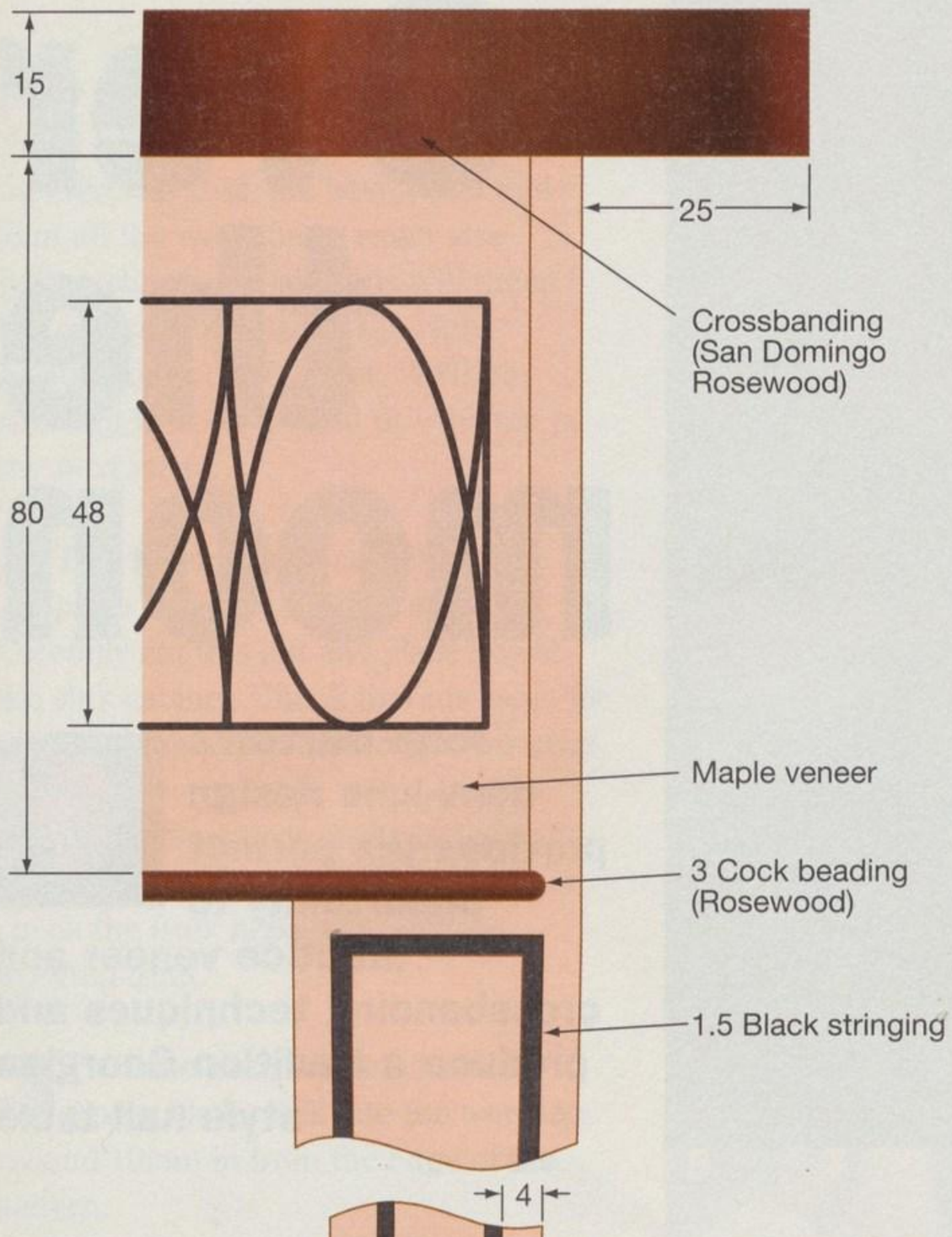
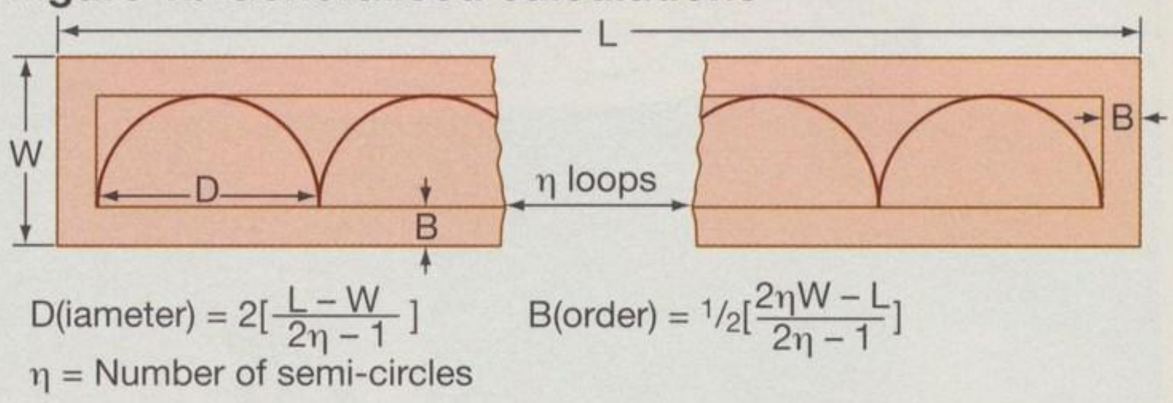


Figure 1a Top, rail and leg decoration

All measurements in millimetres

Figure 1b Generalised calculations



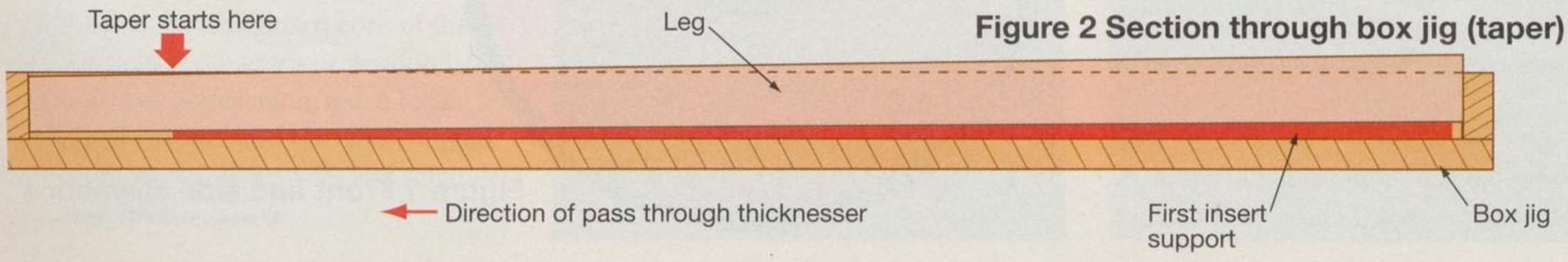
it from pale woods: maple and maple veneer for the legs and rails respectively; a glowing burr ash veneer surrounded by San Domingo rosewood crossbanding for the top. To achieve a point of focus that mirrored the colours of the table, I incorporated a semi-circular fan in the centre and back of the top. To add interest to the front, I included an inlaid pattern of ebony stringing in the front rails, **Figs 1 & 1a**.

Making the table

While it's always useful to make a full-size rod for each component, it's particularly handy in this case: the rod not only provides the surface on which to test the scale and appearance of decorative designs, but can also be made to serve as a useful jig.

Cut and plane the legs to size, noting that each leg tapers on all faces from 32mm square just below the top rail to 20mm square at the foot. There are several ways to achieve the taper, but I found it easiest to construct a simple box jig to present each face in turn through a thicknesser, **Fig 2**. Two points to note here are (i) the taper does not extend the full length of the leg, and (ii) the inserts which support the leg should run the full length of the taper. Without the latter, there is a risk that the thicknesser cutters will bend the leg and create a curved taper. Bear in mind also that after one face has passed, the opposite face will require a second insert to replace the wood removed by the first pass. Mark and cut the mortises at the top of each leg, **Fig 3**. Note that all joints allow for a haunch to prevent twist occurring.

Figure 2 Section through box jig (taper)



Crossbanding tip

A useful tip is to run a narrow tape which is impervious to glue around the top edge of the table where the crossbanding is to be applied, taking care not to cross the line marking the boundary between the ash and the crossbanding. Later, when applying the cross-banding, this will help with the removal of the excess ash veneer beyond its finished circumference.

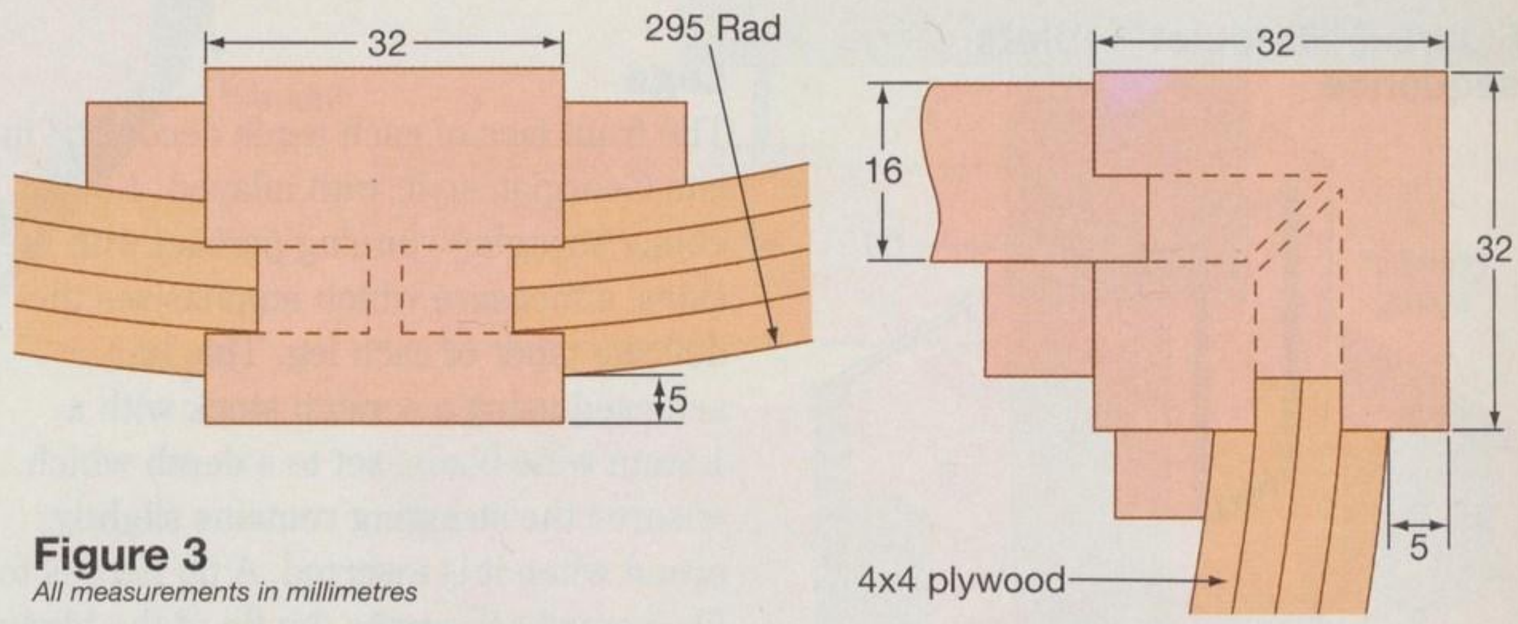
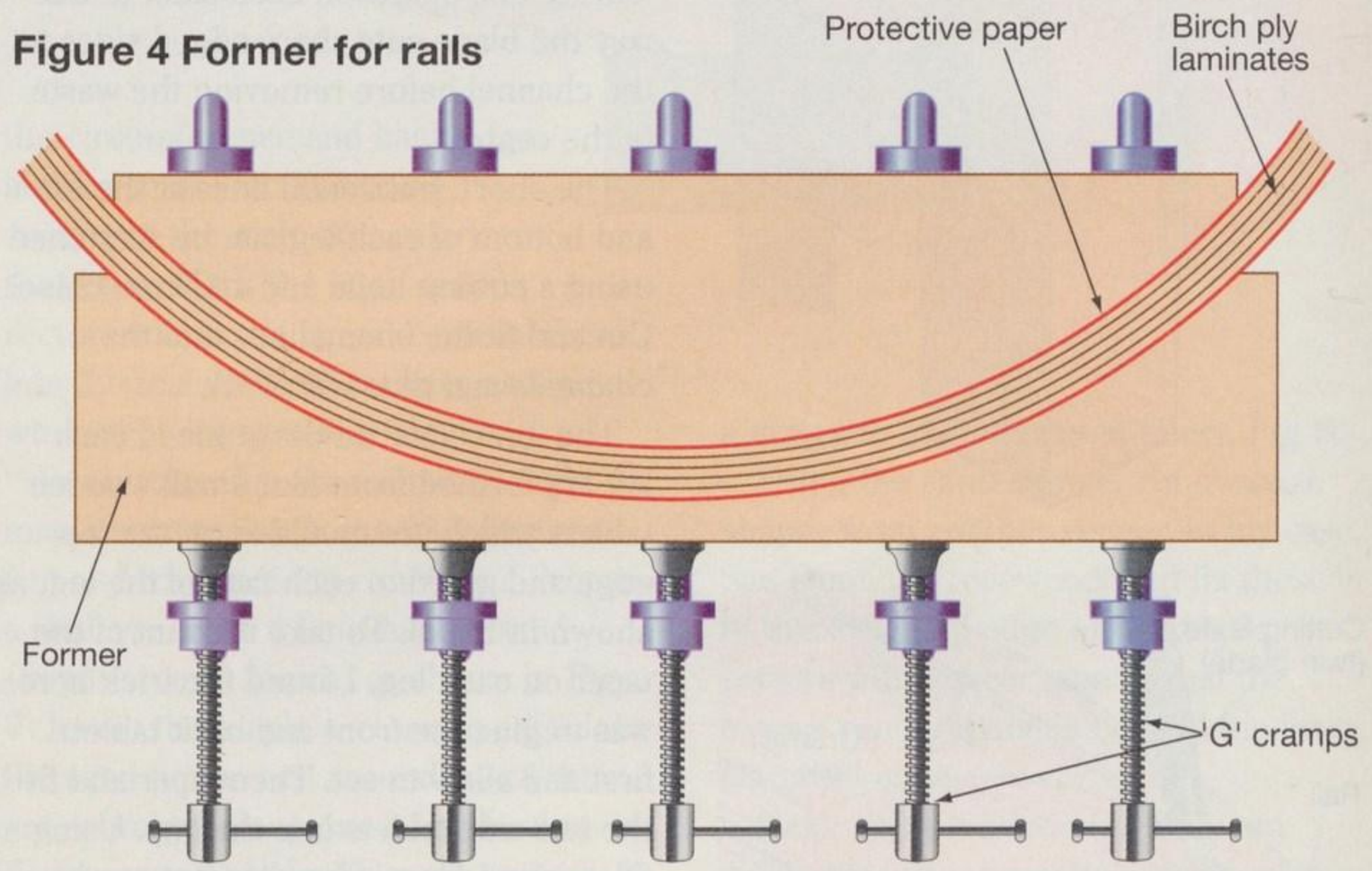


Figure 3
All measurements in millimetres

Figure 4 Former for rails



Front and rear rails

The rear rail, made from poplar, is planed to size and a haunched, bare-faced, mitred tenon is cut at each end. The front rails are constructed from four laminates of 4mm birch ply. Cut the ply 10 percent oversize in length and breadth to allow for any displacement which might occur later in the glue-up. The rails can then be cut to the precise size. Do not forget to allow for the length of the tenons at each end.

To create the required curve, a simple former can be made from two lengths of 120mm square blocks of pine and each is cut to match the curves shown on the rod. Remember that the radius of the inside curve is less than that of the outside curve, it's a common mistake to assume that one cut of the bandsaw will provide both pieces. Apply urea formaldehyde (UF), also known as Cascamite or Extramite, adhesive to the layers of ply and protect the top and bottom faces with paper to prevent sticking to the formers. Compress the two blocks with G-cramps and allow to set overnight, **Fig 4**. Repeat for the second rail.

After checking that the curves match the drawing on the rod, cut to length. Then cut to width on a bandsaw. Place the rails on the rod and carefully mark the slope of the shoulder angle for each tenon. Then cut the tenons and the 45 degree mitres as shown.

Dry fit the structure together and fine tune the alignment of legs and rails. Once again the rod comes into play as a guide for the construction. I found it helpful to define the edges of each foot position on the rod using small pieces of plywood nailed on to the rod to create a 'shoe' into which the foot of each leg can fit. In this way you can easily see which joints need further adjustment to provide correct leg alignment.

Cutting list

Dimensions are shown to nearest mm for finished components but excludes allowances for tenons.

Component	Quantity	Length	Width	Thickness	Material
Legs	3	785	32	32	Maple
Front rails (Laminates)	8	420	80	4	Birch
Rear rail	1	536	80	16	Poplar
Table top	1	650	325	15	MDF
Bracelet blocks	12	30	30	4	Maple

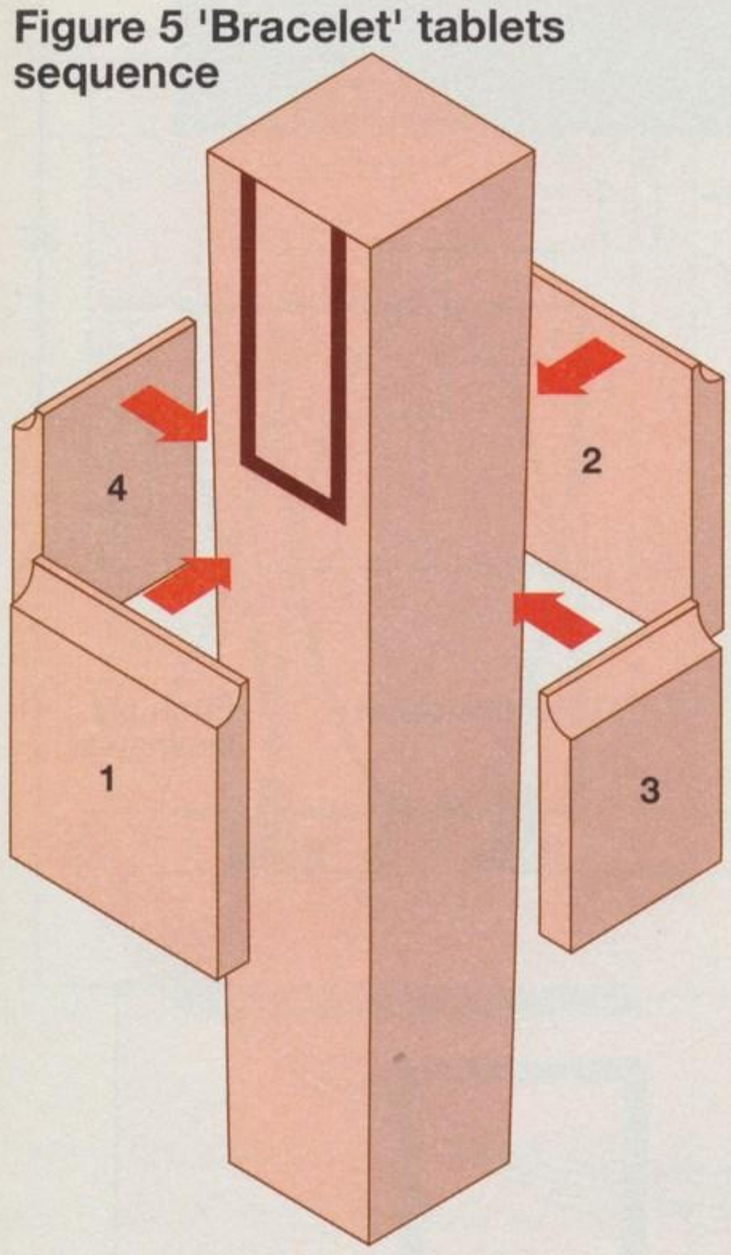
Other materials include veneers and stringing

Table top

The top is cut from a piece of 15mm MDF on a bandsaw. The radius is left just proud of the correct measurement and the exact radius is achieved by using a trammel and a router with a straight flute cutter.

With all components for the table now complete, we can move on to the next stage, the decoration and veneering processes.

Figure 5 'Bracelet' tablets sequence



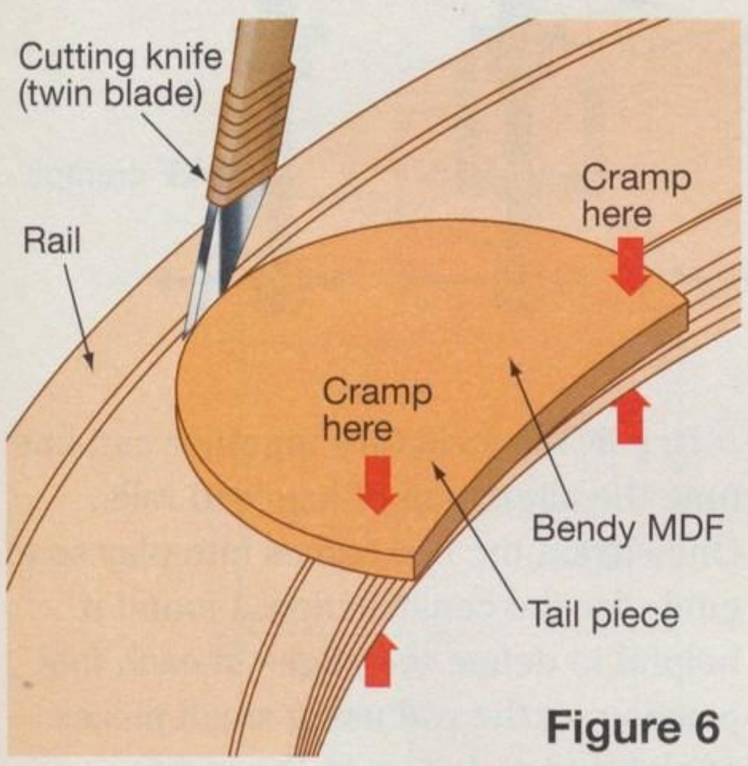


Figure 6

Legs

The front face of each leg is decorated in late Georgian style with inlayed 1.5mm ebony stringing running parallel with the sides, a measure which emphasises the delicate taper of each leg. This is achieved using a scratch stock with a 1.5mm wide blade, set to a depth which ensures the stringing remains slightly proud when it is inserted. A tip here is to file a small arc across the tip of the blade leaving fine points on each side. In this way the blade cuts sharp-edged sides to the channel before removing the waste in the centre.

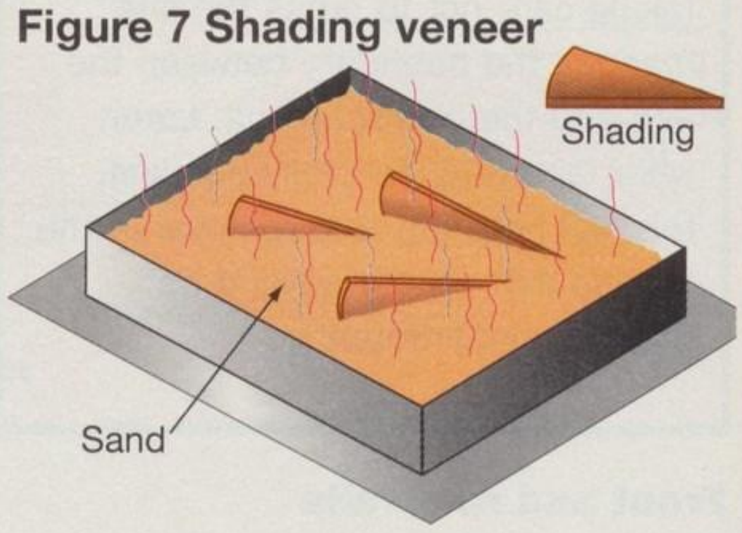
The short, horizontal lines at the top and bottom of each leg can be scratched using a cutting knife and a 1.5mm chisel. Cut and fit the ebony lines into the channels and glue with PVA.

The 'bracelets' on the ankle of each leg are formed from four small wooden tablets which are moulded on the top edge and glued to each face of the leg, as shown in **Fig 5**. To take account of the taper on each leg, I found the trick here was to glue the front and back tablets first and allow to set. Then taper and fit the two side tablets into the gap. Using a fine, round file a 'mitred' effect can be obtained on each moulded corner. By gluing in this sequence I avoided glue lines appearing on the front face.

Veneering the rails

Now that the curved rails have been cut to size, apply a face and backing veneer to each rail (maple veneer in my case) and re-use the wooden block press used to form the rails earlier to act as the former. Allow a 3mm veneer overlap all round and when set, trim and sand the veneers to size.

Figure 7 Shading veneer



In order to set out the traditional pattern of semi-circles as shown, I employed a little algebra, **Fig 1b**. These equations generalise, within limits, the calculations for any number of semicircles and any size of curved rail, assuming the width of the border of the rectangle remains the same all round. They also assume zero thickness of the stringing, so they are only a guide.

Pencil the border rectangle on to the front face of each rail and scratch out a 1mm deep boundary rectangle with the 1.5mm scratch stock, you will need to tape a small block of wood to the tenon ends in order to provide a guide for the scratch stock. The more difficult task is to mark and scratch out the semicircles.

After much experimentation, I found it easiest to make a semicircular template from 6mm 'bendy' MDF. **Fig 6** shows a tailpiece which I left on the template to assist in clamping the MDF to the curved face of each rail. In order to scratch in the channels around the template, I used a 1.5mm chisel. On reflection I could have minimised the veneer breakout problems I encountered by binding two Stanley knife blades together with duct tape, separated by a cardboard spacer in a crude wooden handle and running these around the curve before using the chisel (**Fig 6**). This would have

Figure 8

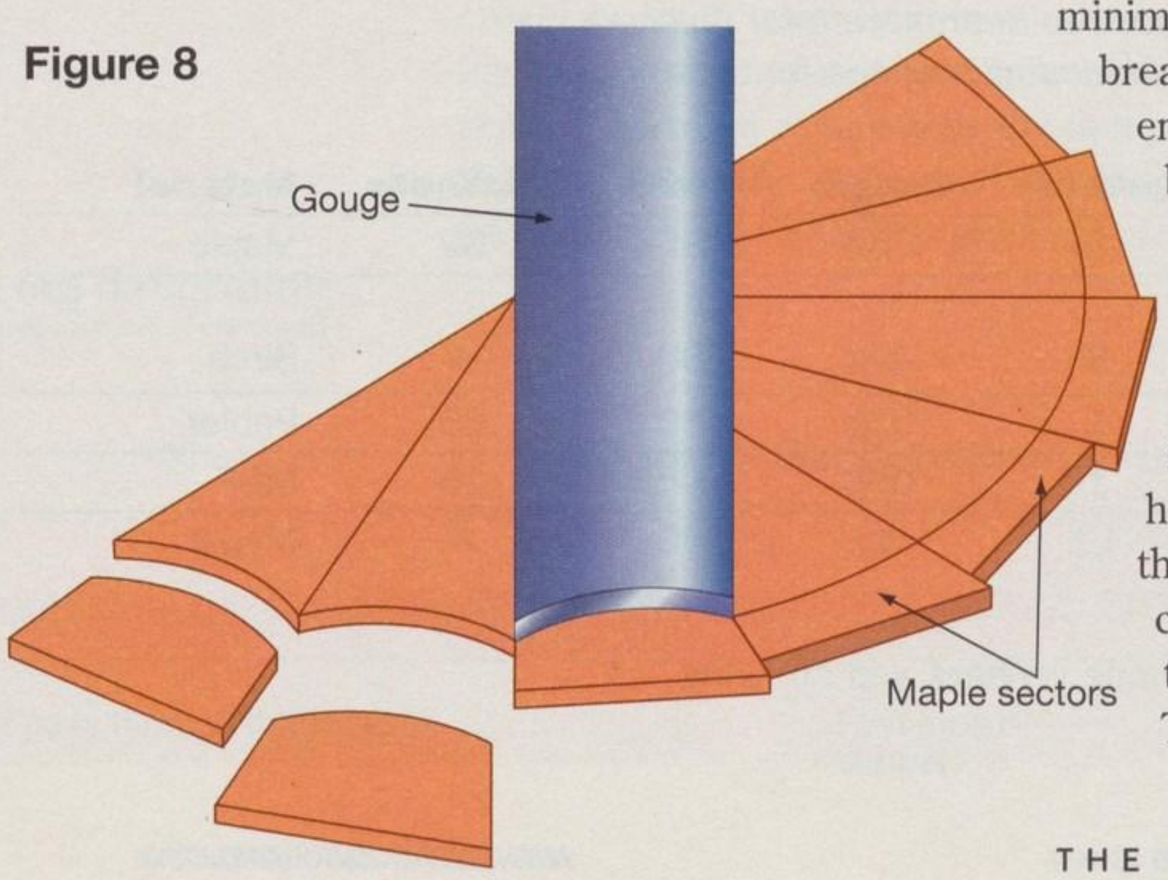


Figure 9

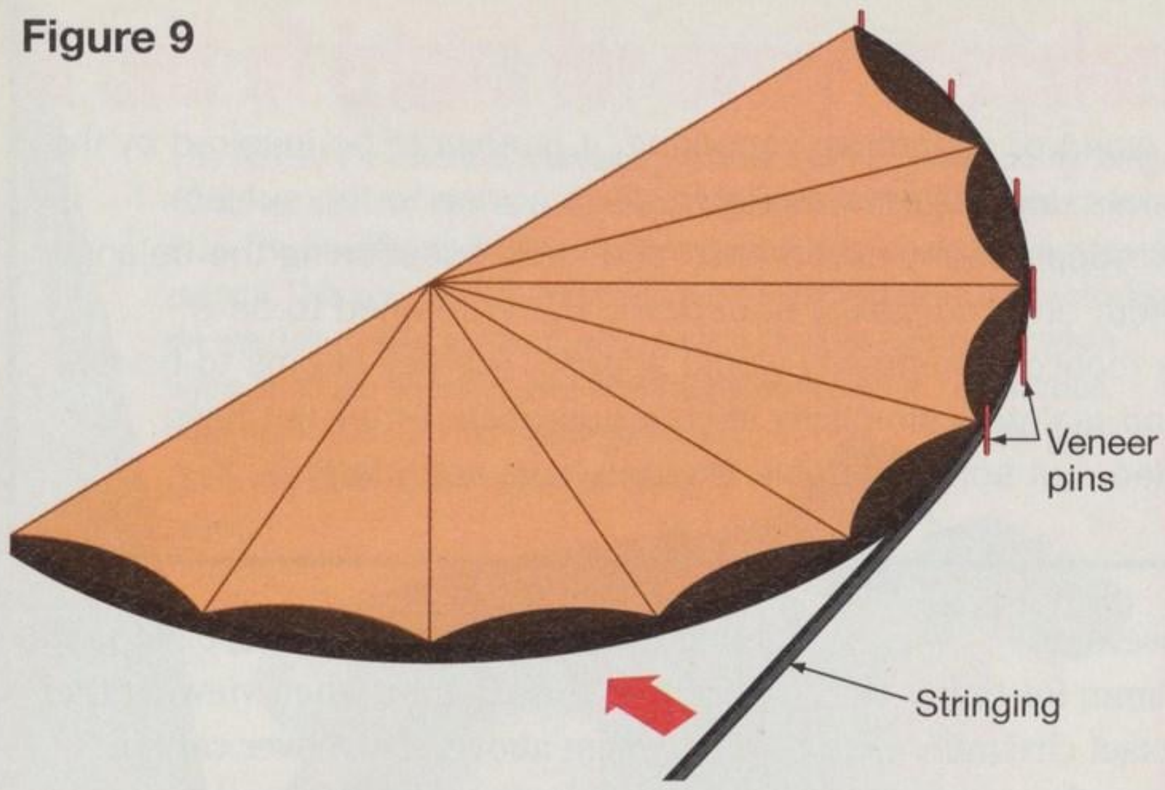
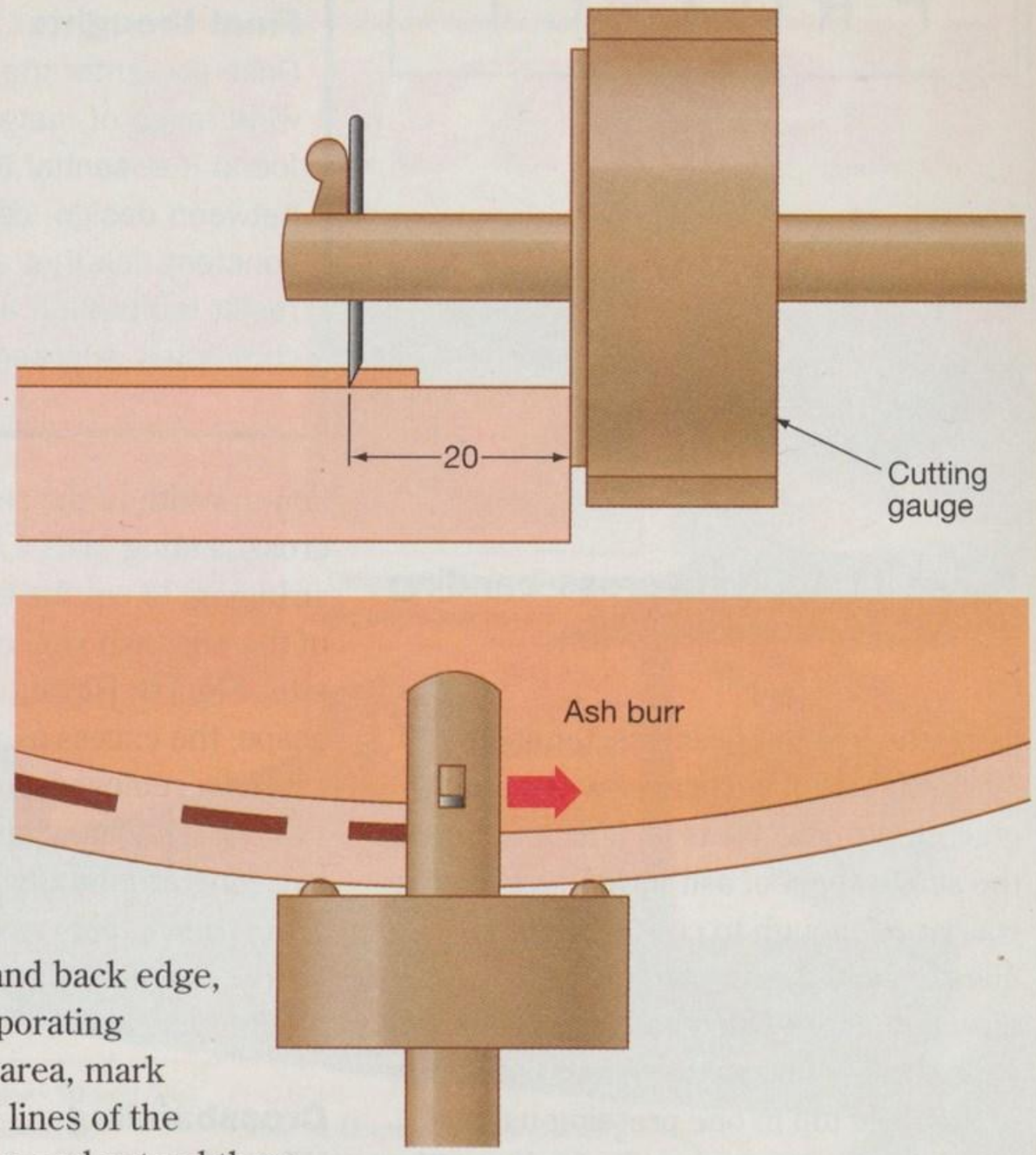


Figure 10 Cutting main veneer on table top



formed crisp cuts the correct distance apart. Great care is needed at this stage since a slip on the veneer surface is extremely difficult to correct. You will need to maintain a constant, sideways force on the chisel to keep it tight to the template.

Once you are satisfied with the channelled pattern, cut, glue and insert the ebony stringing into the channels, and sand down when the adhesive is dry.

One further point to note is that with hindsight, it would have been better to have positioned the template so that the semi-circles run smoothly into the channel of the surrounding rectangle, rather than being tangential. This would have lightened the amount of ebony at the points where they touch.

Table top decoration

Size all surfaces of the MDF top with a weak mix of animal glue and water and allow to dry. Mark out with a pencil the position and outline of the fan, the boundary of the crossbanding around the circumference and back edge, and if you are incorporating sectors in the main area, mark these too. Mark the lines of the sectors within the fan and extend them into the main area to act later as a guide when applying veneers.

In my case, the fan contained eight maple sectors (each one 22.5 degrees). Cut and trim these to exact size. Prepare a shallow, metal tray of heated sand (depth around 25mm) as shown in **Fig 7**. Insert the maple sectors on edge into the sand for several seconds until they are scorched along one edge, having first experimented with spare sectors. It is important to check the degree of scorching required to achieve the desired 3D effect on the fan. Tape the sectors together with veneer tape and mark out and cut the end scallops with a gouge to give the fluted effect, **Fig 8**.

Using the same gouge, cut oversize shapes from another veneer, in my case, San Domingo rosewood, and fix these in to the scalloped edge of the maple sectors with veneer tape so that the excess veneer extends beyond the fan's circumference.

Next, using a dilution of PVA and water, glue the complete pattern on to a thin piece of paper. When the adhesive has dried, cut a semicircle through the tips of each sector and the paper to the exact dimensions of the fan. I found a plywood template useful to assist here. Spread animal glue onto the marked semicircle on the table top and fix the fan into its location with the paper side facing up.

The paper can be removed easily with water and sandpaper later. Apply a thin line of animal glue around the outer rim of the fan and then fix a length of stringing, longer than the circumference of the semicircle, around the edge. The stringing should be held in position with veneer pins, **Fig 9**.

Main veneer

The next step depends upon the form of the veneer chosen for the main area of the tabletop. In the home workshop the preferred option might be to sub-divide the area outside the fan into several sectors with the veneer grain flowing

The sand shaded fan is formed as complete motif and then fixed to the top

Final thoughts

Once you enter the world of decorative veneering, it is easy to be inspired by the wide range of materials and patterns available. As a novice to the subject, I found it essential to suppress my exuberance and keep questioning the balance between design, colour and complexity of pattern. There seemed to be a constant risk that a rococo monstrosity would appear! The key seems to be to resist temptation and maintain simplicity in your approach. I may not have completely succeeded, but some valuable lessons have been learnt.

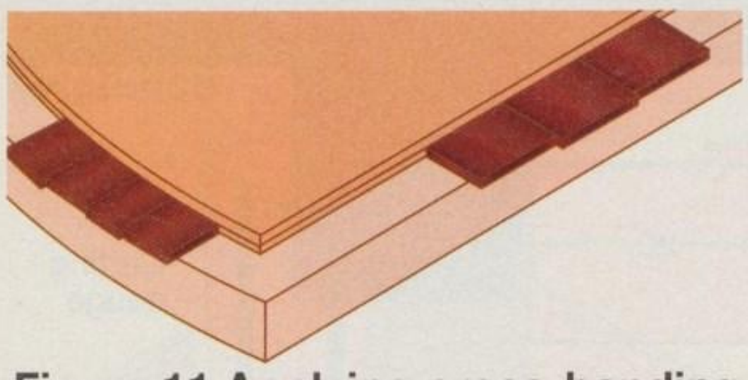


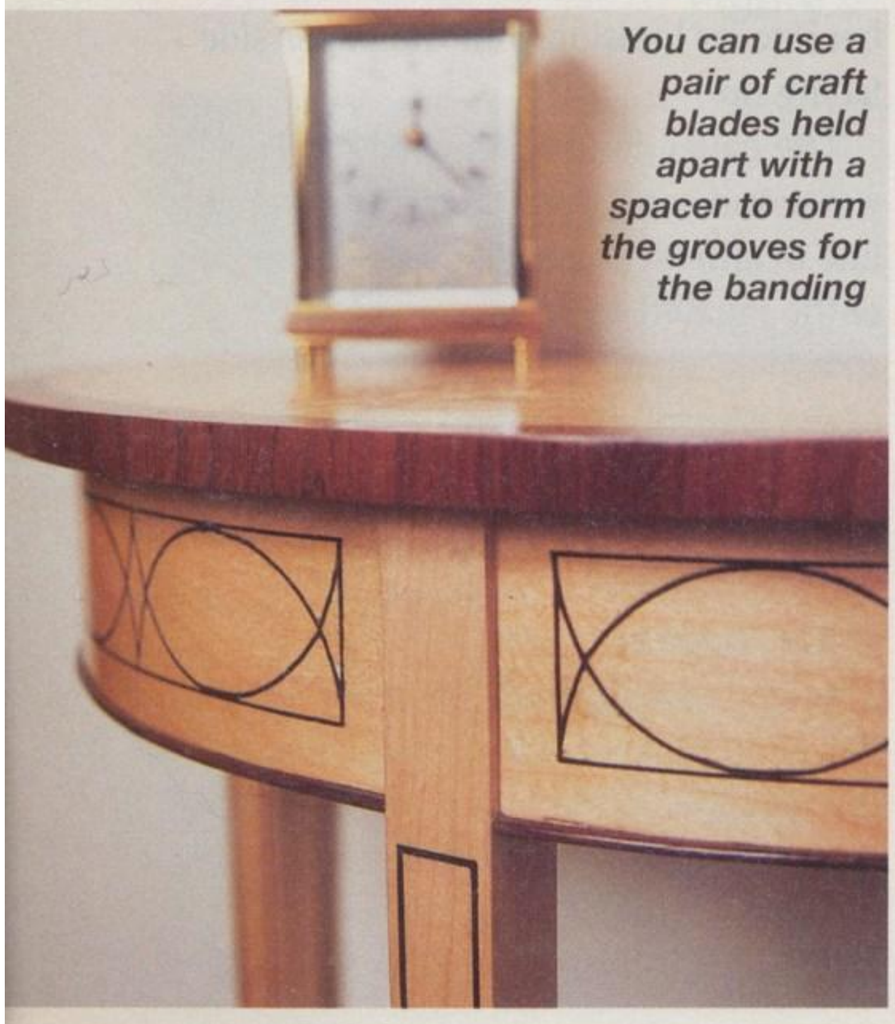
Figure 11 Applying cross-banding

along the length of each sector and to mark, cut and hand-veneer with animal glue. In my case I was fortunate in that the single sheet of ash burr I had chosen was large enough to cover the area in question and it exhibited no grain direction. Since I also had access to a veneer press I chose to veneer both sides of the table top in one pressing using a UF adhesive, remember the underneath of the top requires a balancing or backing veneer to prevent warping. For the balancing veneer I chose maple to match the rest of the table.

Whichever method is used, great care is needed when marking the precise boundary between the fan and the ash. A traditional method is to rub chalk on the stringing which runs around the circumference of the fan and then press the veneer onto the chalk, thus providing a guide for cutting the pattern. I found this method too approximate and instead chose to rely on an accurate pair of compasses.

With the fan and ash veneer fixed in place, I used a cutting gauge, set to the 20mm width of the rosewood crossbanding, plus 1.5mm for the stringing, to cut the exact circumference of the burr ash veneer to the required size, **Fig 10**. Having cut the ash to shape, the excess ash can now be carefully removed with a chisel.

Next use animal glue to fix the stringing around the large semicircle of veneer using pins as described earlier for the fan, not forgetting to fix the straight line at the rear.



You can use a pair of craft blades held apart with a spacer to form the grooves for the banding

Crossbanding

When the stringing is set in place, the crossbanding can then be applied. Cut sufficient short strips of the chosen edging veneer, between 25mm and 50mm in length and about 25mm wide. Make a template from a piece of 6mm MDF which is around 100mm in length and 20mm wide and is cut so that the arc on its inside edge exactly matches the curve of the outer ring of stringing. Place the template on each of the strips of edge veneer and cut one side to the curve of the template. Try to ensure that sufficient width remains so that the outer edge of each veneer strip overlaps the edge of the table by 2-3mm, **Fig 11**. Work around the table top, including straight pieces on the rear of the top, applying the strips of crossbanding with animal glue, a hot iron and a veneer hammer in the traditional way.

Then cut similar short strips of straight veneer, just wider than the 15mm thickness of the table and apply these to the vertical edge of the table in the same way. Ensure they butt up to the top, crossbanding overlapped veneer. I found it helpful, when gluing these pieces, to employ the traditional technique of overlapping adjacent strips and cutting the overlap, thus ensuring a good fit.

When these are dry, remove the top crossbanding excess which overlaps the table using a chisel and then gently file to provide a crisp, right-angled corner where the two crossbandings meet. Note that the crossbandings are applied in this order to ensure that, when viewing the table from above, the viewer cannot observe the top edge of the side crossbanding.

Cock beading

For completeness, I applied two lengths of 3mm thick cock beading to the base of each curved rail. These were cut to approximate shape on a bandsaw and the edges smoothed with spokeshaves. The front edges of the beadings were then shaped to a rounded cross-section using a purpose built scratch stock. They were then glued and pinned under each rail.

Final Assembly

This should be fairly straightforward. Glue the mortise and tenons and apply pressure with a web cramp around the rails at the top. Here I found it valuable again to sit the feet of the legs in the boxes fixed to the rod whilst the adhesive is setting to ensure the legs set in the correct position. Small glue blocks can be glued into the internal corners where the legs meet the rails for extra strength, **Fig 3**.

When this is dry, cramp the top into the correct position and fix the top to the leg assembly, this time with several, triangular cross-section glue blocks. The front blocks will have to be curved on one face to match the rails. These should be sufficient to hold the light, stable top.

Finishing

Given the pale coloured woods involved, I chose to apply several coats of white polish, which is clear shellac based, and then rubbed down with 0000 wire wool between coats. This did no more than tint the veneers, yet maintained their beauty. I then buffed the table with several coats of clear wax polish.

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Mortiser by Multico PM12, almost unused, plus overhead routing attachment. Complete with chisels £250. Buyer collects. Tel: 01296 486834 (Bucks).

Woodworker magazine Sept '78 - Dec '96 complete. Best offer by 31st October. Tel: 01584 861227 or email dickhadfield@yahoo.co.uk (Shropshire).

Axminster 580 circular saw with sliding table and scribing blade 18 months old cost £1030, very good condition. Reasonable offers considered. Tel: 01206 845857 (Essex).

Scheppach HMS260 planer thicknesser. Excellent condition £450. Axminster moulder/shaper. Old model with cutters £400. Excellent condition. Tel: 01462 812874 (Beds).

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Hegner Multicut-2 scroll fretsaw G.W.O exert dust bloer £45, also glue pot £5. Tel: 01737 361902 (Surrey).

Myford ML8 multipurpose woodworker plus motor ML8 bandsaw plus chuck & tools. Hardly used £400. Tel: 07989 701138 (Warks).

Bandsaw Naerok 12in variable speed £200. Multi plane ripper router auto memota £300. Lathe Lorch Stedall Dowding £200. Tel: 01245 477206 (Essex).

Elektra Beckum 10 x 6 planer thicknesser good working order 3130. Tel: 07905 949741 (Oxon).

Woodworker magazines from 1920s to 1950s. Anyone interested? Arcoy alloy routing guide as new £20. Tel: 0118 973 3764 (Berks).

DeWalt DW733S planer thicknesser 260 x 160 as new with spare cutters cost £699 last year £490 ovno. Have upgraded to larger machine. Tel: 07799 648390 (Cornwall).

Kity 5 combination machine, circular saw, thicknesser, planer, spindle moulder, mortiser £600. Multico 37in 5-speed wood lathe £75. Tel: 01244 570567 (Wrexham).

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Norris A5. Dovetailed steel rosewood in-fill front bun been altered and rosewood knob fitted by arthritic cabinet maker ex con. Offers. Tel: 0191 528 1838 (Tyne & Wear).

Router magazines. Copies 1 - 34 complete. Offers invited. Tel: 01291 621117 (Monmouthshire).

DeWalt DW004 24V SDS drill. Case, charger, three batteries, new, used once £275. Tel: 01562 730929 (Bromsgrove).

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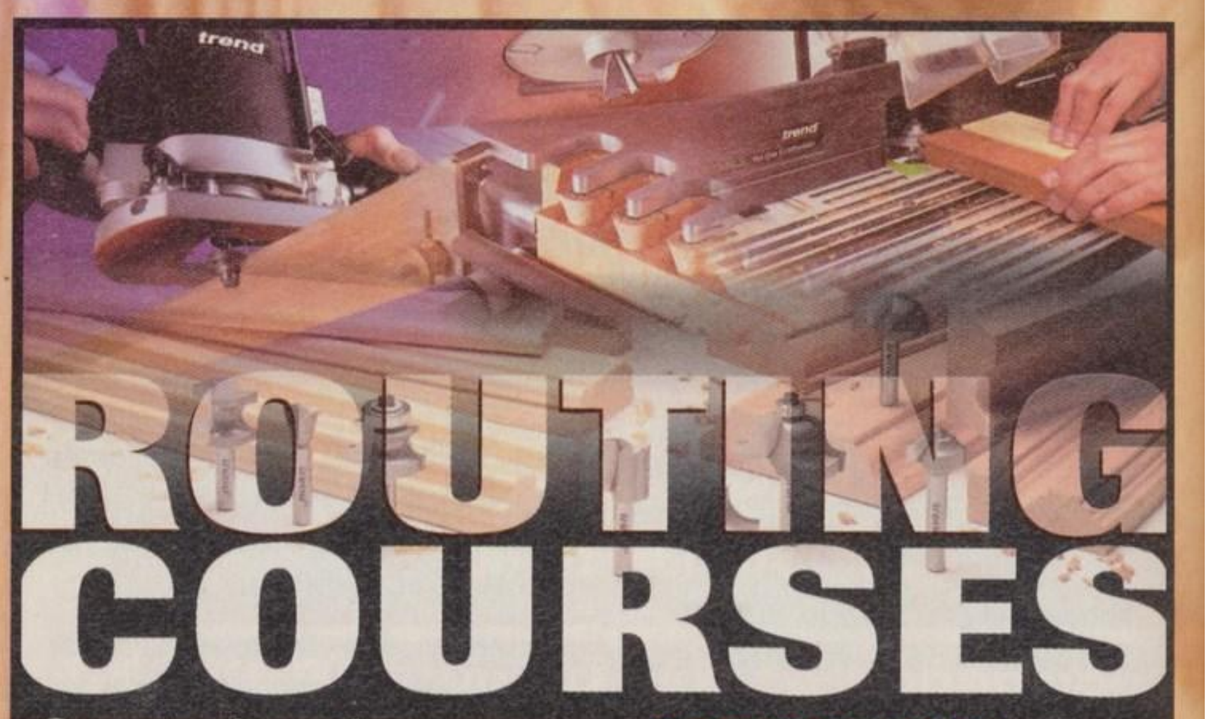

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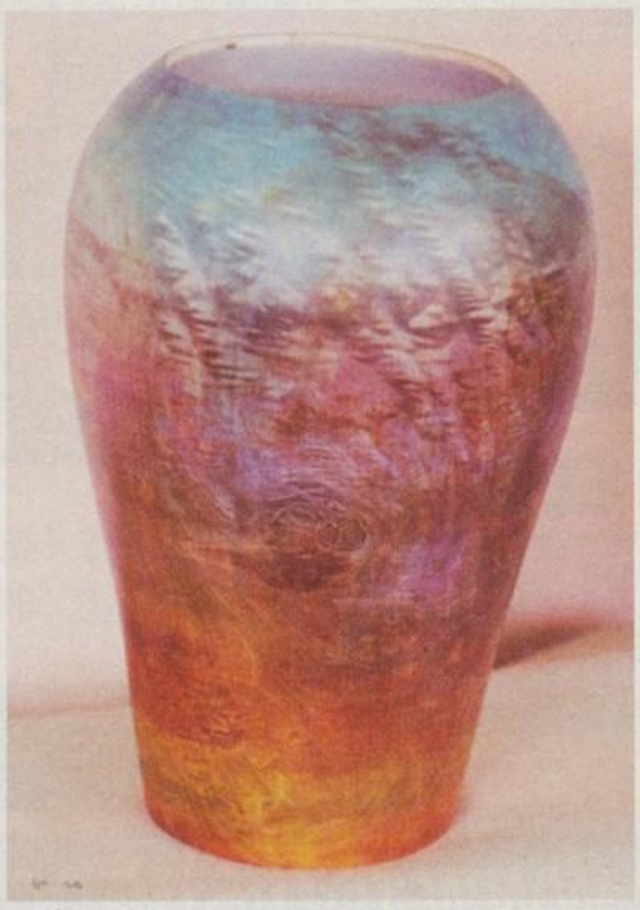

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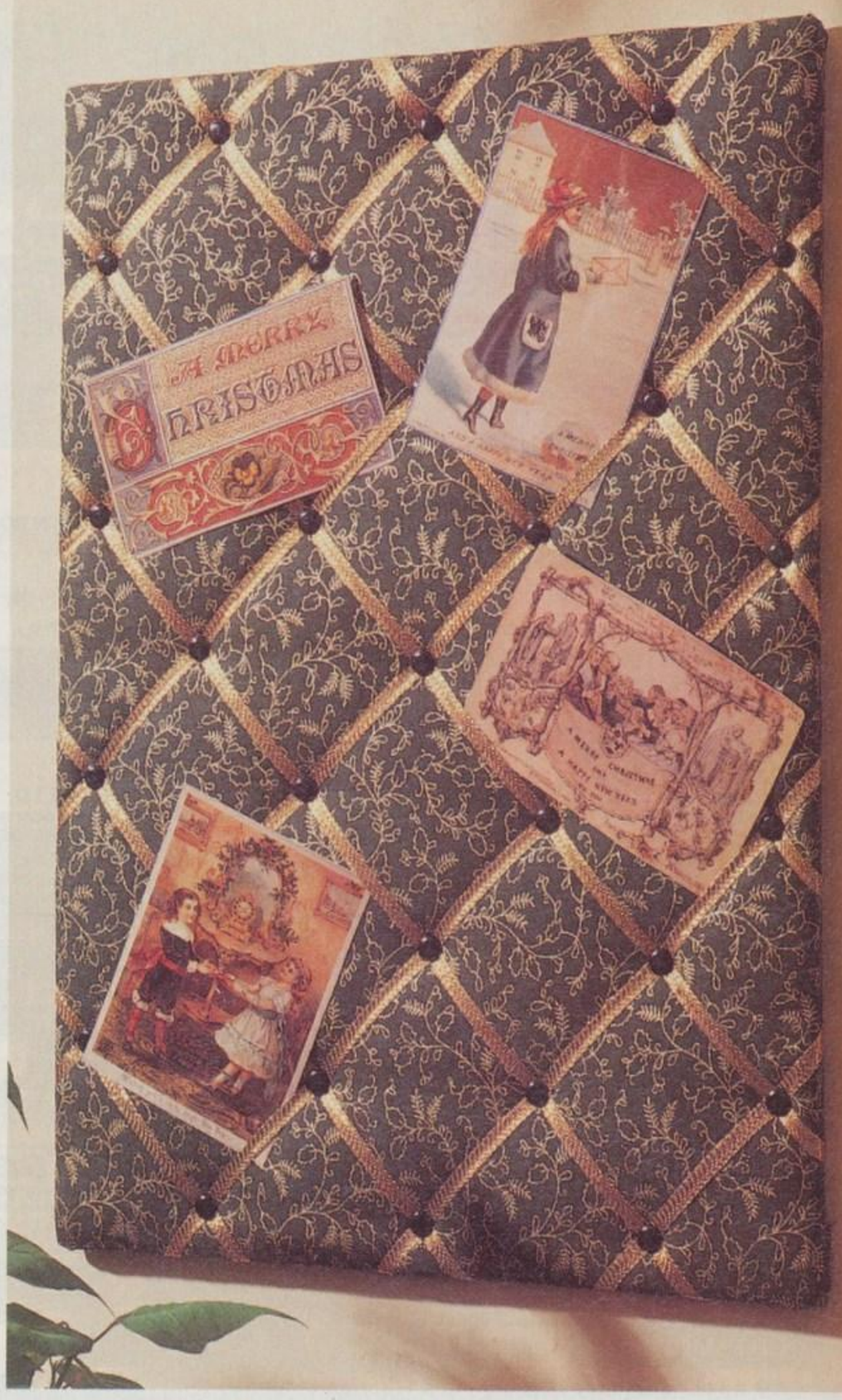
On the board

An off-cut of MDF and some fabric is all you need to display your favourite cards this Christmas. Here's how...



You will need

Materials

- Piece of 12mm thick MDF, around 400x500mm
- Dacron or cotton flock
- Covering fabric
- 40 Dome-head upholstery tacks
- 4m of ribbon

Tools

- Saw
- Tape
- Scissors
- Hammer
- Stapler
- Small screws and picture hanging wire
- PVA glue

This easy-to-make pinboard can be used to keep shopping lists, bills, postcards or Christmas cards neatly on diplay. We used a piece of MDF but hardboard or even plywood could be used instead. If the board is going to be larger than around 60mm square, stronger screw fixings are needed for the wall.

If you don't want to use a festive fabric, try a floral design but avoid symmetrical patterns as it's tricky to align the fabric design with the board edges.

Step-by-step

1 Saw the MDF to size and cut a piece of dacron to the same size. Lightly glue this to one side of the board. You can add an extra layer of Dacron for a more deeply padded effect.

2 Fold your top covering fabric over the board and make sure there are no creases on the front. Tack in place with staples every 50mm, folding over the edges. Pleat the corners.

3 Now form a criss cross pattern with the ribbon. Try to make the diamond pattern symmetrical by keeping the ribbon lengths around 75mm, 3in apart. Staple to the back of the board and repeat to cover the MDF.

4 To emphasis the padded effect, tap the dome-headed pins into the board at the point of each diamond. The pins should be no longer than the thickness of the board. We used black lacquered tacks but you could opt for brass or silver.

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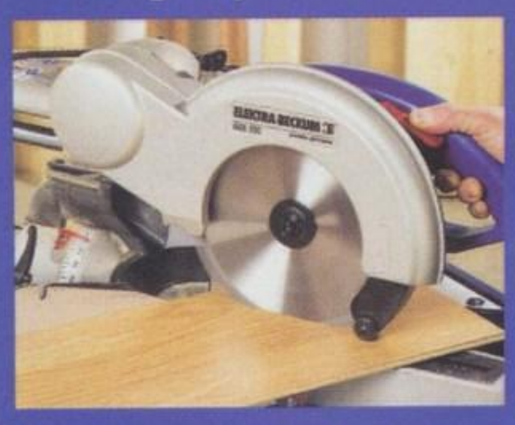

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