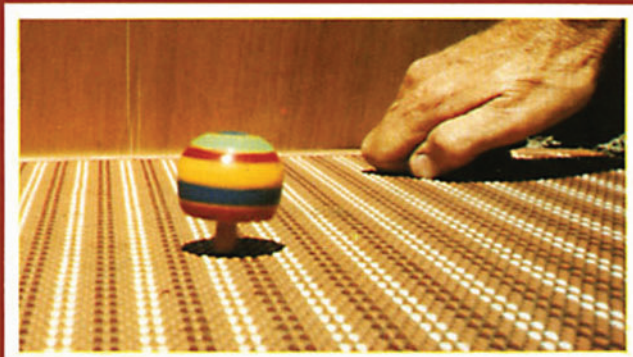


The Australian

May/June '88

\$2.95*

Woodworker



-
- **How to make the remarkable Japanese Spinning Top**
-

- **Adhesives Feature:**
How adhesives work
Using Hide Glue
-

- **The Tortilla Maker**
-

- **The 1988 Squatter's Chair**
-

- **Making a stylish student's Desk Part 2**
-

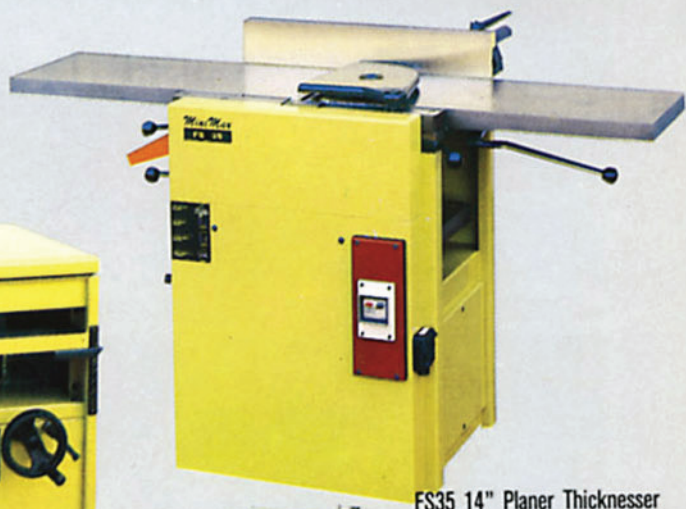
**Birthday
Issue**

MiniMax

Quality Italian Woodworking Machinery For Home, Schools & Industry



U31 Combination
with Scribing Blade



FS35 14" Planer Thicknesser



S31 12" Thicknesser



F31 12" Surface
Planer Table 2050mm
Long



S45 18" Bandsaw



T3 Spindle Moulder with 3 Speed



SI10 Panel Saw with Scribing Blade



L55 Face & Edge Sander with Unique
Tilting Table

The Machinery Center

Incorporated in Victoria

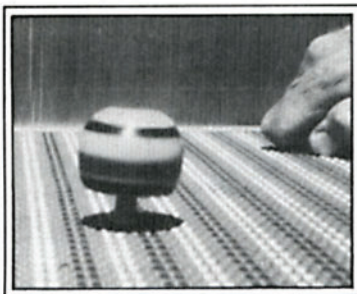
318 Whitehorse Road, Nunawading, Vic. 3131
Telephone: (03) 877 7211

Brisbane Saw Services (Qld. Agent)
49 Toombul Road, Virginia, Qld 4012
Telephone: (07) 266 8611

Unit 1/80 Milperra Road, Revesby, NSW 2212
Telephone: (02) 774 5233

Fisher Discounts (A.C.T. Agent)
68 Barrier Street, Fyshwick A.C.T. 2609
Telephone: (062) 80 4105

In this issue



32

The Remarkable Japanese Spinning Top

by N.H. Bradbury

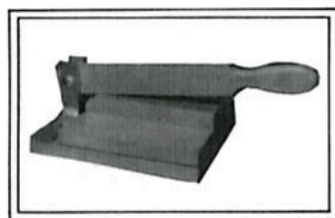
The author learned about these Tops when he visited a woodworker in Japan. Here, he describes how they are made and cautions readers not to be fooled by their apparent simplicity.

18

The 1988 Squatter's Chair

by Ivan Mann

Ivan offers you the country relaxation of his easy-to-make 1988 Squatter's Chair while another woodworker provides two alternatives.



21

Tortilla!

by Jeff Kemp

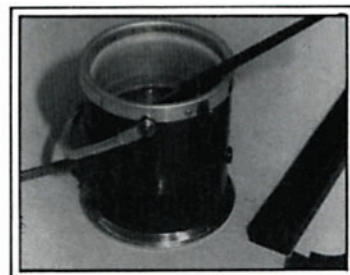
One afternoon's woodworking could bring you many an evening of gastronomic pleasure.

35

Hide Glue

by Paul Gregson

Paul sets out to right some of the wrongs in common beliefs about animal glues.



12

Coming to Grips with Glue

A comprehensive survey of glue types and their availability in Australia.

Other Features:

- 26 A stylish Desk (Part 2) — by W.F. Norquay
- 30 What to do with little bits of wood — by R.M. Guthrie
- 42 A Bushman's Saw — by D.L. Crisp

- 3 News
- 6 Letters
- 8 FORUM
- 16 The Emco-Luna File
- 23 Winners
- 25 Gallery
- 39 Clamps & Clamping
- 40 The BIG BLOW

- 41 Timber Treats
- 44 Shavings
- 46 Book Reviews
- 48 USER REPORT — Speedbore 2000
- 49 Product News
- 53 USER REPORT — Vicmarc VL250
- 54 Directory of Suppliers



The Australian Woodworker

May/June '88

Number 19

The Australian Woodworker is published bi-monthly (in January, March, May, July, September and November) by Skills Book Publishing, P.O. Box 421, Rozelle, N.S.W. 2039.

Tel: (02) 810 6222

Fax: (02) 818 5675

Editor

Art Burrows B.Sc.(Tech)
M.I.E.Aust.

Art Director

Greg Burrows

Cartoons

Max Foley

Display Advertising

Glenys Smith

Mike Smith

Tel: (02) 436 4922

(02) 436 2433

Directory & Classifieds Ads

Ros Hannan

Tel: (02) 810 6222

Subscriptions:

\$13.50 for 6 issues (including postage)

\$27.00 for 12 issues (including postage)

Address for all correspondence,
artwork, directory and classified
ad copy:

"The Australian Woodworker",
40-44 Red Lion St., (P.O. Box 421),
Rozelle, N.S.W. 2039

Typesetting by TENSOR Type, Sydney

Printed by Offset Alpine Printing Pty. Ltd.
Silverwater N.S.W.

Newsagent Distribution by Gordon and
Gotch Limited, Sydney

*Recommended Retail Price

Editorial

The Price

It is now more than eighteen months since we last raised the price of the magazine. Production costs have risen sharply in that time and we've finally had to bow to the inevitable and increase the price again.

The good news is that the increase will allow us to further improve the magazine. Some of these improvements will be evident in this issue; others are planned for later this year.

Fourth Year

Our birthdays seem to flash by faster and faster. With this issue, *The Australian Woodworker* enters its fourth year.

Contents

Sorry about the Wheel Cutter article. There was a last minute hitch that led to it being put aside, hopefully for the next issue.

We also promised to return to the subject of Prices/Prices in our FORUM pages but the importance of the forest/timber debate seems to us to take precedence at the moment. We've taken the latter a little further this month. Already, an overall view is beginning to emerge. Another couple of issues and we hope to be able to make a definitive statement about the opinions and beliefs of the woodworkers of Australia on this subject and structure a consensus of their views concerning how the problems should be resolved.

But, please, keep sending those letters, even if you only wish to support a statement made by another reader.

Copyright

No part of this publication may be reproduced without the prior written permission of the Publisher.

Letters & Queries

All letters should be addressed to the Editor, "The Australian Woodworker", P.O. Box 421, Rozelle, N.S.W. 2039. Letters containing information for publication (eg. advice concerning coming events, club profiles etc.) should be sent so as to arrive at least five weeks prior to the first day of the month of publication. Queries can only be answered if accompanied by an s.a.e.

Contributions

Contributions are invited on virtually any subject of direct interest to Australian woodworkers. Those who wish to contribute articles should write to the Editor requesting "The Australian Woodworker" Guide to Authors. This outlines the preferred presentation for articles and details the current scale of payment.

Notes for the FORUM section will be paid for on the basis of \$5 per item used plus \$5 for each photograph, sketch or drawing published.

Advertisements

Advertisements are accepted for publication only on condition that the advertiser and/or the advertiser's accredited agent warrant to the Publisher that the advertisement complies with the Publisher's Terms and Conditions as per "The Australian Woodworker" Booking Confirmation & Advertising Space Order and that the Publisher is indemnified against all claims etc. which may arise from publication of the advertisement.

SKILLS SUCCESS

Heralded by a glittering opening ceremony at the Sydney Entertainment Centre, Skills Olympics, held at the recently opened Darling Harbour Exhibition Centre, was a sensational success for the Australian team.

Officially, the opening ceremony began with a Parade of Flags by the 400 competitors from the 19 countries participating in the 1988 Skills Olympics. (Unofficially, it began with a demonstration of martial arts by an Australian/Indonesian group and a Lion Dance — a more than appropriate welcome considering Chinese New Year was being vigorously celebrated on the same evening in nearby Chinatown.) After a program that both celebrated and demonstrated the depth and diversity of Australia's youthful talent, the ceremony ended with another unofficial event — an impromptu Haka by the New Zealand contingent.

The following four days of intense competition saw Australia win third place in the Olympics with 4 gold, 5 silver and 3 bronze medals (a total of 25 points).

Winners of the Olympics were Korea with 12 gold, 6 silver and 3 bronze medals (51 points); second was China-Taipei with 35 points.

The measure of the Australian team's success may be seen from the results recorded by Japan (fourth with 21 points), the U.K. (fifth with 17 points) and Germany (sixth with 13 points).

Other countries to win medals in the 1988 Skills Olympics were Austria, France, Ireland, Liechtenstein, Switzerland, The Netherlands and the United States.

The winners for Australia were:

GOLD

Stephen Perryman (Bricklaying)

Devin Flor (Automotive Mechanics)
Mark Eddison (Plant Mechanics)
Russell Cooper (Industrial Wiring)

SILVER

Sean Dibben (Stonemasonry)
Colin Twigg (Turning)
Maurice de Jersey (Industrial Electronics)

Ken Channon (Plumbing)
Celeste Careedy (Jewellery)

BRONZE

Andrew Barnes (Electric Welding)
Roy Lim (Gas Welding)
Mouï Trinh (Cookery)



BICENTENNIAL CONFERENCE & EXPO

With more media attention being paid to EXPO, organisers of the "Bicentenary Celebrations of Woodturning Down Under" expect a rapid upsurge in bookings as woodturners throughout Australia realise that attendance at the Conference will also give them an ideal opportunity to see EXPO.

The EXPO site in South Brisbane is only 10 kilometres from Griffith University where the woodturning conference is to be held on July 1-5.

The Conference is being hosted by The Woodturners Society of Queensland. A full schedule of events has been planned to allow woodturners of every level of ability to gain information and enjoyment from their participation. Eleven internationally respected woodturners, six of whom will visit Australia especially for the Conference, will act as demonstrators/lecturers.

The cost of the Conference — including admittance to all lecture and demonstration sessions, a wine and cheese evening, all lunches, morning and afternoon teas (during the Conference) and temporary membership of the Griffith University licensed Club — is \$200. To register, a cheque for this amount should be sent now to the Convenor: Neil Derrington, 64 Mornington St, Alderley QLD 4051. Further information concerning the Conference, on-campus accommodation (available at \$40 per night) or assistance with off-site accommodation, may be obtained by writing to the above address or contacting Mr Derrington by phone — (07) 356 1004 (home) or (07) 275 7277 (business).

WOODWORK TOOL SUPPLIES CLOSES

After 12 years of service to the woodworking fraternity, Bruce and Elisabeth Dobbie have closed the business of Woodwork Tool Supplies Pty Ltd at 178 Through Rd, Burwood, Victoria.

Speaking with *The Australian Woodworker*, Elisabeth Dobbie said that she wishes to spend more time with her family and in the pursuit of personal commitments than her work as a full-time partner and Director would allow. The business has not, however, been sold and Bruce says that he is "looking forward to entering a new direction within the existing company". He can be contacted on (03) 890 4596.

Both wished to thank the thousands of customers with whom they have dealt over the years and said that they still hold stocks of many unusual and hard to get wood-working items which they intend to offer on a limited basis by mail order through *The Australian Woodworker*.

COFFS HARBOUR/PORT MACQUARIE EXHIBITIONS

The Mid-North Coast Woodworkers will again be staging two exhibitions of "Fine Woodwork" during 1988.

The first will be held from Saturday July 9 to Wednesday July 13 in the Coffs Harbour Civic Centre.

The second will be held on Saturday and Sunday, October 1 and 2, in the Port Macquarie Civic Centre.

The exhibitions will feature the work of many talented woodworkers living on the Mid-North Coast including Roger Gifkins, Neil Scobie, Stefan Bruggisser, Rob Parker, Lex McWhirter and many more.

The group suggests that readers may wish to plan holidays around one or both these exhibitions so as to enjoy not only the work exhibited but the "wonderful climate of both these venues".

Further information concerning either of these exhibitions can be obtained from Mr Mick Waters, RMB Mt Brown Rd, Upper Orara, NSW 2450.



T-GEM SHIFTS

Barnwell Engineering Developments, designers and manufacturers of T-GEM lathes, have shifted to new premises at Unit 5, 2 James Street, Bayswater, Western Australia 6053 and have a new telephone number — (09) 272 8033.

INVITATION TO EXHIBIT

The Ballarat Woodworkers Club is inviting woodworkers throughout Australia and New Zealand to exhibit at their Woodworking Craft Exhibition to be held at the

Maryborough Creative Arts Centre from Monday September 26 to Sunday September 2, 1988.

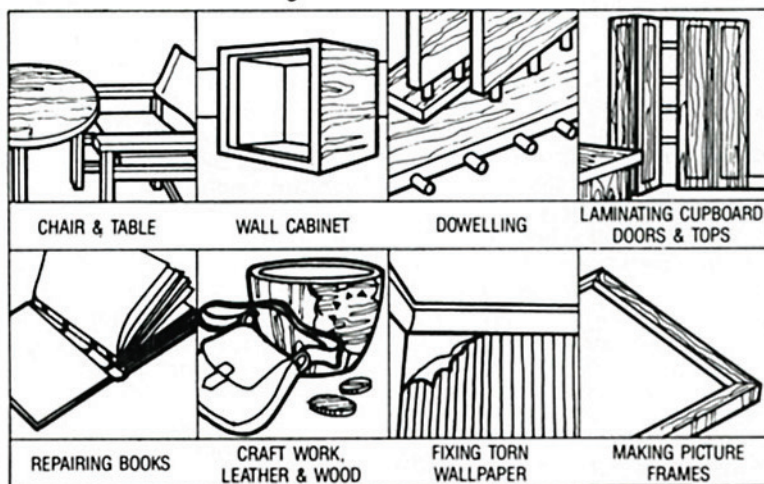
The purpose of the Exhibition will be to encourage all woodworkers — from beginners to experienced craftsmen — and up to three small articles or one large article (eg furniture) may be submitted by each exhibitor.

The organising committee reserves the right to select and reject articles submitted. Exhibits may be sent for sale or display only, the Creative Arts Centre taking a 20% commission on

Fullers Carpenters

max bond PVA Wood Glue

Max Bond P.V.A. is a professional quality adhesive for a vast range of applications throughout the joinery and carpentry trades. Ideal for furniture making and will bond materials such as wood, cloth, pottery, ceramics and many more. Contains 65% Solids, suitable for stress bonding. Dries clear.



READER
SERVICE
②

H.B. Fuller International, Inc.

HEAD OFFICE — Sydney
8 Clearview Place, Brookvale NSW 2100
Phone: Sydney (02) 938 3811, Melbourne (03) 791 5733,
Brisbane (07) 358 7322, Adelaide (08) 296 4399,
Perth (08) 451 8191

all goods sold.

The formal opening will begin at 7.30pm on Monday, September 26; entry will be free and refreshments will be served.

For further information please contact the secretary of the Woodworkers Exhibition sub-committee, Norman M Lowe, 115 Gillies Street, Maryborough, VIC 3465.

NATIONAL WOODWORK EXHIBITION

A selected exhibition of Australia's finest woodcraft is to be held at the Exhibition Buildings, Melbourne, concurrently with "The Working With Wood Show" on October 21-23, 1988.

The National Woodwork Exhibition will allow woodworkers to exhibit their work in various categories such as furniture (traditional, modern and commercial), woodturning, bowls, sculpture, carving, musical instruments and undefined objects. It is planned to make available two

Awards in each category; these will be presented at the Official Opening.

It is also intended to select the piece that most represents the significance of the tree in Australia's development as the "Bicentennial Woodcraft Gift to the Nation". A substantial acquisitive Award is available to the maker of the selected piece.

Entry Forms are available by telephoning (03) 240 8461 or by writing to NATWOOD, Gembrook Post Office, VIC 3783.

WORKING WITH WOOD

Full information concerning exhibition stands at "The Working with Wood Show" are now available. The Show, to be held at the Exhibition Buildings in Melbourne, October 21-23, is expected to display the widest possible range of timber, machinery, tools and allied equipment for the Woodworking Industry.

Further information may be obtained from Interwood Holdings Pty Ltd,

Level 2, 286 Toorak Rd, South Yarra VIC 3141, Tel: (03) 648 2411.

MACKAY CLUB PLANS WORKSHOP

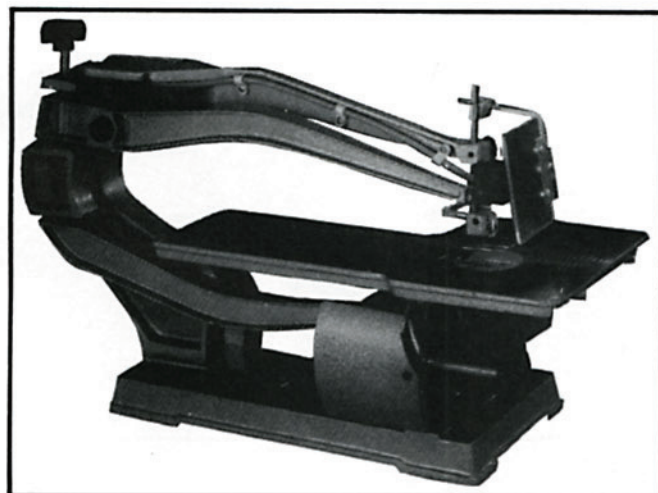
The formation of the Mackay Woodturner's Association followed the initiative of Rodney Adam, one of the district's most experienced woodturners, who arranged a weekend workshop with Harry and David Arnall.

The Association, now with 45 members, meets monthly, mostly on the afternoon of the first Sunday and usually at St Patrick's College Hall, River Street, Mackay.

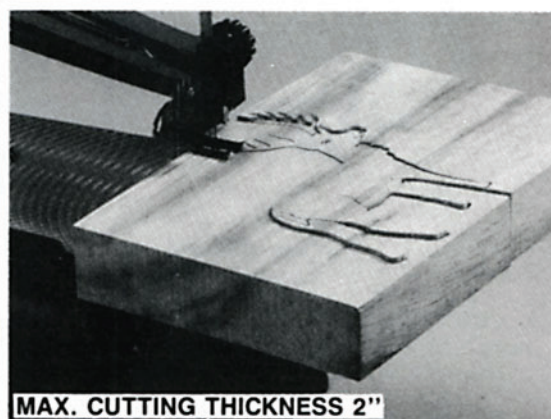
With the co-operation of the Woodturner's Society of Queensland, the Association has invited some of the international craftsmen who will appear at the Society's Bicentennial Seminar in Brisbane to help stage a weekend workshop in Mackay. Further details are available from the Secretary of the Association, Mr KE Porter, 16 Mango Avenue, Eimeo, Mackay, Tel: (079) 54 6547 (AH) or (079) 57 1230 (Bus).



Woodman Group SCROLL/FRET SAWS



AVAILABLE IN 15", 18" and 26" THROAT DEPTH



MAX. CUTTING THICKNESS 2"

READER
SERVICE
③

QUEENSLAND

Gregory Machinery Pty Ltd
1 Vulture Street, West End 4101
Ph: (07) 844 4433

VICTORIA

B & G Machinery Centre
112 Cheltenham Road, Dandenong 3175 Ph: (03) 794 7362
Glen Syndal Tools Pty Ltd
15 Coleman Parade, Glen Waverley 3150 Ph: (03) 232 1173
Malvern Machinery
1822 Malvern Road, East Malvern 3145 Ph: (03) 259 9031

NEW SOUTH WALES

Major Woodworking Equipment
4 Fairford Road, Padstow 2211
Ph: (02) 708 3233

SOUTH AUSTRALIA

David Trembath Agencies
75 Grange Road, Welland 5001
Ph: (08) 46 4561

PLEASE SUPPLY INFORMATION ON:
THE ____" SCROLL SAW

Name:

Address:

..... P'code:

Phone:



Letters

The phone number of Oils & Proteins Australia (see Letters, Issue #18) is (03) 376 5978.

A.P. Riddells Ck (VIC)

We contacted the company and learned that it has changed its name and is under new management: Sceney Chemicals, cnr Radcliffe & Dynan Rds, Sth Kensington VIC 3031. The company still makes "Good Old Fashioned Weatherproof Oil" which it distributes through hardware stores. (Most Homestead, Homesaver or Thriftylink stores should either have it or be able to get it for you and some Mitre 10 stores also stock it.) If you are interested in larger quantities, you can buy 20 litres direct from the

factory for about \$50.

Dr Sceney, the new proprietor, also told us that he is packaging PURE Tung oil in small containers (i.e. sizes that are suitable for amateur woodworking). This will be good news to all those who have so far been able to find only Tung oil mixtures — Ed.

I have just read "The Typical Australian Garage/Workshop" by Paul Grgeson. Can this man be for real?

Where in Mr Gregson's garage/workshop are all those things which "might be handy one day"? Where do you put the unfinished job or the bit of furniture you could repair for one

of the kids when they get a place of their own? Where are the boxes of odds and ends your wife asked you to "find a place for in your workshop", or the half-finished motorbike your son has been restoring?

Mr Gregson obviously follows the adages "a place for everything and everything in its place" and a "tidy workbench is a sign of a tidy mind". But whoever thought up those sayings didn't have to share his workshop with sons and their friends who rarely put things back and if they do, not in the right place!

I suppose I can dream about Mr Gregson's typical (or is it atypical?) garage/workshop.

C.E.A.S. Page (ACT)

After years of family criticism, one of our friends finally solved this problem. He built a second garage for his car. Within months it looked just like the first — Ed.

In reply to A.McA of Bellbridge, the English magazine he refers to was probably *Practical Woodworking*, issues February, 1983 (plans and instructions for making the gears) and March, 1983 (instruction and ½ size plans for making the rest of the clock and assembly. T.T., Kilaben Bay (NSW)

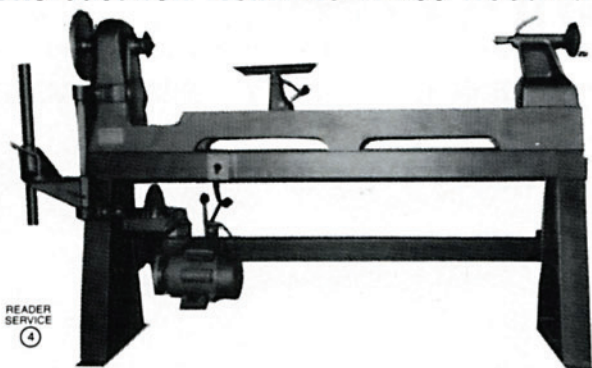
A neighbour travelling in W.A. found a "Black Boy" lying beside the road. It has been dropped at my door with a request for a bowl. Having no knowledge whatsoever about breaking into or using the limited amount of wood, I would like to know if any other reader can suggest the best way to tackle this valuable piece without waste.

Barry Strauss
630 Prune St Lavington
NSW 2641. Tel: (060) 25 1305

Some woodturners (particularly in Queensland) have become adept at using synthetic finishes to allow the working of fibrous/woody materials. These techniques would appear to have application here. Whilst we have, at Mr Strauss' request, included his address and telephone number, we would prefer notes on the subject to be passed to him via this office so that we can consider them for publication — Ed.



The Cast Iron VICMARC VL250 Wood Lathe



READER SERVICE
4

HEAD STOCK Cast Iron, 8 Speed Pulleys, Indexing Facility.

TAIL STOCK Cast Iron, Camlock Adjustment, Long Hole Boring Facility.

TOOL REST Camlock Adjustment, Cast Iron Support.

CAST IRON BED 500mm Swing, 1300mm Between Centres.

STAND Fabricated Steel, Quick Belt Change Motor Mounting Facility.

SPINDLES No. 2 Morse Taper, 30mm Thread Mounts, Heavy Duty Thrust Bearings.

ACCESSORIES Outrigger Turning, Long Tool Rests, Copying Facility.

VICMARC MACHINERY — MANUFACTURERS OF QUALITY WOOD LATHES

CONTACT YOUR STATE DISTRIBUTOR FOR FURTHER INFORMATION:

Queensland	N.S.W.	Victoria	S.A.
Gregory Machinery P/L 1 Vulture Street, West End, 4101 Ph: (07) 844 4433	The Woodturning Centre 6 Roger Street, Brookvale, 2100 Ph: (02) 938 6699	Malvern Machinery 1822 Malvern Road, East Malvern, 3145 Ph: (03) 259 9031	A.S.W. Machines 13 Young Street, Adelaide, 5000 Ph: (08) 519 669

We thank the many readers who have responded to the appeal of A.McA. of Bellbridge (VIC).

The information supplied has been passed on to this reader.

The Woodworker's Mail Order Bookshop



FOR ALL WOODWORKERS

Sharpening and Care of Woodworking Tools and Equipment by John Sainsbury.
Published by The Guild of Master Craftsmen (UK).
The equipment you need and the way to use it. Essential reading for every woodworker — by one of the world's best known woodworking writers; 128 pages, 287 mm x 210 mm, line drawings and 80 photographs. (\$25.50)

Gluing & Clamping by Patrick Spielman.
Published by Sterling. A classic book, covering virtually every conceivable technique for gluing and clamping. 256 pages, 254 mm x 203 mm, over 500 photographs. (\$19.95)

PLANS & PROJECTS

Woodworking Plans & Projects
Published by The Guild of Master Craftsmen (UK). Fully illustrated with step by step instructions for 30 projects (Tables, Seats, Dresser, Woodcarving Bench, Rocking Horse, Roll Top Desk, Oak Cradle) plus separate, fully detailed plans for traditional Doll's House: 128 pages, 297 mm x 210 mm, line drawings and 88 photographs. (\$25.50)

Making Toys in Wood by Charles Hayward.
Published by Sterling. Over 50 projects, from Noah's Ark (with all the animals) to a dump truck. Many photographs, step-by-step instructions and scale drawings. 168 pages, 216 mm x 165 mm. (\$14.95)

Making Cabinets & Built-ins by Sam Allen
Even if you have never worked in wood before, even if you own just a few ordinary tools, you should have no difficulty following this expert cabinetmaker's simple instructions (aided by hundreds of close-up photos and diagrams) in all the basic techniques from selecting materials and reading plans to doing layout, cutting and assembling cabinets and built-ins. 416 pp, 253 x 203 mm. (\$29.95)

Making Old-Time Folk Toys by Sharon Pierce
There are 23 toys in this book with easy to follow instructions for making them using ordinary tools, glues and paints. Every important point in the process is shown by close-up illustrations. 132 pp, 241 x 190 mm. (\$16.95)

176 Woodworking Projects
by the staff of Workbench magazine
Plans for outdoor — verandahs, patios, stairways, sun shades and wind screens — and for indoors — child's desk, TV-VCR stand, poker table, chairs, beds, dollhouse furniture, puzzles, games — all with easy to follow instructions. 256 pp, 279 x 209 mm, (\$23.95)

USING TOOLS

Router Handbook by Patrick Spielman.
Published by Sterling. All you ever wanted to know about these versatile tools. Shows how to make your router into an entire workshop — covers all uses — including tasks that otherwise need much more expensive equipment — helps you select the best router, choose router bits, buy or make tables, jigs and fixtures. 224 pages, 254 mm x 203 mm, 80 line drawings, 510 photographs. (\$18.95)



Table Saw Techniques

by Roger W Cliffe.
Published by Sterling. Helps you get the most from your table saw. Full of solid information, hints and tips — not just about table saws, but the jigs and fixtures used with them: 352 pages, 254 mm x 203 mm, line drawings and over 700 photographs. (\$26.95)

Japanese Woodworking Tools

by Henry Lanz
A well-organised, clearly written and generously illustrated introduction to Japanese tools and their use: 160 pages, 254 mm x 203 mm. Over 200 photos and drawings. (\$23.95)

Scroll Saw Handbook

by Patrick Spielman
Compares most of the popular types and brands of scroll saw. Also provides, step-by-step, fully illustrated descriptions of the most important cutting techniques for bevel sawing, inlay, relief, recessing, marquetry, joints etc: 256 pages, 253 mm x 203 mm. Over 500 photos and drawings. (\$23.95)

WOODTURNING

Turning Miniatures in Wood

by John Sainsbury.
Published by The Guild of Master Craftsmen (UK). A complete and detailed book about miniatures — the equipment, the tools, the sharpening methods and the turning techniques plus over 25 practical projects, fully explained and superbly illustrated. 144 pages, 280 mm x 215 mm 30 photographs. (\$24.50)

Craft of Woodturning

by John Sainsbury
A world-renowned woodturner/teacher uses over 400 superior photographs and drawings to give the beginner a bird's-eye view of the position and use of each tool and technique used in woodturning. 192 pp, 279 x 215 mm. (\$19.95)

Woodturner's Project Book

by Phil Jones and Charles Mercer
You'll want to try your hand at all 43 of these projects — from the simplest ones (a knife handle, candle lamp and dried flower vase) through items such as a pepper pot, picture frame, cigar holder, inlaid jewellery box and goblet (with lid). 224 pp, 260 x 203 mm. (\$24.95)

WOODCARVING

Woodcarving — A Complete Course

by Ron Butterfield
Ron Butterfield, a teacher of 37 years, has included everything from drawing and design, choosing tools and equipment to detailed studies of each of the major techniques of woodcarving — chipcarving, carving in relief, carving in the round, decorative carving, lettering, all with carefully described examples and projects. 128 pages, 252 mm x 199 mm. 140 photos and line drawings. (\$26.00)

Woodcarver's Pattern and Design Book

by E.J. Tagerman
For the times when your problem is not how to carve but what to carve, here are great new designs and unusual patterns — over 800 of them for relief and in-the-round. 256 pp, 254 x 177 mm. (\$24.95)

ORDER FORM ON PAGE 64

FORUM



TREES AND TIMBER

From the letters received on the subject of timber supplies (see FORUM, Issue #18), one thing is abundantly clear. Many people interested in woodworking have already addressed the apparent conflict between world forest conservation and their own use of timber; their statements show a deep concern, not merely for their craft, but for the wider issues involved.

Rather than publish the letters en masse, we believe the interests of woodworkers and the community at large would be better served if we take a small number in each issue and use these as the basis for discussion.

Perhaps, before we begin, we should set a couple of ground rules for this discussion:

We will not, as has been suggested by a couple of writers, "give 'em heaps". Indeed, it would be difficult since the suggestions came from people of clearly opposing views.

But we must start from the basis that neither the "cut it all down" nor the "leave it all alone" viewpoints are satisfactorily proven to be either the will of the majority or even in their best interests. To do otherwise would negate purposeful discussion.

Nor, however, should we automatically assume that the final position towards which we are aiming is a compromise. Instead, we believe that the purpose of these discussions should be to gain a better understanding of the problems, suggest solutions which everyone can live with and find practical, sensible things we can do — as individuals and in groups — to help alleviate the difficulties in which we now find ourselves.

Our first letter is from Mr. G. Horey of N.S.W.

Sir,

Your March/April issue is most welcome with your advocacy of the problem of Forest Conservation. This problem is not intractable but it is urgent.

I suggest that there are certain issues which are undeniable and must be faced by everyone. They may be summarised:

- 1. Once all the timber usable in the Woodworking Industry and Craft has been harvested, that is the end. Then will all the wringing of hands be useless. Therefore action must be taken now, today.*
- 2. As with all other commodities, the demand for which exceeds the supply, it is necessary to plan for the future. If there is to be continuity of supply, then the source must be replaced continuously as stocks are depleted.*
- 3. Planning for this can only be undertaken at the highest level, ie. the Commonwealth, and on the widest of bases, ie. the forest management for all users, wood pulp and paper, building industry as well as for our special interest, the use of fine timbers. Present management instrumentalities seem to be inadequate and too diverse.*
- 4. Until a state of equilibrium, in which replacement equals*

harvesting is reached, there must be a long, painful period of restrained usage. We now live in the midst of this painful interregnum period and must all accept the fact that the timbers of one's choice are becoming more and more restricted and will soon be doubling, trebling and quadrupling in price. We shall have to learn to use veneers instead of solid timber. As for woodturning, things will have to change, a fact which I for one consider to be for the good. I do not doubt that there are some other basics which must be added to my list. They will quickly emerge for I am certain that the response to your call will be well heeded.

Let me conclude by stating that, while your FORUM commentators raised some interesting points, I feel they all suffer from failing to see the wood for the trees. This issue is fundamental today: our world is recklessly squandering its precious resources. We must reverse this trend and we need action to support words. I suggest, therefore, that "The Australian Woodworker" has the ability and manpower resources of its readership to draw up an overall plan for submission to the Federal Government of how amateur and professional woodworkers of Australia believe our future forests should be planned and managed.

G. Horey
N.S.W.



This excellent letter must surely result in further comment from other readers. Meantime, there are a few remarks we might add to the debate.

We would be cautious of supporting the view that central planning by the Federal Government is the only course possible. Indeed, this may not be precisely what Mr Horey advocates since he speaks later of a plan being generated by Australian woodworkers for presentation to government. Of course, any plan can only be effectively implemented if it is administered by the Federal Government with the support of State Governments.

The statement that "management instrumentalities seem to be inadequate and too diverse" is one that many people in the community would probably make. But is it accurate? Have we, in fact, given these instrumentalities the chance to do the job we want them to do? Can we justify the notion that the planning should be taken away entirely from the people that this society has trained specifically to perform the task? If we, as a community, are unhappy with the job being done by our foresters, should we assume we can do it better — without the benefit of their knowledge and experience? Surely it would be wiser for us to learn to use the people and the technology we already have available to us, in a way that will allow us to achieve our objectives.

Naturally, we would welcome further comment on this subject from foresters or, conversely, from those who are critical of the role of the forester.

In general, we agree with Mr. Horey's scenario of the changes that may have to occur in woodworking — with one excep-

FORUM

tion. The woodturner may have a more favoured existence than he predicts. This branch of the craft often uses the unusable; if there is to be any usage of trees for timber, the bits left over will surely be worth more as raw material for the woodturner than they will as firewood.

Returning to the subject of foresters, we introduce our second item for discussion which is not a letter but "Forest and Timber", Volume 23, 1987. This is an annual publication of the Forestry Commission of New South Wales. It is available free to Australian residents by writing to "The Enquiry Desk, Forestry Commission of NSW, PO Box 2667, GPO NSW 2001".

Here are some excerpts from the current issue:

"Can native species be grown for profit? The short answer is — no...

"If profit is the only objective, the most profitable species to grow is an import, radiata pine...even that can be a chancy business...

"However, the Forestry Commission conserves 3,727,000 hectares of State forests and timber reserves, of which only 164,000 hectares are planted to species not native to Australia...

"The Commission also supports the planting of native trees on private land areas, for example agricultural land, hobby farms or rainforest gullies in private holdings, by making available healthy seedlings of native species at reasonable cost through its nurseries...

"The following trees are worth considering: silky oak, Queensland maple, black bean, white cedar, red ash, blackwood, Australian teak, silver ash, Queensland kauri, beefwood, southern sassafras, silver quandong, bunya and hoop pine and of course red cedar...

"The Forestry Commission of New South Wales produced approximately 750,000 seedlings of native trees and shrubs during 1986-87. These seedlings are for sale to the public and may be purchased at Forestry Commission nurseries...



It seems to us that there are two essential ideas of interest to woodworkers in all of this:

1. It is currently predicted that growing native trees will be unprofitable (at least in the economic sense).

2. The NSW Forestry Commission (in common, we understand, with all of the other Forestry Commissions in Australia) are happy to help owners of private land by way of information and advice and the sale of seedlings, to grow native trees.

Concerning the first, we might comment that current predictions about profit may not take into account the extraordinarily large increase likely in the cost of fine timbers if governments pursue policies aimed at severely limiting the use of timber from present forests both here and overseas.

And regarding the second, we might note that instead of bemoaning the fact that other people are not doing enough to safeguard our forests, we might be better employed actually using the resources available to us right now from the Forestry Commissions of Australia.

That brings us to our last item on this subject for this issue — a very special letter from Mr. R. Smith of Queensland.

Sir,

I read with interest of the concern expressed at the 1987 National Australian Woodworking Conference at the depletion of national stocks of fine timbers.

I share that concern and whilst I applaud the action taken at the Conference, I believe that more can be done than asking others to overcome the problem.

Some months ago, I sought and obtained the approval of the local Shire Council to use a piece of vacant Council land to develop a small plantation of cabinet timbers. The purpose of the exercise is to determine which species are best suited to this area in the hope that property owners will, from the results, recognise the potential for agro-forestry and also plant commercial plots of valuable timbers.

"more can be done than asking others to overcome the problem"

Of the 3Ha site, 1Ha will be densely planted with a wide variety of trees and a record will be kept of plantings, weather conditions, fertilising, mulching techniques, watering, and results.

The project, which I commenced in November, involves me in a good deal of research but only about 5 hours of physical work per week and in spite of drought conditions, already 11 varieties totalling about 70 trees are in place. These include: Red Cedar, Silky Oak, White Beech, Black Bean, Maple, Tulipwood, Brown Pine and Crows Ash.

A further 16 varieties have been identified as worthy of planting and will be planted during 1988. The ultimate target is about 500 trees. The project will never provide a supply of timber because being on public land it will never be harvested.

It will though, I hope, provide knowledge and incentive and in the longer term, a valuable source of seed for other growers. Might I suggest that similar projects undertaken by woodworking groups or individuals around the country would, with genuine commitment and appropriate publicity, not only create positive public awareness of the need for re-afforestation but also prove an extremely rewarding and satisfying experience for those participating.

*R. Smith
Queensland*



Originality in Design

by Mac West

No-one who attended the Third National Wood Conference in Canberra will forget the final day's debate on furniture, led by the key-note speaker from England, Richard La Trobe Bateman), and the ensuing discussions that took place in the wind-up session at the end of the Conference.

In fact, "wind-up session" is a particularly appropriate term for the whole matter, given the heat that was generated.

FORUM

Following a morning during which Geoff Hannah had given a slide presentation and talk on "Traditional Furniture-Making", Bateman strongly criticised the nature of this sort of work and observed his discomfort at being part of a Conference in which it was given any prominence.

Many of those present must have felt it unfortunate that discussion then strayed into the grey areas of taste and preference and the right of the individual to do the sort of work he or she pleases. For inevitably this shifted the focus away from a constructive appraisal of the design-based approach to woodworking as opposed to an approach based more strongly on the use of historical models.

In these days when it seems increasingly common for woodworkers to consider themselves "designers" because they can put together a piece of furniture, or (as was pointed out by Richard Raffan in a recent article in *Fine Woodworking*) "artists" because they can turn a competent and pleasing bowl, it seems worthwhile to occasionally think in more detail about the approach we take to our work and whether we do in fact deserve either of these labels.

While several people have correctly pointed out that Bateman himself had on occasions made a fairly direct copy of a historical piece of furniture (as if this automatically negated his criticism of the work of traditional furniture makers), it must have been clear to anyone who saw slides of his work — whether they liked the work or not — that his basic approach is to avoid, as far as possible, the direct use of past models when considering any new design problem.

An identical approach has been taken in all the design workshops or exercises I have taken part in. Thus an exercise to make a table, for example, is described in terms of supporting a surface of a given size at a particular height. Of course, everyone involved realises that the surface will be just about the right size and height for people to sit down and eat off, but describing it in this manner helps us to get away from the basic image we all immediately conjure up if we talk about "tables".

Anyone who has taken part in such design exercises — whether they be to make a table, a stool, a chair or any other piece of furniture — knows that the results are often weird, sometimes wonderful, and frequently impractical. But the best attempts can embody ideas or approaches that are at once interesting and stimulating.

Whether or not the rough prototype hacked together out of scrap materials with a hot glue gun is capable of being successfully resolved into a finished piece of furniture is another matter, but at least the exercise is a considerable development on merely thinking about designs. We must have all had the experience at some time or other of thinking that we had a great idea for something to make, only to find when we make the effort to bring it to life, that the idea was neither as great nor as practicable as it seemed when it was still in our heads.

Thus, while the results of many or most such exercises are odd, impractical or both, it is only by approaching what we do in this manner that we have any hope of actually creating something truly new.

The cobbling together of different components or pieces that we know and like into some "new" combination may well be more likely to produce a visually pleasing — and often, more commercial — result, but it can hardly be considered a design-based approach to making furniture.

Similarly, while it is easily possible to make a basically simple

and obvious structure look more interesting by any number of means — supporting it on spheres, painting it with metallic finishes, cutting edges at odd angles, adding spiky bits or whatever — this frequently seems to me to be less to do with fundamental design and more to do with superficial decoration.

Approaching the process of design in a creative manner does not necessarily mean that one is constantly striving to produce objects that are breathtakingly "original" or different from what has gone before. Anyone who makes furniture over a period of time is bound to evolve certain themes or details that please them — ie they will develop their own personal aesthetic — but the challenge is to develop a basic creativity and avoid falling into a mental rut. The cardinal sin, for those who value creativity, is to be directly derivative.

When working at the commercial level, and with a client's brief and preferences in mind, it is certainly not always possible to be as creative as one might wish. However, it is important to try to make something "new" when we consider what we will put forward for exhibition.

If we are successful, the results should stand apart from other work; they may not be "better" than more traditionally based work, as judged by many observers, and they will not necessarily be more popular with the general public.

However, they do stand a chance of stimulating ourselves and others into taking new approaches to what we do, and to help us to gradually evolve forms that in some way reflect late 20th century Australia more, for example, than 17th century Europe or, for that matter, current Italian and American styles.

TABLE=a device to support a surface of approximately "a" square metres, between "h1" and "h2" mm from the floor.

Questions:

Before beginning your design, ask yourself these questions:

1. Can a table support surfaces of different heights?
2. Can a table support a sloping surface, or several sloping surfaces, or a combination of horizontal and sloping surfaces?
3. Must the area defined by the extremities of the table at floor level be contained within the area defined by the surface it supports?
4. Must a table be physically stable?
5. Would a table hung from a ceiling or mounted on a wall be any less a table?
6. To what extent should the use to which a table is to be placed, be allowed to affect its design?

NEXT ISSUE

A new Question & Answer Section

Send your questions to:
Q & A, P.O. Box 421 Rozelle, N.S.W. 2039.

AUSTRALIA'S LEADING COMBINATION WOODWORKING MACHINES



durden
WOODWORKING MACHINERY

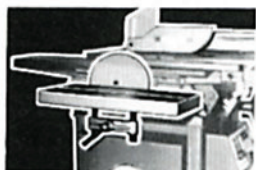
PACEMAKER® UNIVERSAL WOODWORKER

**SAWS! — MITRES! — PLANES! —
REBATES! — MOULDS! — GROOVES!**

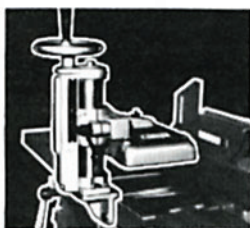
It's the perfect combination of the most used tools for the home, farm or factory. Several models to choose from. The Pacemaker has an attachment for every operation in timber.



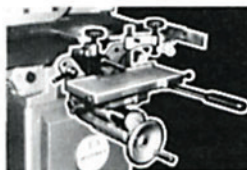
DURDEN PACEMAKER ATTACHMENTS:



BORER/SANDER
Serves as a boring table.
Sands any angle.



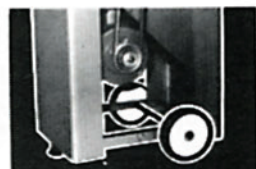
THICKNESSER
Ideal for accurate machining.



MORTISER
Speeds up Mortise and
Tenon cutting.



WOBBLE SAW
Grooves in one pass.



WHEEL KIT
Ideal for confined spaces.
Machine can be parked
when not in use.



durden
WOODWORKING MACHINERY

JUNIOR JOINER

The Transportable Home Woodworker.

It's compact, it's tough and it's competitive!

Saws — Grooves — Mitres — Planes — Rebates — Drills — Bores — Sands —
and with options, Thicknesses and Moulds.

A quality piece of machinery, easy to work, and comes with a 12-month guarantee,
instruction manual and working tools.

Available at Leading Stores:

The Durden range includes Combination Woodworkers — Saws — Planers — Lathes —
Dimension Tables, etc.

For further details, contact any of our State branches or post coupon —

STATE BRANCHES:

- QLD.** — Perry Tool & Equipment Pty. Ltd.
12 Windsor St., Stafford, 4053. Ph. (07) 356 8066.
- N.S.W.** — John Waters & Company,
15-17 Daphne St., Botany, 2019. Ph. (02) 666 8144.
- VIC.** — Douglas M. Goodman,
12 Loxley Ct., East Doncaster 3109. Ph. (03) 848 8444
- W.A.** — Josco Industrial Agencies,
6 Ledger Rd., Balcatta, 6021. Ph. (09) 344 7388.
- TAS.** — Foro Distributors Pty. Ltd.,
4 Forster St., Launceston, 7250. Ph. (003) 31 7022.

To: DURDEN MACHINERY CO.
3 Home Avenue, Glynde, S.A. 5070. Phone (08) 337 3188.

Please send me details of:

- ☐ Pacemaker ☐ Junior Joiner
☐ All Products

Name

Address

Postcode

COMING TO GRIPS WITH GLUE

"In the past two or three decades, adhesives have passed from being 'a secret, black and midnight art' to something of a science".

This is the way Bob Bolton of C.M.C. Chemicals describes the industry to which he has devoted most of his working life.

It is an important industry — both functionally and economically — for adhesives are used in virtually every facet of our society, from heavy engineering to the home. Those few children who have not made the acquaintance of adhesives by the time they start school very quickly learn of their existence and their usefulness. Then starts a lifelong association with the glue pot and tube.

The amount of adhesives consumed in Australia each year is believed to total over \$400 million — a staggering sum of which the value used in woodworking is a small but significant part.

Yet modern adhesives truly are modern. Even the oldest of the commercially available synthetics

epoxy etc. tend to be rather grey around the edges. It isn't always possible to put products in a specific class and then assume that they share the same characteristics as the rest of the class.

Third, manufacturers tend to be cagey about the technical details of their products i.e. they don't like talking about what's in them or how they are made.

Fourth, and maybe this is simply a corollary of the third, there's a fair bit of hocus pocus at the commercial level regarding the "qualities" of the adhesives.

One thing is for sure. Australian adhesive manufacturers can formulate just about anything that a "quantity" customer is likely to need — and the relatively few highly specialised adhesives that they don't make are freely available from suppliers representing the world's best.

But... if you'd like to know what the differences are between Product A of Brand B and Product X of Brand Y, or

they have to be large enough to form bonds between the uneven surfaces of the two materials to be joined.

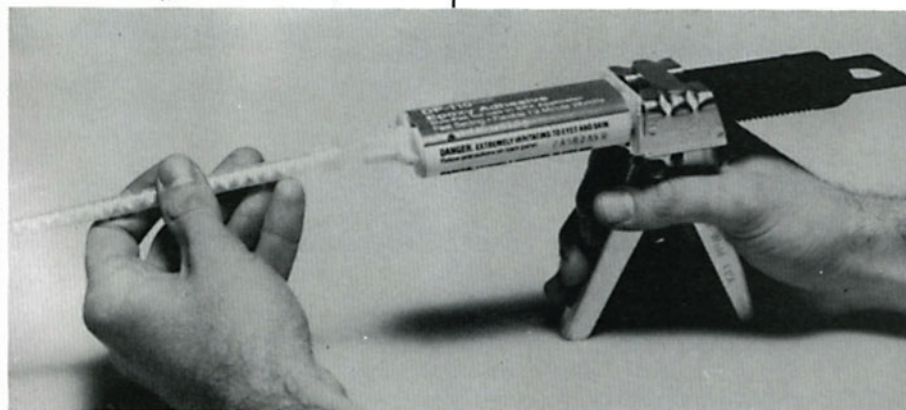
The wet glue is applied to the surfaces, the surfaces are clamped together — this reduces the amount of glue that must be used to bridge the gap — and the whole assemblage is left to dry. The solvent evaporates or is absorbed by the materials being joined and those large molecules hang on to the surface imperfections, bonding the two materials together.

Sometimes the drying must take place before the two surfaces are joined. Contact cements, for example, are usually (but not always) based on synthetic rubber and are frequently used to bond laminates to substrates such as particleboard. These cements are designed so that they do not have to rely upon the solvent being absorbed by either the laminate (almost incapable of absorbing anything) or the particleboard (which is not particularly absorbent either).

Even these "simple" glues have undergone a vast transition in the past few decades. Seemingly similar glues may be quite different because of the type and/or quantity of solids that they carry, or the exact formulation of the synthetic solvent that they use.

P.V.A., one of the most popular woodworking glues, can have a solids content ranging from under 40% to over 50%. As usual, there are advantages and disadvantages to any particular level of solids content. Those with the highest solids content do not spread easily so may be hard to apply to some joints, but they can be used for "gap filling" and are often sold expressly for this purpose. Those with a lower solids content need only a little encouragement to spread into the thinnest parts of the joint, but demand more absorbency from the materials being joined. If they don't have this absorbency, the glue may harden at the material surfaces, leaving water trapped within the glue, permanently weakening the joint.

The more complex adhesives approach the notion of "an ideal glue" from a different direction. Instead of being made up of large molecule solids in some kind of mixture, solution or emulsion, these hi-tech glues consist of



belong to this century and most date no further back than the thirties.

In the course of preparing this article, we spoke to a number of people who represent adhesive manufacturers, some in a technical, others in a commercial capacity. Basically, this is what we learned:

First, the range of adhesives now available is huge. (C.M.C. Chemicals, for example, claim no less than 700 different products.)

Second, the classifications that we are likely to use such as PVA, acrylic,

whether one is better than the other, that's a lot more difficult.

The best way of approaching this problem, is to do a little testing for yourself. But to know what to look for, you are going to need some basic information and that is the reason for this article.

The simplest glues are materials that consist of large molecules. The molecules still have to be small enough to allow the material to be spread when it is in a paste or liquid form (i.e. mixed with some sort of solvent e.g. water) but

substances that change their molecular weight during the "curing" (as opposed to purely "drying") process.

These adhesives work partially or wholly on the basis of polymerisation. Straight from the can, they have molecules of relatively low molecular weight. This permits them to be spread easily or at least, fairly easily. Then the modern magic starts. The adhesive begins to "cure". This can require the evaporation of solvent in the same way as simpler adhesives, the absorption of moisture from the atmosphere as in the case of acetyl curing caulking compounds or a purely chemical reaction. Regardless of the precise mechanism, the result is the same. As curing takes place, the molecules join together forming larger molecules. The strength and rigidity of the bonds formed in this way are therefore superior to those which are possible using the simpler adhesives.

Just for the record, a polymer is described as "a compound of high molecular weight which is derived either by the combination of many smaller molecules or by the condensation of many smaller molecules eliminating water, alcohol etc."

As you can see, this dictionary meaning describes exactly the events we have discussed with respect to polymerising adhesives.

If we can achieve such strong, rigid bonds with these adhesives why use anything else? There are two major reasons. The first is that we don't always want this kind of bond. Once you have a strong, rigid bond formed of very, very large molecules, it won't shift even when the timber does. So as timber contracts and expands with the weather, it may actually shrink away from the glue and leave it as a hard, unmovable blob. This doesn't hold anything together but it can't be got rid of without smashing the joint.

The second problem is cost since these modern miracles can be expensive.

One point we should make before describing each of the adhesive classifications we have used in our list, is that at the top end of the scale there are the epoxies, the true polymer type adhesives. At the bottom of the scale, there are the adhesives which are referred to as "cross-linking". (This is a chemical term which describes what actually happens during polymerisation.)

There are, for example, P.V.A. glues which are described as "cross-linking". We may assume from this that they do not merely "dry" but that they "cure" since some polymerisation occurs as the water is evaporated and/or absorbed. This suggests that the bond

will be stronger than when using a conventional P.V.A. and that is exactly what we are expected to assume.

Unfortunately, it doesn't necessarily mean that the glue really is any better than its competitors since it all depends at what level of "cross linking" this term is applied. The fact is that most glues, even the simpler ones, undergo some cross-linking during drying. It's just that it is so small that it can't be compared with the level of cross-linking that happens in polymerisation.

This is an example of what we meant by the need to do your own testing rather than rely entirely on what is said on the label.

To make this task easier, you will need to know what glues are available and where you can get the technical product information you may require. To assist you, we made a survey of many of the major suppliers of adhesives in Australia. The results are contained in the list on the following pages.



We haven't tried to include every adhesive in the country. With so many available, such a task would be clearly impossible. But we have included glues outside of those normally used in woodworking. This is in recognition of the fact that woodworkers are usually competent in many other areas which can include the use of caulking compounds (some of which are really high solids type adhesives anyway), household and special purpose glues.

The main classifications used are:

Casein Adhesives — Made from dried milk curds. Supplied as a dry powder to be mixed with water before use. Used extensively in the thirties and forties but now used only for special purposes.

Contact Cements — Usually made from synthetic rubber with volatile solvents though there are now some water-based types available. Used primarily for bonding laminates to timber or particleboard substrates. Excellent water resistance.

Cyanoacrylate Adhesives — The so-called "super glues", these very quick bonding glues can be used for non-porous surfaces but are expensive. They should be used only for close mating surfaces since they do not spread easily. Excellent water resistance.

Emulsion Adhesives — These were the original "modern" glues. A wide variety of formulations make them suitable for many types of work.

Epoxy Adhesives — The true polymer type adhesives. Available as either "single" or "two pack", the latter consisting of a "resin" and a "hardener" pack. Some manufacturers supply two pack epoxies with two or more hardeners. One of these is a liquid whilst the others are gap filling or other special purpose powder hardeners. Excellent water resistance and good heat resistance.

Hot Melt Adhesives — Extensively used in packaging and in furniture manufacture, these glues have not lived up to their earlier promise of wide use despite the easy availability of light equipment suitable for home or small workshop use. Perhaps they will become more popular as more woodworkers and home handymen appreciate the speed with which good quality bonds can be achieved. Although a range of glues is possible, giving different "open" and "setting" times, only one or two general purpose hot melt glues are easy to obtain by the normal consumer. Good water resistance. Since these are thermosetting adhesives, the application of heat whilst in service, can take them beyond their melting point.

Hide Glues — Described elsewhere in this issue.

Polyurethane Adhesives — Available in one pack (moisture cure) types for laminating when bonding porous to non-porous substrates and in two pack types for bonding non-porous substrates to themselves or to other porous

MUSK
(*olearia argophylla*)

— WANTED TO BUY —

Conservator working on preservation of Australian Colonial Furniture requires a selection of MUSK wood lignotuber and lower bole, either veneer sliced or solid.

Phone Paul Gregson
(02) 875 4790
or write

23/10 Pioneer Ave
Thornleigh 2120 N.S.W.

or non-porous substrates. High resistance to water and heat.

P.V.A. Adhesives — The so-called white glues. The most popular adhesives for woodworking. Close cousins to the aliphatic resin adhesives developed from them. Wide variety available with differing solids content etc. Excellent bonding, relatively poor water resistance. Some P.V.A.'s and aliphatic resin adhesives are coloured (yellow) and purported to have better heat and moisture resisting properties but the colour is sometimes merely a dye.

Resorcinol Adhesives — Provide very strong joints with high water resistance. Often used in marine applications where their high cost is outweighed by their advantages.

Silicone Adhesives — Really half brothers to the adhesive clan rather than adhe-

sives in their own right, these are used principally for caulking where their ability to fill large gaps is more important than their adhesive properties.

Solvent Based Adhesives — Covers a multitude of adhesives which rely upon the evaporation and/or absorption of a solvent to set and harden. The range of properties is equally wide.

Special Adhesives — In this Classification, we've included anything that could not be conveniently squeezed in elsewhere or an adhesive for a purpose that we thought might be of special interest to woodworkers.

Urea Formaldehyde Adhesives — Urea or plastic resin glues consist of a powder to which water is added (and, sometimes, a hardener). A strong adhesive with poor to fair gap-filling properties but good water resistance. [W]

ADHESIVE SUPPLIERS

3M Australia Pty Ltd
950 Pacific Hwy
Pymble NSW 2073
(02) 498 9333

Principal Brand/s: 3M
Availability: Distributors. Direct
Principal Products:

Contact Adhesives
Scotch Spray 74
Scotch Spray 90
Epoxy Cements
Scotch-Weld EPX
Hot Melt Adhesives
Jet-Melt

Adhesive Technologies
7/222 Headland Road
Dee Why NSW 2099
(02) 938 3733

Principal Brand/s: WEST SYSTEM
Availability: Hardware Stores. Direct
Principal Products:

Epoxy Adhesives
West System:
105 Resin
205 Fast Hardener
206 Slow Hardener
403 Filler (Microfibers)
406 Filler (Colloidal Silica)
407 Filler (Microballoons)
409 Filler (Microspheres)
410 Filler (Micro Fibre Blend)
411 Filler (Microsphere Blend)
420 Additive (Aluminium Powder)
423 Additive (Graphite Powder)
— Reinforcement — Glass Fabric
— Reinforcement — Glass Tape
701 Reinforcement — Graphite Fibres
— Pigments
850 Solvent
860 Etch Kit
Rapid Cure

A.V. Adhesives

27 Edgar St
Northgate QLD 4013
(07) 266 4466

Principal Brand/s: AV (AV adhesives are manufactured by A.V.Syntec)
Availability: Distributed by Laminex Industries
Principal Products:
Contact Cements
AV55 Spray

AV55 Brush
AV57 Soft Foam
AV55W Water Based
Hot Melt Adhesives
AV402 EVA Hot Melt
AV450 EVA Hot Melt
Polyurethane Adhesives
AV505 Spray Grade
AV510 Brush Grade
AV606 Thixotropic Grade
AV520 Two Pack
PVA Adhesives
AV101 High Solids Grade
AV140 Medium Setting Grade
AV150 General Bench Grade
AV260 Crosslinking PVA
AV270 Single Pack Crosslinking PVA

Resorcinol Adhesives
AV303 Resorcinol Phenolic

Special Adhesives
AV56 Laminated Board Adhesive
AV180 Laminex Craftwood Adhesive
AV190 High Strength Sandable Grade
AV59 High Solids Laminating Adhesive
AV791 Medium Solids Laminating Adhesive
AV58Z AV54 Modular Panel Adhesive
Urea Formaldehyde Adhesives
AV201 Urea Formaldehyde
AV203 High Strength Urea Formaldehyde

C.M.C. Chemicals Pty Ltd

38 Sydney St
Marrickville NSW 2204
(02) 519 2444

Principal Brand/s: CRAFTBOND
Availability: Hardware Stores. Direct
Principal Products:

Contact Cements (brush grade, spray grade, gel grade)
Craftbond SQ50
Craftbond 07
Craftbond GEL
Emulsion Adhesives (acrylic, copolymer)
Craftbond MF (Melamine:Chipboard)
Craftbond VL (PVC:Chipboard)
Hot Melt Adhesives (copolymer)
Craftbond HM31
Mastic Pastes (acrylic, PVA, copolymer)
Craftbond A2, V9
Craftbond TA-P
Craftbond V&C
Mastic Cements (rubber)
Craftbond CM

PVA Adhesives
Craftbond MS
Special Adhesives
Craftbond MDF (Medium density Fibreboards)
Craftbond MF6 (Melamine)

Davis Gelantine (Australia) Co
13 Barrett St
Kensington VIC 3031
(03) 376 0601

Principal Brand/s: DAVIS
Availability: Distributors
Hide Glues

Emhart Fastening Systems Group

Bostik Division
191-203 O'Riordan St
Mascot NSW 2020
(02) 317 5088

Principal Brand/s: BOSTIK
Availability: Hardware Retailers. Direct
Principal Products:

Contact Cements (brush grade, spray grade, gel grade)

Wallboard & Flooring
No More Nails

Cyanoacrylate Adhesives
Superbond

Epoxy Adhesives
EpoxyBond

Hot Melt Adhesives
General Purpose
Sealer/Caulker

Mastic Pastes (acrylic, polyurethane)
Fillergap
Seal-N-Flex

PVA Adhesives
Timberbond

Special Adhesives
Contact Bond (laminated/particleboard)

Solvent Based Adhesives
Multibond
PVC Solvent Weld Cement

H.B. Fuller International, Inc

8 Clearview Place
Brookvale NSW 2100
(02) 938 3811

Principal Brand/s: MAX BOND. FULAPRENE. CAULK-IN-COLORS

Availability: Hardware Stores

Principal Products:

Contact Cements
Spray Bond Plus
Pow'r Grip

Cyanoacrylate Adhesives
Pow'r-Bond

Epoxy Adhesives
Fulapoxy (general purpose)

Mastic Pastes (PVA, acrylic)
Max Bond
Caulk-In-Colors
Fulacryl
Max Bond (construction grade)
Fulaprene (multi-purpose)
Max Seal (clear)
Sturdi Bond (wet timbers)

PVA Adhesives
Max Bond
Fulabond PVA.

Silicone Adhesives
Green Label (neutral cure)
Blue Label (acetic cure)
Red Label (multi-purpose)

Special Adhesives
Pow'r Grip Contact Adhesive
(laminated/particleboard)
Perfect Put Down (all purpose latex cement)

Inter-National Adhesives and Resins Pty Ltd

13 Stanton Rd
Seven Hills NSW 2147
(02) 624 6022

Principal Brand/s: STAYBOND. STAYMELT

Availability: Direct
Principal Products:
Emulsion Adhesives
Wood-Lok 225
Wood-Lok 068
Duro-Lok 150 (thermosetting)
Kor-Lok 3000
Bondmaster 240-0129
Bondmaster 288-2646

Casein Adhesives
Bondmaster 235-1586

Contact Cements
Bondmaster 281-1040/1/2
Bondmaster 281-1054
Bondmaster 281-1056
Bondmaster 281-1080/1
Bondmaster 288-2646

Epoxy Adhesives
Bondmaster 389-1594/95

Hot Melt Adhesives
Staybond 5720
Staybond 5701
Peerless HM535
Staymelt 2 & 3

PVA Adhesives
Staylock 1305
Staylock 1340
Staylock 1341
Staylock 1325
Staylock 1368
Staylock 2306
Staylock 1306
Staylock 1369

Solvent Based Adhesives
Bondmaster 386-1501

Special Adhesives
Staylock 2307 (auto dowel insertion machines)
Staylock 1389 (Laminate:Particleboard)
Staylock 2317 D&E (high temp bonding)
Stayflex 3181E (PVC:Particleboard)
Stayflex 3320 (PVC:Plasterboard etc)

Loctite Automotive and Consumer Products Pty Ltd
34-42 Gilbert Park Drive
Knoxfield VIC 3180
(03) 547 6244
Principal Brands: LOCTITE
Availability: Hardware & Specialty Stores. Direct
Principal Products:

Contact Cements
Contact Adhesive and Trim Cement
Acrylic Contact Adhesive

Cyanoacrylate Adhesives
Super Glue 3
Super Glue Xtra (Gel)
Super Glue Pen

Epoxy Adhesives
5 Minute E-Pox-E
Super Strong E-Pox-E

PVA Adhesives
Premium Woodglue

Perkins Products Pty Ltd
14 George St
Granville NSW 2142
(02) 637 9357
PRINCIPAL BRAND/S: PERKINS
Availability: Newsagents (some products); Direct
Principal Products:
PVA Adhesives
PVA Woodworking Adhesive
Starch based adhesives
Perkins Paste

Polymer Chemicals Australia Pty Ltd
18 Artisan Rd
Seven Hill NSW 2147
(02) 674 3911
PRINCIPAL BRAND/S: POLYMER CHEMICALS
Availability: Direct
Principal Products:
Epoxy Adhesives
Polymer 220

Selleys Chemical Co Pty Ltd
1 Gow St
Padstow NSW 2212
PRINCIPAL BRAND/S: SELLEYS. KWIK GRIP.
SUPA GLUE. AQUADHERE
Availability: Hardware stores
Principal Products:

Emulsion Adhesives (acrylic, copolymer)
Carpet Glue
Tile Bond

Contact Cements
Kwik Grip
Gel Grip
Liquid Nails
Supa Nails
Floor Bond

Cyanoacrylate Adhesives
Supa Glue
Supa Glue Gel
Supa Glue Pen

Epoxy Cements
Araldite 5 Minute
Araldite Super Strength
Hot Melt Adhesives (copolymer)
Craftbond HM31

Mastic Pastes (PVA)
Unifix

PVA Adhesives
Aquadhere
Stik Back
Craft Glue

Resorcinol Adhesives
Resorcinol Resin Glue

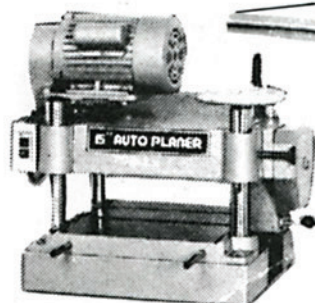
Silicone Adhesives
Selleys Silicone Sealant Range (Window & Glass/Roof & Gutter/Brick & Concrete Crack/Bathroom & Tile)

Solvent Based Adhesives
Superstrong
Multigrip
Urea Formaldehyde Adhesives
308 Wood Glue

WALKERS POWER TOOLS

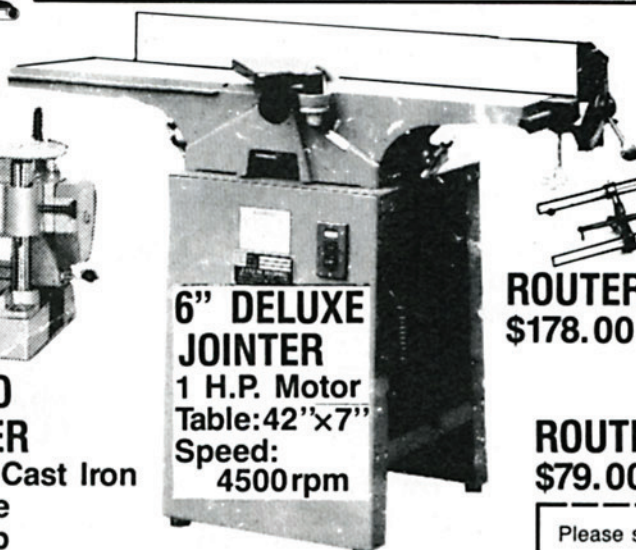


END OF YEAR SPECIALS **ROUTER PANTOGRAPH** \$45.00 INC ST. **ENGRAVER PANTOGRAPH** \$19.00 INC ST.



15"X8" AUTO THICKNESSER

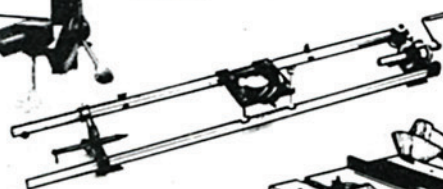
- Heavy Duty Cast Iron Bed & Fence
 - Precision Jib Adjustment
- 20" AUTO ALSO AVAILABLE



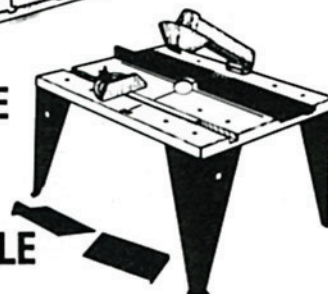
6" DELUXE JOINTER
1 H.P. Motor
Table: 42"x7"
Speed: 4500rpm

PHONE OR CALL NOW FOR SPECIAL PRICES (02) 637 8188
103 SOUTH ST, GRANVILLE 2142
MAIL ORDERS WELCOME

VERMONT AMERICAN



ROUTER LATHE
\$178.00 INC ST.



ROUTER TABLE
\$79.00 INC ST.

Please send more information on

Name:

Address:

.....P'code:

The Emco-Luna File *by The Operator*

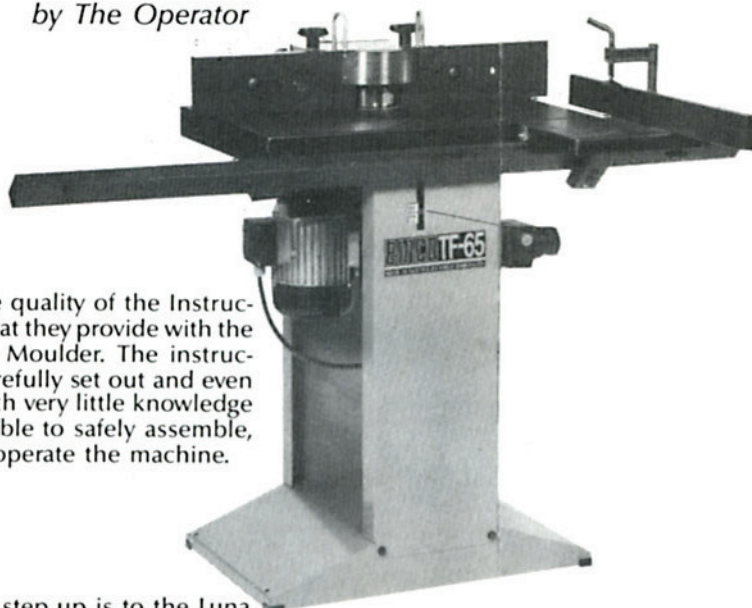
This time, I want to talk about the way in which Emco and Luna have produced a range of products to satisfy the increasing demand for woodworkers to have the capacity within their workshops to carry out Table Moulding or Spindle Moulding operations.

The Emco TF-65 Table Moulder belies the myth of pressed metal workworking machines by providing the operator with a robust floor mounted machine with commercial capabilities. A very new option is a micro adjuster on the trailing fence facilitating precision set up; guides and pressure bars are fitted for high speed and accurate production. The basic machine costs about \$1000 and provides a good foundation to which the woodworker can add from the wide range of accessories available to customise the machine for specific requirements.

When correctly operated, the Table Moulder is one of the most versatile of all woodworking machines (though when incorrectly operated, it is certainly the most dangerous). Emco must be congratu-

lated on the quality of the Instruction Book that they provide with the TF 65 Table Moulder. The instructions are carefully set out and even a person with very little knowledge should be able to safely assemble, adjust and operate the machine.

The next step up is to the Luna L28 Spindle Moulder, designed for continuous commercial operation and loaded with many of the features required by the professionals as standard equipment. At \$2,950, the Luna Spindle Moulder L28 with its cast iron table and fence is ready to run. Extra Accessories include a Tenon Guide and Adjustable Table.



For those who only have light moulding requirements, Luna now has a Router Table with external switching and a sophisticated set of fences and guides. W

PAULCALL CLAMPS

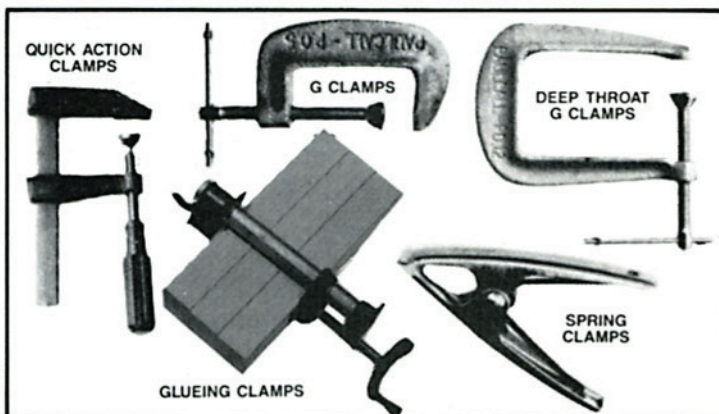
- * AUSTRALIAN MADE
- * HUGE RANGE
- * RELIABLE — DURABLE
- * VALUE FOR MONEY
- * SEND FOR CATALOGUE

The PAULCALL CLAMP range includes Spring Clamps, G-Clamps, Glueing Clamps, Fretwork Clamps, and Quick-Action Clamps. These clamps are ideal for clamping furniture, fabricating frames, glueing panels and a host of other uses for carpenters and cabinet makers.

Distributed by
J.W. Ross & Sons
(Australia) Pty. Ltd.

39 Skinner Ave., Punchbowl N.S.W. 2196
Agents in every state
A QUALITY "JUSFAY" PRODUCT

READER
SERVICE
7



Please send me information on my nearest distributor of PAULCALL CLAMPS.

Name:

Address:

..... P'code

My interest is in ☐ Cabinet Making

☐ Boat Building ☐ House Building

Other:

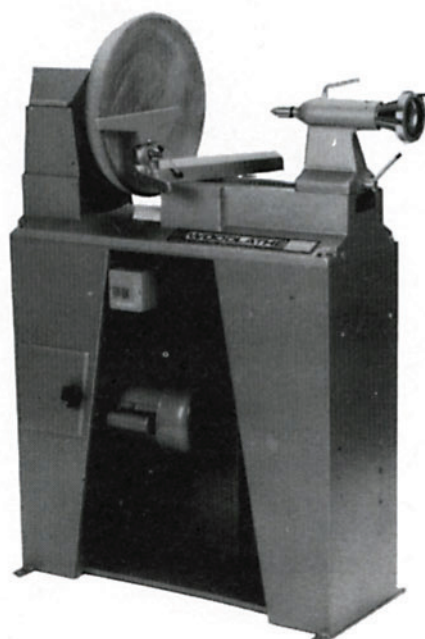
WOODFAST WOODLATHE VOTED No1

BY LEADING U.K. WOODTURNING AUTHORITY

JOHN SAINSBURY

PRECISION ENGINEERED FROM VIBRATION ABSORBING CAST IRON, SUPERBLY FINISHED, POWERFUL, SMOOTH RUNNING AND GUARANTEED TO DO THE JOB. SURE THEY COST A LITTLE MORE, BUT YOU WON'T BE DISAPPOINTED LATER.

FREE
WITH EVERY MODEL MC900, M400H OR X150.
SORBY WOODTURNING TOOLS (SET OF 6)
BOWL TURNING DESIGN BOOK - RICHARD RAFFAN
VALUED AT \$170.00



M400H



MC900

READER
SERVICE
8

IF YOU NEVER TURN LONGER THAN 450MM, THEN SAVE \$\$\$ AND FLOOR SPACE WITH THE MODEL M400H.

OFFER EXPIRES 30-6-88

THE ABOVE OFFER ONLY AVAILABLE FROM THE FOLLOWING PARTICIPATING STOCKISTS

N.S.W.

DAYDEN MACHINERY LTD.,
UNIT 3/189,
PORT HACKING ROAD,
MIRANDA, SYDNEY.
PH. (02) 522 5726

EXPRESSWAY ENG. SUPP.,
CNR. ORANGEGROVE ROAD
& DOYLE AVENUE,
UNANDERRA, WOLLONGONG.
PH. (042) 71 1066

ARTISTS IN WOOD,
UNIT 4/80-82
WOLLONGONG STREET,
FYSHWICK, CANBERRA.
PH. (062) 80 6969

THE WOODTURNING CENTRE
6 ROGER STREET,
BROOKVALE, SYDNEY.
PH. (02) 938 6699

HARE & FORBES PTY LTD.
180 GEORGE STREET,
PARRAMATTA, SYDNEY.
PH. (02) 633 4099

G.F.S. TRADING,
332 MANN STREET,
GOSFORD, N.S.W.
PH. (043) 24 3333

NEWCASTLE SAW SERVICE,
101-111 FERN STREET,
ISLINGTON, NEWCASTLE.
PH. (049) 61 1272

W.A.

HUGH W. BROWN P/L.,
1301 ALBANY HIGHWAY,
CANNINGTON, PERTH.
PH. (09) 458 4488

**RON MACK
MACHINERY SALES**,
8 HECTOR STREET,
OSBORNE PARK, PERTH.
PH. (09) 445 2555

ALLEN WOLFENDEN MC.,
4 HALSEY ROAD,
AIRPORT WEST, MELBOURNE
PH. (03) 338 3300

**CROSS ELECTRICAL
SUPPLIES**,
90 BLAIR STREET,
BUNBURY, W.A.
PH. (097) 215 858

8 PITT WAY,
MYAREE, PERTH.
PH. (09) 330 3137

VIC.

THE MACHINERY CENTRE,
318 WHITEHORSE ROAD,
NUNAWADING, MELBOURNE.
PH. (03) 877 7211

DES ELLIOTT PTY. LTD.,
210 ARMSTRONG ST. STH.
BALLARAT, VICTORIA.
PH. (053) 31 5811

QLD.

ACMAC LTD.,
123 SANDGATE ROAD,
ALBION, BRISBANE.
PH. (07) 262 2333.

**HORIZON PRECISION
ENTERPRISES**,
1ST FLOOR, 89
REDCLIFFE PARADE,
REDCLIFFE, BRISBANE.
PH. (07) 283 3242

MACHINERY INTERNATIONAL,
242 HOBART ROAD,
LAUNCESTON, TASMANIA.
PH. (003) 44 9899

BRISBANE SAW SERVICE,
49 TOOMBUL ROAD,
VIRGINIA, BRISBANE.
PH. (07) 266 8611

**NORTH QUEENSLAND
MACHINERY & SUPPLIES**,
110 BUCHAN STREET,
CAIRNS, QLD.
PH. (070) 513 531

TAS.

HALLS MACHINERY P/L.,
82 WARWICK STREET,
HOBART, TASMANIA.
PH. (002) 34 3804

SA & NT

**WOODFAST
MACHINERY CO.**

912 PORT ROAD, WOODVILLE
STH. AUST. AUSTRALIA 5011
TELEPHONE (08) 45 2577
TELEX WDFAST AA 82899

The 1988 Squatter's Chair



This modified version of Ivan Mann's Squatters Chair (November/December '86) has fold away legs to save space.

Just as comfortable and attractive as the original Squatters Chair, this fold-away footrest version is also easy to construct.

The drawings are identical with those for the original basic design except for the footrests.

The quantity of timber required is only 8 metres of 100mm x 25mm (rough sawn) and 1.1 metres of 75mm x 75mm for the two front legs.

As the chair is designed for a semi-outdoor area, a well seasoned, good quality hardwood is recommended. I prefer North Queensland Spur Mahogany which is durable and attractive.

All joints are dowelled and a good bonding glue is necessary — Resorcinal or Epoxy would probably be best though I use PVA Gluwood or Fullers Max Bond with quite satisfactory results.

The canvas sling is a standard size (520 x 1800mm) and is available in a variety of attractive colours (stripes or plain) from most canvas shops.

When completed, the chair can be finished with a clear polyurethane

(Estapol) to protect it against weather and wear and tear, as well as highlighting the wood grain.

Construction

(1) Cut all the rough timber to the correct lengths as shown on the drawings.

(2) Plane out and cut to a reasonably smooth finish, but don't take off too much, as you want the timber as thick as possible for strength (and that solid look!).

(3) Remove any rough spots by sanding with about 40 grade grit; use a belt sander if available.

(4) Mark out and cut to size all sections as shown. If you don't have a lathe or can't woodturn don't worry, as plain legs are quite acceptable.

(5) Sand all curves to a smooth finish and finally fine sand all sections with 80-120 grit.

Assembly

(1) Mark out and drill holes for all dowels. Take care when drilling, as accuracy is important. Drill end grain holes first in side and then cross rails.

(2) Assemble all sections for both sides

paying particular attention to fitting the fold-away footrests; they should swivel freely without being loose.

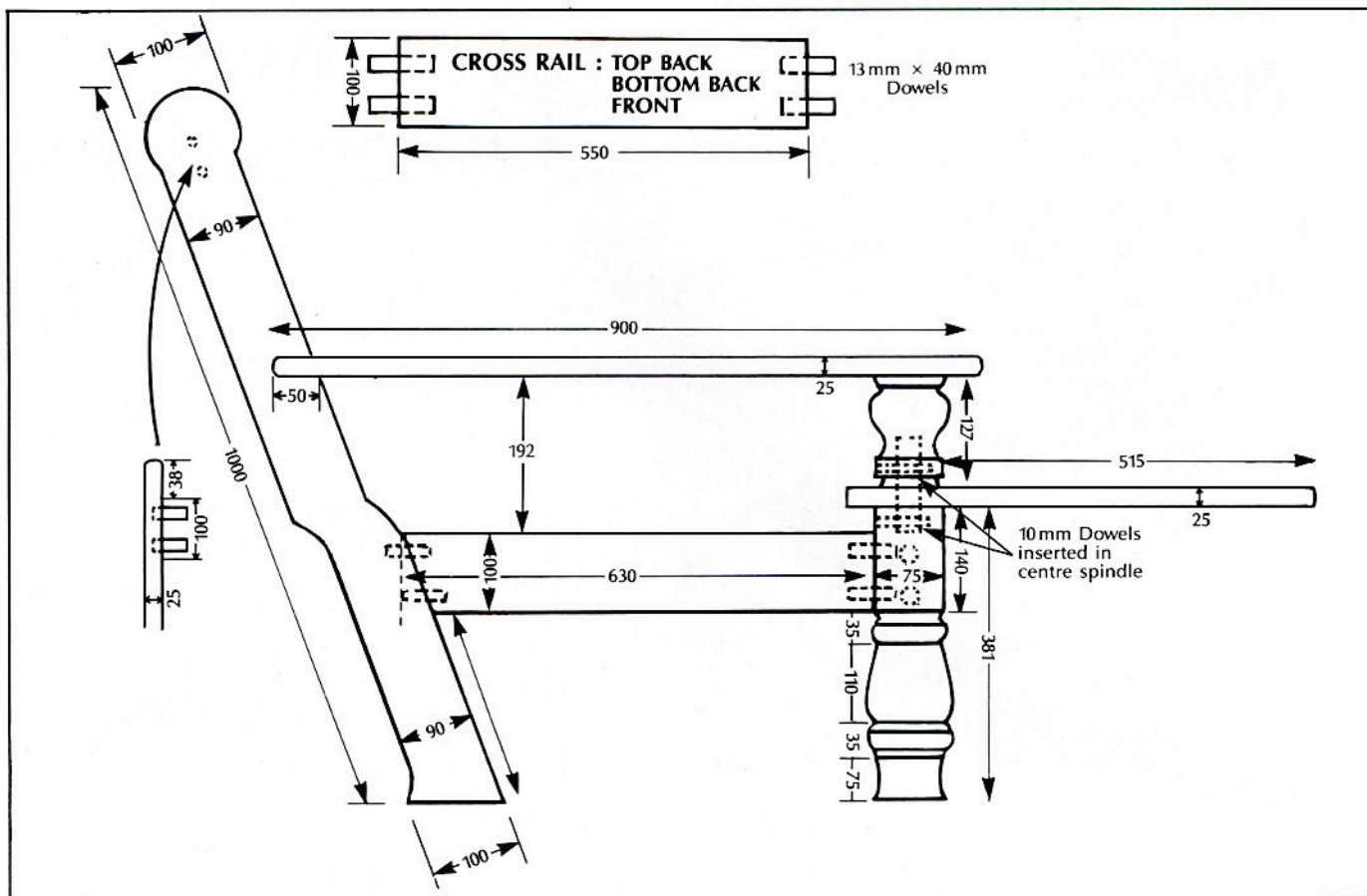
When the 25mm spindle is firmly glued in both sections of leg, lock in place with 10mm dowels from rear of leg (Figs. 2 and 3) to avoid possible loosening with usage of the footrests.

(3) When glue has set in both side sections, complete assembly by clamping both sides to top back, bottom back and front rails (Fig. 4).

Note: To prevent unsightly blotches, remove all traces of excess glue (while still wet). A damp cloth is all that is necessary to remove PVA glue.

(4) Brush or spray three coats polyurethane clear, sanding lightly between coats.

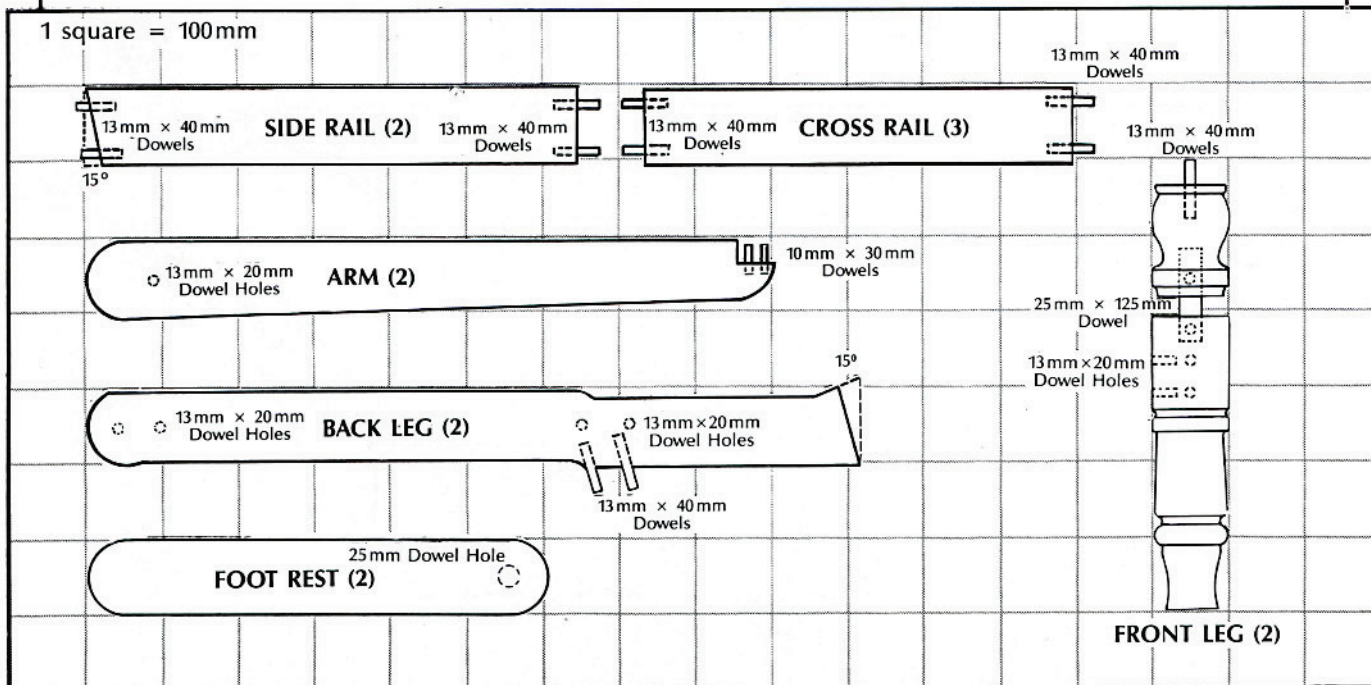
(5) Fit canvas sling as illustrated. Drill five 10mm holes in the top rail to match eyelets in canvas. The edge of the canvas is flush with the bottom edge of the top rail. Lace securely through the holes, fold once over the back rail, then cover the front rail. The cord is criss-crossed from the eyelets to the bottom back rail. Adjust cord to suit. W



Materials List

No. Rq'd	Description	Length	Width	Thick				
2	Back Legs	1 metre	100 mm	25 mm	2	Front Legs	520 mm	75 mm 75 mm
2	Fold-a-way Footrests	600 mm	100 mm	25 mm	1	Squatters Chair Canvas Sling	1800 mm	520 mm
2	Chair Arms	900 mm	100 mm	25 mm	4	Nylon Cord	5 metres	5 mm
2	Side Rails	630 mm	100 mm	25 mm	4	Dowels	30 mm	10 mm
1	Top Back Rail	550 mm	100 mm	25 mm	4	Dowels	60 mm	10 mm
1	Bottom Back Rail	550 mm	100 mm	25 mm	20	Dowels	40 mm	13 mm
1	Front Rail	550 mm	100 mm	25 mm	2	Dowels (Centre Spindle)	125 mm	25 mm
					500 ml.	Polyurethane Clear		
					250 ml.	Epoxy Glue		

1 square = 100 mm



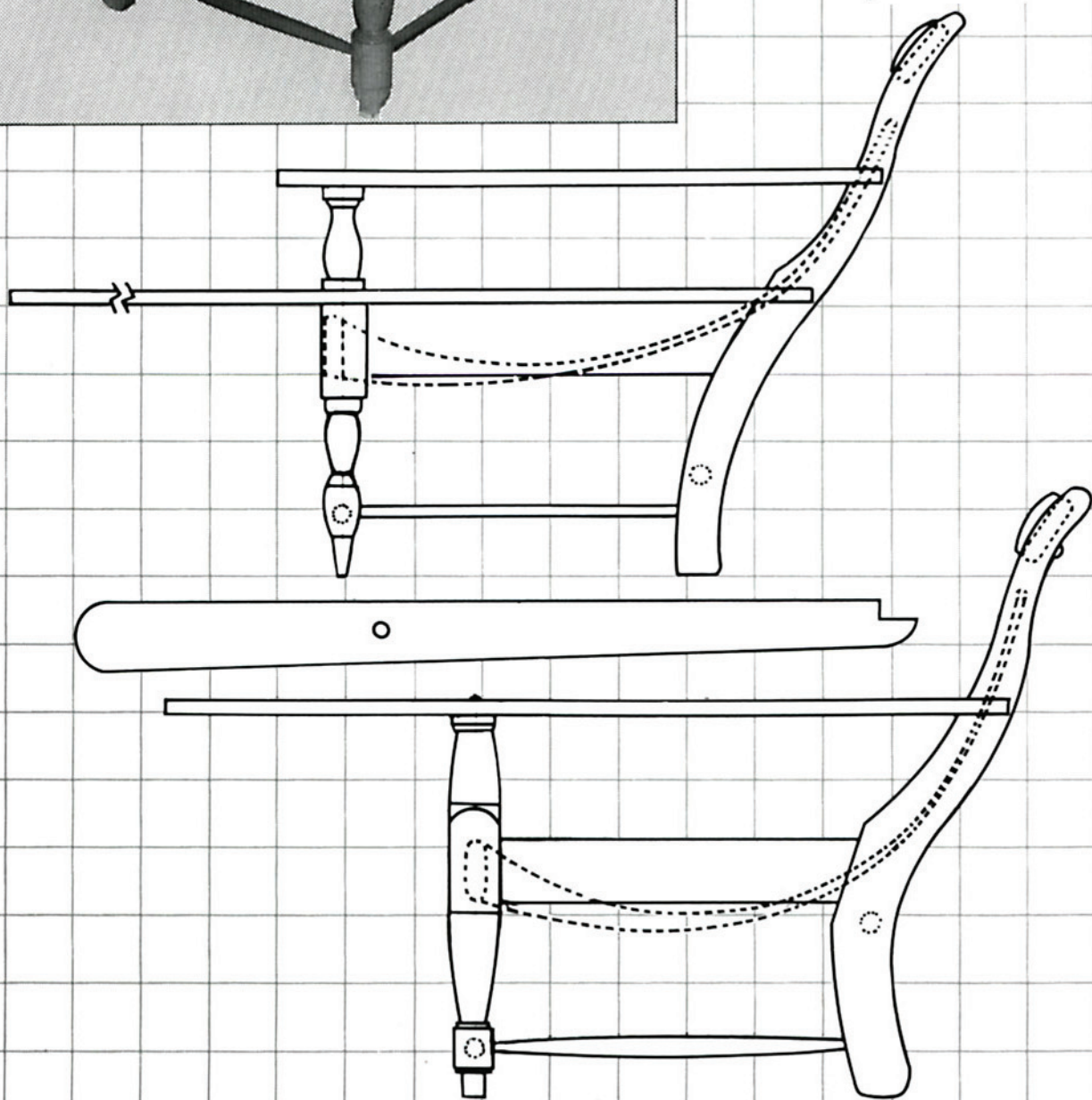
Two Alternatives

by Ian Want

Alternatives to the Ivan Mann design are shown in these drawings. The grid provides the information necessary to size the components and much the same method of construction may be used as that described my Ivan Mann.

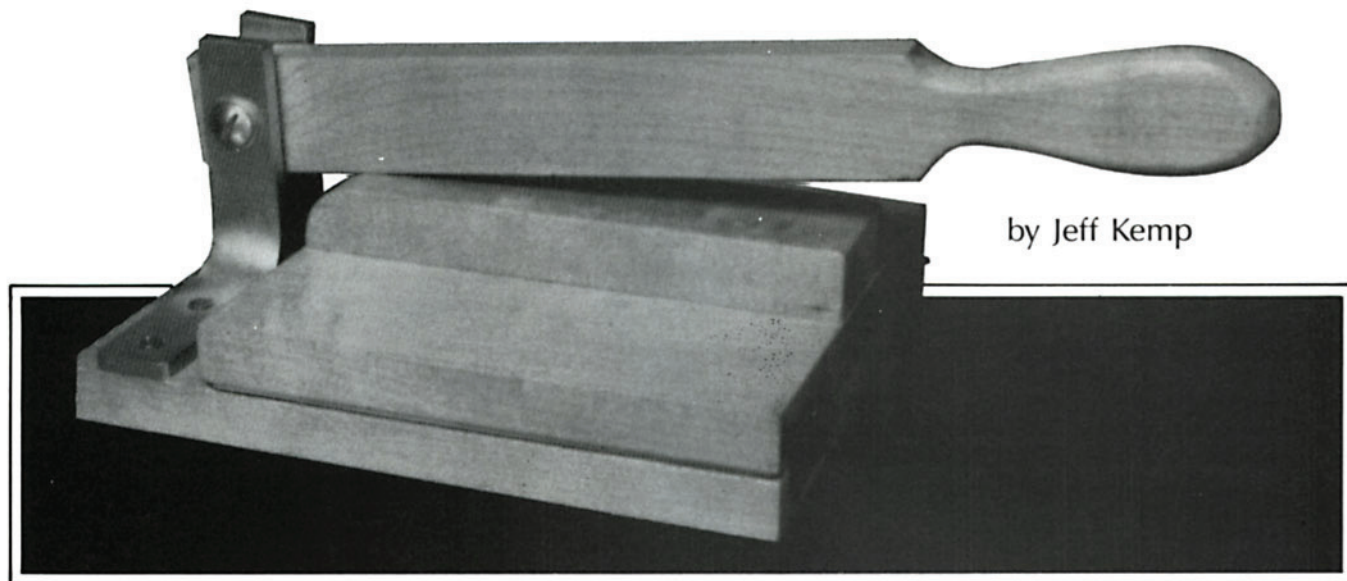


1 square = 100mm





TORTILLA!



by Jeff Kemp

If, like most of us, you enjoy cooking and eating good food, in particular Mexican, you will find this handy Tortilla (pronounced 'tawr-tee-yah') Press a valuable addition to your kitchen utensils. The Tortilla is the Mexican equivalent of bread. Each Tortilla is pressed out very flat like a pancake, although much thinner. It is very hard to roll a Tortilla to the required thickness using a conventional rolling pin but this Tortilla Press handles the job with ease.

I made my Tortilla press in only an hour or two using scraps of Rock Maple that I had lying around the workshop, but any hardwood would do equally well.

Materials:

	W	T	L
Hardwood	200	25	200
	200	25	250
	40	25	250
	40	25	370
	40	25	200

2 butt hinges, 1 only 6mm (1/4") stove bolt, nut and 4 washers and 1 piece 25mm x 6mm aluminium approx 600mm long

The angle brackets featured in the photographs are made of 25 x 6mm aluminium bar, heated and bent to a 90° angle. Cut the bar in half and bend each half at the centre. If you have no method of heating the bar you may prefer to use 100mm metal angle brackets as a substitute.

Refer to Fig.1 and Fig.2 and cut all components to finished size. Finish sand all of the pieces, cut and sand a 15mm radius on the end of piece "A" and slightly round the corners on all the components. Glue piece "A" to the centre of "B" making sure the grain is running along the length of both pieces. While you are waiting for the glue to dry, you can cut and shape the handle portion of piece "D".

Place "B" and "C" in their correct position with a piece of Laminex or something of similar thickness be-

tween the two. Fix the hinges in place whilst in this position. The handle "D" must be positioned in such a way that when the unit is fully closed there will be a 20 to 40mm clearance between the end of the handle and the press body. This clearance should be present in order to give us some mechanical advantage in the Press's action. I have not mentioned exactly where to cut to length and position the holes as these

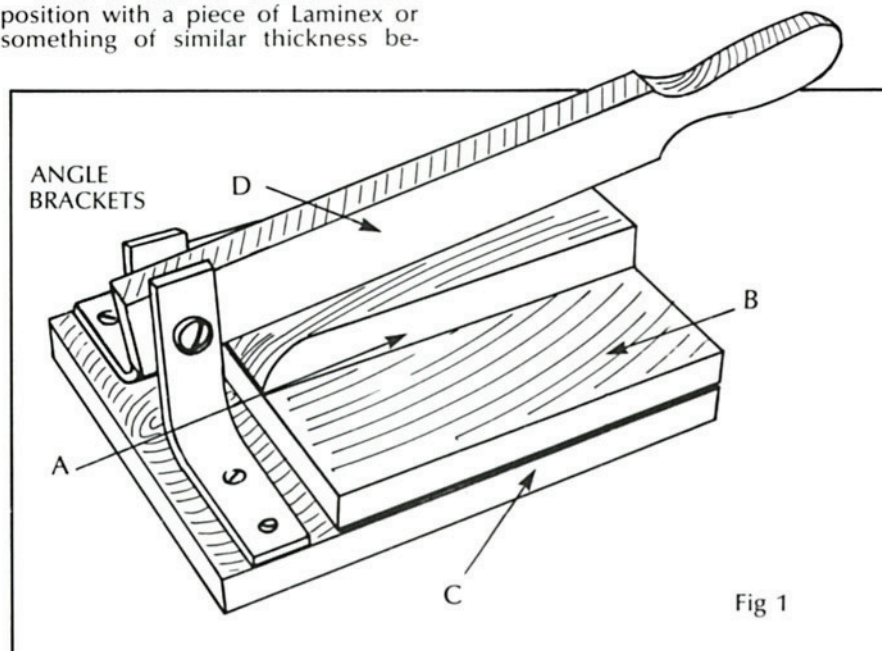
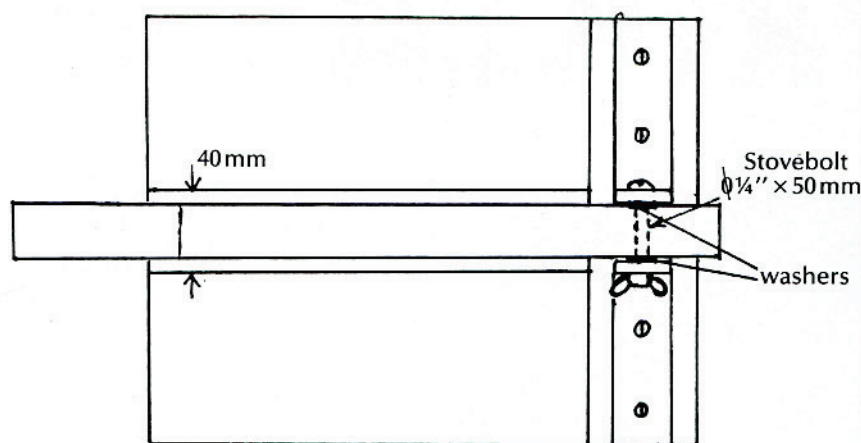


Fig 1



dimensions will vary with the type of angle brackets that you choose.

Hold the brackets and handle in position, mark the length of the brackets and the position of the holes. Cut the excess length off the brackets and drill the axle hole for the handle $\frac{1}{4}$ " diameter. Drill and countersink two mounting holes in the bottom of each bracket to take a 10 gauge screw. Place the axle bolt through the brackets and handle with washers separating all components. Place the whole assembly in position on the baseboard ('C') and screw it into place.

Finish the Press as you wish, keeping in mind that it will be used for the preparation of food and will be subject to damp conditions. [W]

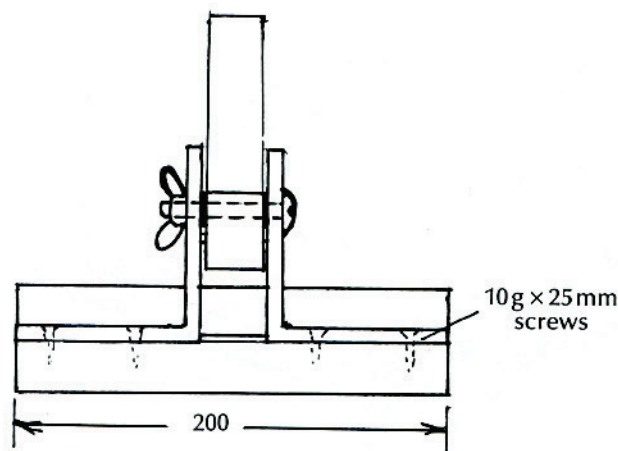
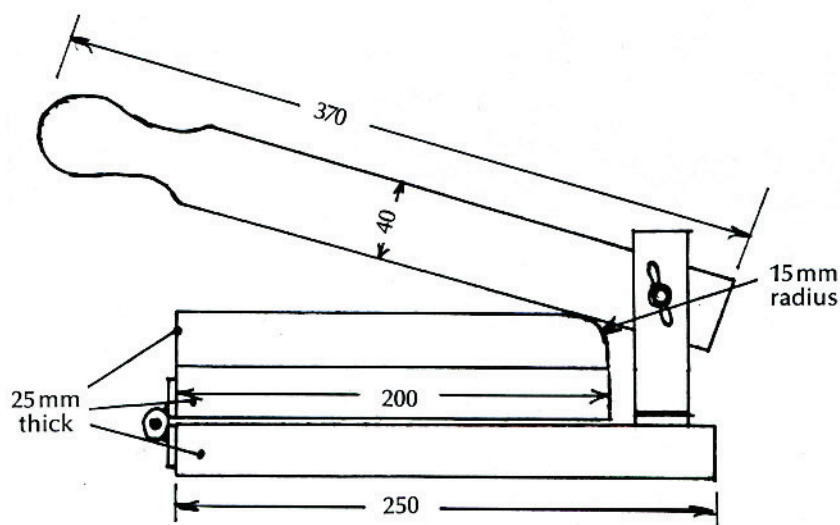


Fig 2



Tortilla Recipe

(Flour Tortilla)

225g plain flour
 $\frac{3}{4}$ teaspoon Baking Powder
 50g butter
 pinch of salt
 150ml water

Sift flour, baking powder and salt together into a bowl. Rub the butter in until the mixture resembles breadcrumbs. Mix the water in until the dough becomes firm and smooth. Cover for half an hour before use.

Place some greaseproof paper in the open press, take a small piece of dough and roll it into a ball. Put the dough in the centre of the base, close the lid and press down firmly on the handle. Open the press, take out your finished Tortilla and start again.

All you need now is a good Mexican cookbook full of delicious recipes for using your Tortilla, then enjoy the best part of all — sitting down and eating a fantastic home-made Mexican extravangana. [W]



WINNERS

National Woodworking Exhibition
December, 1987

Award: 1st Prize — Furniture

Item: Cabinet With Mirror

Award: Second Prize — Furniture

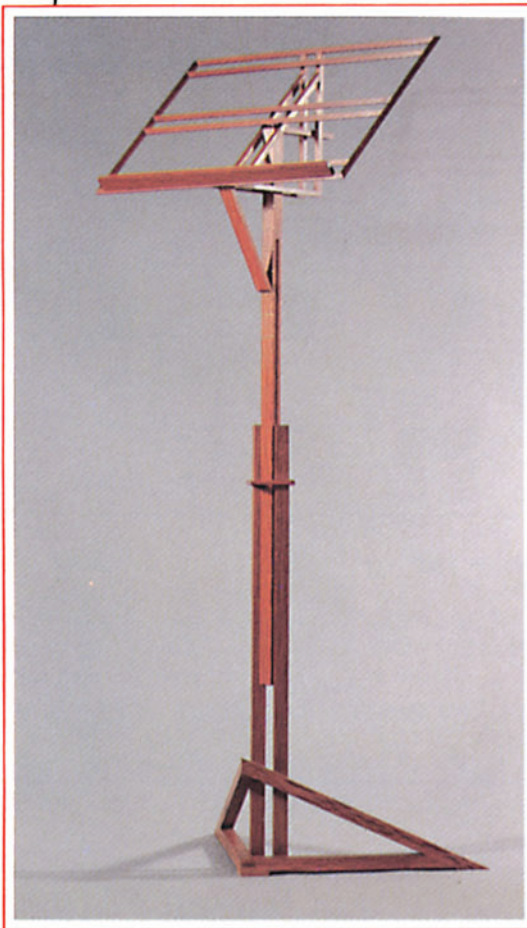
Item: Music Stand

Winner: Tom Harrington,
Narrabundah, ACT

After two years in the Navy and four years at University studying Law and Economics, Tom Harrington left Australia in 1976 and worked for several years as a professional yacht skipper in the Mediterranean and the West Indies.

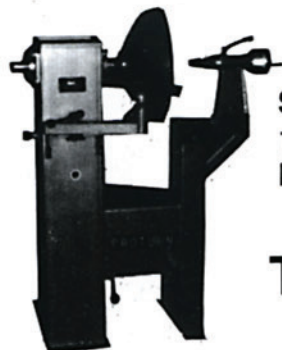
It was during this time, Tom says, that he reached the conclusion that he finds far more satisfaction working in a practical rather than an academic environment. So, when he returned to Australia in 1981, Tom undertook a cabinetmaking apprenticeship and then went on to complete the two year Associate Diploma in Wood at the Canberra School of Art.

Tom Harrington is at present involved in a co-operative workshop in Narrabundah in the ACT.



PROTURN

COMBINATION BOWL TURNING WOODLATHE



SHORT BED MODEL
1000mm DIAMETER
BOWLS — INBOARD

THAT'S BIG!

*Don't compromise your
Skill and talent...*

READER
SERVICE
9

FOR MORE DETAILS —
HILL O'BRIEN ENG.
2/47 LAWSON CRESCENT,
COFFS HARBOUR 2450
PHONE ENQUIRIES TO:

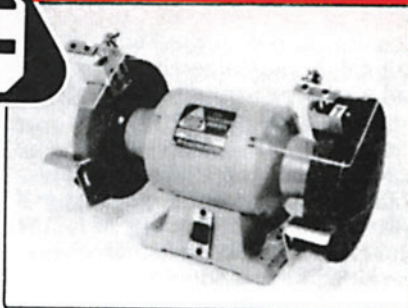
(066) 51 1720



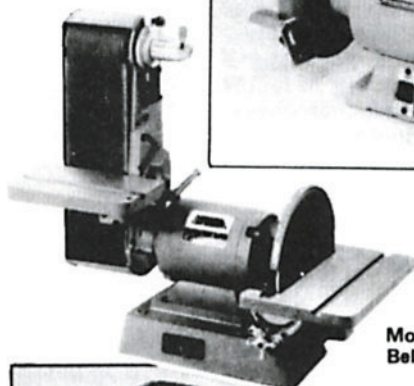
Helpmates for handymen!

GMF — Australia's leading brand for decades — now introduces a range of power tools designed to give every handyman that professional touch.

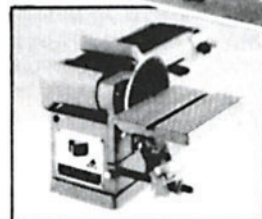
GMF



Tradesman Grinders
150mm and 200mm

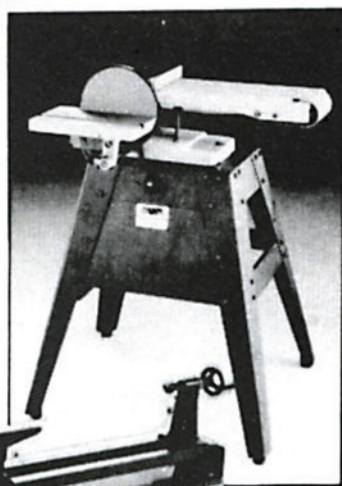


Model SB-12
Belt/Disc Sander



Model SB-4X6
1/3 HP
Belt/Disc Sander

Model SB-9
1/4 HP
Belt/Disc Sander



Model K1440D
Wood Turning
Lathe



Model BSW-10
254mm Band Saw

READER SERVICE 11

AT LEADING
HARDWARE & DEPARTMENT STORES
Backed by
BETTS ELECTRIC MOTORS' reputation for quality

Frank Galdys of Wanniasa (ACT) carved this bowl from a Lombardy Poplar that had been dead about three years.

The bowl was given a low sheen, clear finish to retain the colours of the timber.



TREND TIMBERS PTY LTD

SPECIALISTS IN FINE WOODS FOR



CARVING
BOAT BUILDING
FURNITURE
JEWELLERY
MUSICAL INSTRUMENTS
TURNERY, and
WOOD BENDING

WE ARE STOCKISTS OF:

CENT. AMER. MAHOGANY	WHITE BEECH
HUON PINE	TEAK
N.G. ROSEWOOD	AMER. WHITE OAK
KALANTAS	AMER. WHITE ASH
TAS. BLACKWOOD	AMER. WALNUT

AND MANY OTHERS INCLUDING WOODTURNING
BLANKS, TEKNATOOL LATHES AND SIKKENS
CLEAR WOOD FINISHES (colours avail. within 48 hrs).

Woodturning Demo. & B.B.Q.: Sat. 4th June from 9.00 am

PO Box 212, Windsor NSW 2756
Cunneen St., Mulgrave

Tel: (045) 77 5277 — 77 5207

OPEN for Sat. Morning Trade

READER SERVICE 11

Gallery

Allan Marks made these Barometer sets using a home-made pin router table.

The large Barometer is 915mm long and 305mm wide and made from Australian Red Cedar. The smaller one is made from walnut and is 760mm long and 250mm wide. Both are finished by French polishing, leaving the timber natural.

To make the Barometer sets, Mr Marks decided to construct his own pin router table based on one which had been manufactured by Shopsmith (US) but which is no longer available. This unit is described in *The Router Handbook* by Patrick Spielman.

In Mr Marks' own words:

"The table is made from particleboard and scrap timber and is adjustable front to back, about 150mm. The insert pins are removable for different size pins to match the router cutters being used. A Bosch drill stand is used with a suitable bracket made to suit my router which is a 2hp Ryobi Towi model. An adjustable clear, high-impact plastic guard keeps fingers at a safe distance. Wooden fences are fitted to slots in the table top; these are adjustable and make a practical, light jointer and an ideal set up for light mouldings.

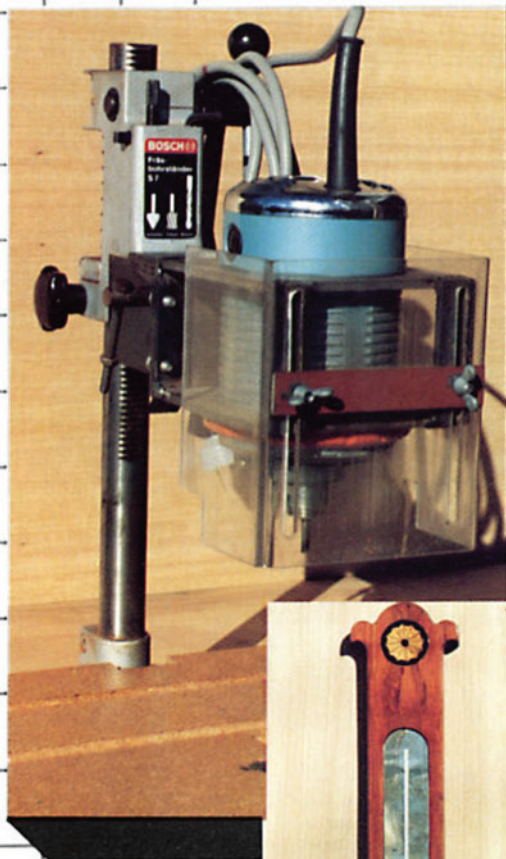
"The drill stand allows for any adjustment in the height of the router above the work and complete control of the depth of cut is very simple.

"A foot control allows easy operation of the router without having to take hands away from the workpiece.

"Making a pattern in 6mm masonite or similar from full size patterns supplied by U-Build Enterprises enables work such as these barometers to be shaped very easily and there is virtually no need for cleaning the edges other than a light sandpapering. Holes for the Barometer and Hygrometer are easily trued as is the recess for the Thermometer. The segmented sections of the Barometer base (both the round and the 12 sided), are blind splined using the fences and a suitable jig. A pattern under these bases allows the moulded edges to be put on using the pin in the table as a guide."

Here's a chance to show your work.

Open to anyone in any branch of woodworking (provided only that the work was done in Australia) the Gallery let's you show everyone your latest work. Either colour or black and white photographs are acceptable. Please write your name and address on the back of each photo (so we can ensure return) and send details of the timber used and brief notes of any special methods.



A stylish Student's Desk (Part 2)

by W.F. Norquay



Selecting the timber for the drawers is very important. The variations in the timber and grain patterns which give it its beauty can give a patchwork quilt look if you aren't careful. Ideally you should be able to use one piece of timber to make the drawers across each level.

As you cut the fronts, mark the back with the drawer location. Also mark the top with an arrow so you keep your match. I aim to have around 5mm clearance between the opening and the drawer front. This takes a little fiddling but the effect is well worth the effort. I have found the best way is to cut the boards about 2mm too wide and about 15mm too long, then plane them to get the height right.

Next trim one end so it is a perfect fit with the vertical, trimming the other to match the length.

There are a number of different ways of making drawers, many relying on nice pine (or similar timber) sides 12mm thick. For those who haven't tried to buy such timber recently, don't bother. Sure you can get 12mm pine etc. but in most cases it isn't nice, it isn't straight and it isn't cheap. For stability I use 9mm plywood. This may horrify some purists, but it's straight, it's stable, it's available and it isn't expensive.

Cut the drawer sides 10mm narrower than the height of each

drawer and 15mm shorter than the depth. Make sure you cut the sides so the grain runs along the sides and not across; it looks and wears much better.

The backs may also be cut; these are another 10mm less than the height of the sides (ie. 20mm narrower than the width of the opening). Then use the router to cut a 9mm slot vertically on the sides, 1mm deep and 6mm in from the back edge. This is to locate the backs of the drawers and give a little more strength.

A word of warning: the ply has a rough and a smooth side — make sure the smooth side faces out.

Now comes another fiddly bit! I like dovetails but I don't like the ones my router does even though they look pretty enough. Making a template from some 3mm aluminium plate works fine for old-fashioned hand-cut dovetails. I mark both parts, then cut the fronts with a fine saw and sharp chisel.

It takes a little more time (not a lot, once you get some practice) but it makes a good strong drawer. On the sides I cut out the tails on the bandsaw and clean them up with a chisel and file. (A sharp triangular file is great for this).

Whichever system you use, make sure the top of the side is level with the top of the front panel. The bottom edge will be about 10mm above the bottom

edge of the front. This may horrify some drawer makers, but the reason will soon be clear.

Having got the sides cut and dovetailed, you then need to cut the slot in the bottom of the front for the floor of the drawer. Unless you plan to drop bricks in the drawers, 4mm ply is fine. So you need a 4mm slot right across the back, the top of the slot being level with the bottom of the drawer sides. I use a router with a 4mm bit and cut the slot about 5mm deep.

The bases of the drawers can now be cut out; don't forget to mark them with their drawer number. Above all, make sure they are square. The inner end of the drawer will be 4-5mm narrower than the front but this can be planed off the edges of the floor later; it is better to get the bases square now before any horrible errors come in.

Before you assemble your drawers, decide what type of drawer front you want. My bevelled edges (I think fielded is the technical term) were done with a moulder head. I've seen books showing old timers cutting them with planes and chisels but unless you have their skills, I suggest you stick to the moulder or convince yourself you like flat fronted drawers.

If you decide on bevelling, now is the time to do it. I did across the ends first because this minimises the risk of splitting out the edges. I also did it in several cuts, the last being very, very fine.

You are now almost ready to assemble the drawers. Before you do, cut two runners about 20-25mm wide and 7mm thick for each. I used a fairly hard wood to ensure they give good wear. Again that purist streak — I hate nails and never use them in any serious piece of work, but if you must, you must. I glue and screw my drawers together but before I start assembling, I drill the sides (at the rebates for the backs) and the runners so everything is ready to go when the glue is on.

Assembly is simple. Put plenty of glue on the dovetails, fit them, then screw the back and fit the floor. I put

a clamp over the drawer to hold the floor hard into the slot in the front (this makes it easier for squaring). I then screw the floor to the back and sides, and screw the runners to the sides through the floor.

If you have made the floor dead square, you can make the edges overlap evenly on either side at the back. Hey-presto! Your drawers will be square.

Make sure you wipe any surplus glue off the drawers before it sets.

The big filing drawer is similar in construction to the others but I used a commercial ball bearing runner track since it becomes quite heavy and needs this type of runner to let it move freely. These are relatively cheap and can be bought through cabinet hardware shops (I use Knobs & Handles at Dandenong).

Instead of dovetailing this drawer, I cut a 9mm slot 12mm in from the edges, then fitted the edge of the sides into the slots. For a little extra strength, I also glued and screwed a corner piece on each side. Otherwise the drawer is the same, but it doesn't have the runner strip underneath.

When the drawers are dry, you will find they don't fit. Don't be dismayed, it was planned that way. The runner underneath needs to be planed down so that the drawer slides on the runners and when they close the top of the front is just clear of the opening. You may need to do a little sanding and plane the edges off the floor so the sides are smooth, but the drawer should slide in and out beautifully. In fact it may surprise you how well this system works.

The final part of the drawer making is setting the drawers so they go in the right depth. They need to be within a millimetre of each other for the bevelled fronts and dead level for the flat fronts. I cut a 45° bevel on the inner end of each drawer side. It doesn't have to be big, about 5-6mm wide, but it helps centre the drawers. I then cut some strips 12mm x 6mm with a 45° angle on one edge. These strips are cut into lengths to fit vertically on the back drawer dividers. When the drawer is in the right position the strips are glued and screwed in position hard against the bevels on the inner ends of the drawers. This enables you to get the drawer so it stops in the right place and centres itself. If you have flat stops the tendency is for one side to hit before the other. That allows one side of the drawer to stay out slightly as the inner width of the drawer is slightly smaller than the front opening.

With the drawers now fitted and sliding smoothly into their closely fitted openings you can start thinking of the next little intricacy.

MAKING AND FITTING THE FLAP

The flap and it's support are what really sets this desk apart.

Start by making up the flap, using the boards you selected (remember, the incredibly straight ones). First plane them up and glue them together using high strength glue. Don't worry about the ends yet, just make sure the panel has 25mm surplus on every edge.

While you wait for it to dry, cut the support arms. They need to be a nice sliding fit in the slots beside the end

panels. Leave them about 70mm too long and mark them left and right.

When the flap has dried, plane the bottom edge square, mark the length (to match the sides +6mm). Next, measure the width to the top panel and mark these dimensions from the planed edge.

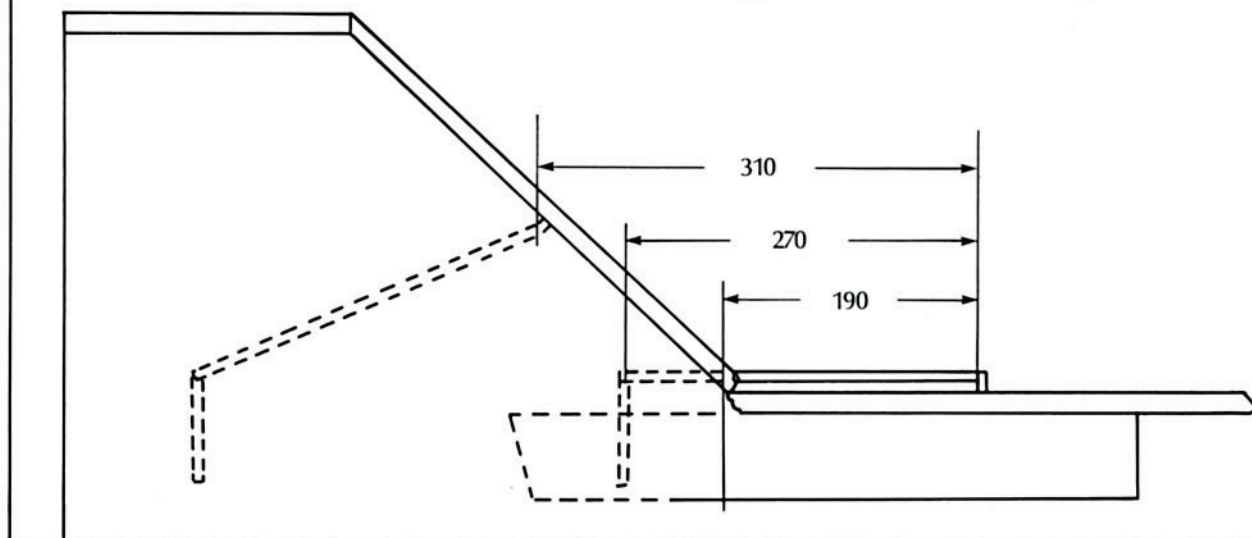
For strength, the ends have a 75mm wide cross strip. To make it look neat, I have the ends cut to 45°. You need to mark the cut-outs on the flap, 75mm in from the marked ends and then 45° angle from each corner. This can be cut out with a bandsaw but the finishing is best done with a router and a wide planer bit. The clever bit is getting the angles right and blending the two cuts so they match. It takes a little patience. Don't try to do it free hand; set up a fence to guide the router.

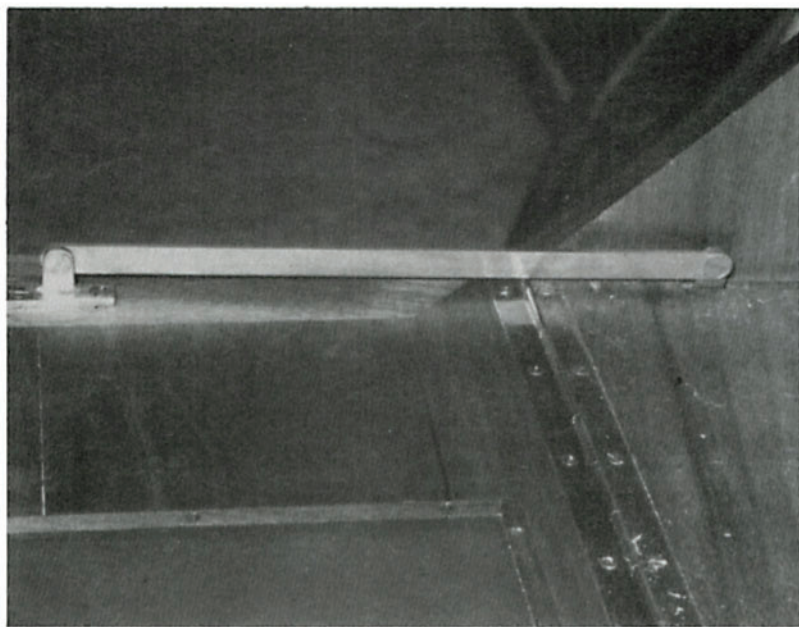
Once the cut-outs are finished, cut the inset strips, leaving a few millimetres on the width for later trimming. Lay the strip under the flap and mark the shape of the cut out; cut the strip to match with a little for trimming. Plane the strips so they fit the cut-outs perfectly. Here is a perfect place to use those plywood tongue joints again. Using the slotting cutter cut the grooves in both the panel and the end strips to within 25mm of the ends. The ply strips are then cut to fit, making sure it all fits well before gluing with high strength glue.

Let it dry well before continuing.

Look at the panel and pick the best side (to be the outside). Sand both sides well to get a good finish. Now mount the flap onto the inner top panel. If you use brass piano hinge, you will need to

Support Mechanism Geometry





MAKING THE FLAP SUPPORT MECHANISM

When I first thought of the flap mechanism I scratched my head and wondered "how the hell?" But it wasn't so bad after all. If you check the inner top flap, you will see that the cut-outs are 360mm long. The flap supports can only move out 310mm (allowing for the material and clearance). Take a look at the sketch — the pivot on the flap moves through a horizontal distance of 310mm. All you need do is pick your arc to get that dimension.

There is a reasonable range of positions which can give this travel. For the actual linkage, I purchased some $\frac{1}{2} \times \frac{1}{8}$ brass strip. Again, it isn't cheap — a 20ft (6.1m) length (enough for both desks) cost about \$35.00. The photograph shows the pivot on the flap; it consists of the brass strip cut into short lengths and silver soldered together.

On the inner end, I soldered two pieces together for the bottom 50mm, then cut a slot in the support arm to take the brass strip. I drilled a $\frac{1}{4}$ " hole in the arm and tapped the brass strip to take a screw.

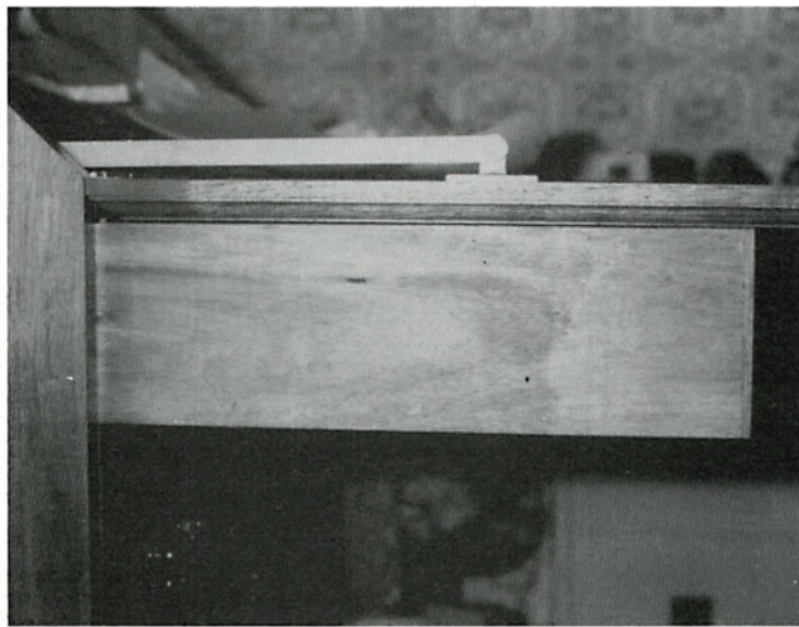
For the actual pivots, I used a brass screw head and countersunk one piece then drilled the other for a nice fit. I then put a dab of solder on the opposite side. After the soldering, the linkage needs a little polishing for appearance.

You will note that now the support arms move in and out freely! (well, after a little cleaning up), but they stick out at the front. With the flap closed, mark the length of the arm at the front and the back. Remove the arms and cut the front 5mm in from the mark and the back the same distance but on a 20° angle so there is some clearance for dust etc at the bottom.

Next cut a strip 6mm thick to glue over the front end. When dry, plane this level with the front dividers. This way, you don't have end grain showing on the support arms and they blend well with the dividers.

When the flap is in position and the movements are all working well, trim the top edge with a very sharp plane so that the angle matches the top panel and the flap sits down on side panels. This takes time. For safety have the flap against something solid so the planing effort is not taken by the hinge. Don't rush things; it would be very disheartening to botch it up now. Plane the top edge so the angle is perfect and there is no gap along the top.

You will note that the angle at the tip protrudes up past the top panel. When you have the vertical angle right, plane this off level with the top panel and allow the 3mm per side down the

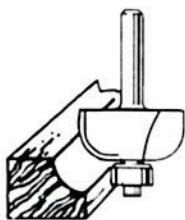


cut a shallow rebate the same as you did on the inner top panel.

Note that the hinge doesn't go right to the end of the flap so stop the router before you go too far. The flap can now be fitted but, be warned, keep the support arms out, whatever you do. Don't let the flap swing down without the arms out or you'll wreck the flap or the inner top panel. Teardrops stain

terribly!

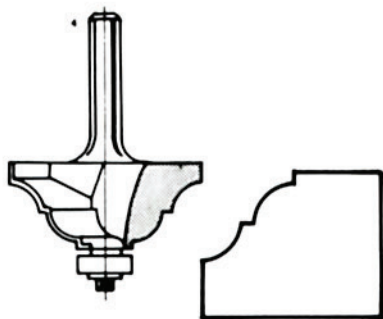
When fitting the flap, use brass screws but watch the length and use a drill stop. You don't want any holes through. Another word of warning here, brass screws twist off easily; it's best to use steel screws the same size then take them out and put the brass screws in. Well you are almost there. Time to think about a little geometry.



edges of the flap.

Rather than have handles on the flap, I have a cut out on each side of the side panel. This is done with a router and a cove bit (eg. Carb-I-Tool T712B).

For the final finish, run the router along the ends of the top panel and down the edges of the flap. I used a Carb-I-Tool TC12B — the shape looks good and matches the style.



But — but — but, there is a trap. The cutter has a bearing guide. This is great till you get to the top front corner. If you are not very careful you can run over the edge and the bearing will come in and the cutter can spoil the corner. For safety, clamp a piece of wood to the top for a fence.

I also glued a piece of 19mm x 4mm timber in the open slots along the end panels into which the inner top panels

fit. It just makes it a little neater and is a lot easier than making two short slots.

You may note that I have a leather insert in the top. This is purely a matter of taste, but it does make a lovely writing surface and gives that extra bit of class. To fit this, cut a groove around the insert 9mm wide and deep. (Be very careful, use a fence and mark it all well before you start hacking into it with the router.) The leather is stretched and glued down then stapled inside the groove. The sketch gives you the layout. A timber filler strip is cut and fitted into the groove and screwed in.

Well, you are close to the finished article. If you wish to put drawers in the top, this is the time to do them. (If you've got this far, you won't have much trouble with them.)

You have probably noticed the gaping hole at the back. You need a sheet of plywood to cover this — fitted neatly into the rebates you cut early in the piece. The type of ply doesn't really matter for the lower part, but the top section needs to be finished to match the timber. You can use veneered ply here or even glue some veneer onto the same ply used for the bottom.

FINISHING YOUR MASTERPIECE

Let not the fruits of your labours be in vain! Preparation and finish are as important as style.



Leather Insert Detail

Start with top quality sandpaper in 120, 180, 240 and 360 grit. Don't muck around with el-cheapo stuff. Blackwood tends to block sandpaper and these blocks can mark the surface.

Using a good cork block, sand carefully along the grain. Start with the 120 then gradually work down. Orbital sanders can be used, but be wary of using them with coarse paper; they can leave little circles.

When you have the marks out on one grit start on the next, don't be in too big a rush to go to a fine paper too early. Wrap a piece of paper around some 6mm (1/4") dowel to get into the radius shapes and use a piece of ply planed to 80° for the fine corners in the mouldings.

Don't use coarser than 180 grit on the mouldings; it's too easy to take the edges off the shape.

Before sanding the drawers, drill the fronts for the handles. Centre the handles on the drawers and drill the holes. One caution — the centre line of the handle (not of the screw holes) should be on the centre line of the drawer.

Now sand the drawers the same as the rest of the desk. If you have bevelled the edges, I suggest you take a strip of timber 25mm x 50mm x 300mm and glue a piece of sandpaper along the 25mm edge, then trim the sandpaper so it is exactly in line with the edge. Use this to sand the bevels; it will stop you damaging the corners of the bevel.

Choose your finish carefully! Pick one in which you have confidence. It's no use trying to French Polish and ending up with a shellac finish with no more than a slight French accent.

On the desks shown, I used a Danish oil finish. It takes a little time but it really brings the depth out of timber. Before you open the can of finish, clean your workshop. Vacuum every bit of dust off the desk and out of your workshop. If the other people where you live are understanding, take the desk inside for the last two coats — it helps minimise the dust problem. Sand well between coats and really bring out the depth and beauty in the timber.

After months of work, annoying everyone with noise, dust and shavings, your desk is finished. Sit back and drink in the beauty of your masterpiece. Even better, enjoy the rest of your life knowing that YOU MADE a family heirloom.

[W]



It is probably fair to say that the hobbyist is more likely to be content with slower methods than the professional, provided the results are acceptable and capital outlay falls within budget limits. But there is another consideration, too, and that is waste — the less of it the better.

Making segmented bowls is a way of applying these concepts.

Whilst segmented bowl construction is far from new, beginners will find the building of a bowl from "scrap" timber an economical way to gain turning experience and confidence. Graduation to the use of more exotic and costly pieces of timber can come later.

For the first project, you should select a relatively simple shape and draw a cross section as illustrated in Fig. 1.

The shape can then be divided into layers as the bowl increases in height. The layers may be bandsawn from scrap timber using 4 to 8 pieces to complete the circular section. Six pieces is the idea since the radius applied to the circumference provides six "equal" chords.

The assembly of these pieces is accomplished, one layer at a time. The pieces are glued using P.V.A. and then allowed to set for 24 hours. Each layer is turned to shape using a template and faced off ready to accept the next layer. Vertical joints are best made using a sanding disc and support "table".

This approach allows you to turn the last layer and fit the next in approximately one to one and a half hours. If your lathe is a light hobby type like mine, you will find that out of balance forces are minimised using this method, when compared to completing the assembly before attempting to do any turning.

It is best to finish turning the inner surfaces of the bowl as each layer is added but leave some material on the outer surface for "turning up" when all layers are in place. Shrinkage of material can result if too much time is allowed to elapse between starting and finishing your bowl — depending of course on the moisture content of the wood when turned.

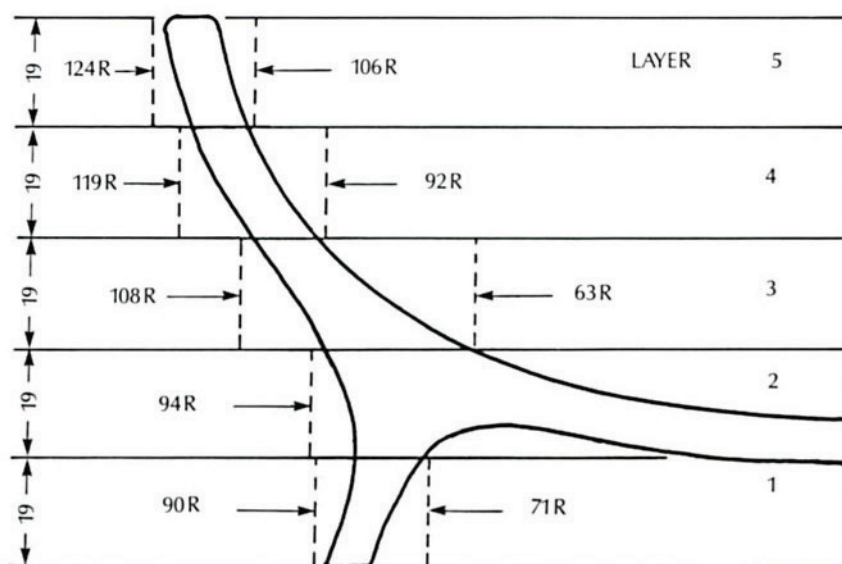
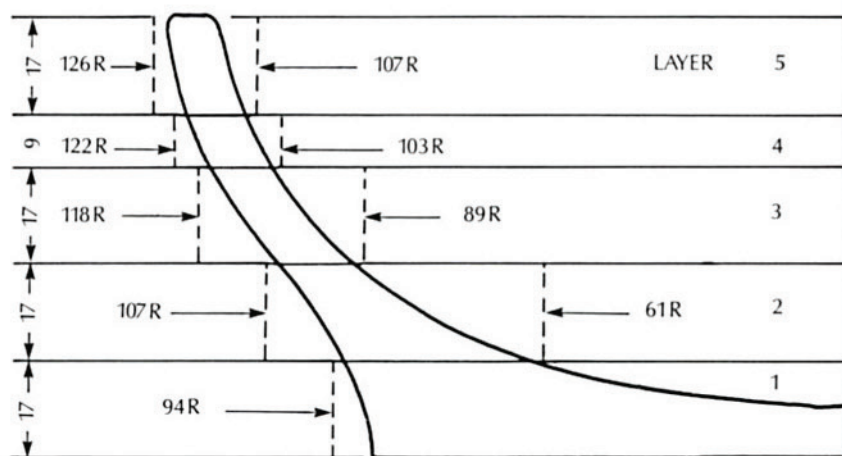
The possibilities for variation in style and pattern using different colour timbers are many and limited only by the designer's imagination. If you have an endless supply of patience, your bowl can be assembled in such a way

as to require no turning across the end grain and hence minimise sanding.

Fig. 2 has been added for the more adventurous. This bowl requires two "set ups". First mount layer 2 on your faceplate, turn the base (to template) and mount the base layer (No. 1). Finish turning and sanding the base and apply your final finish.

Choose the number of feet you require on your bowl and mark their positions and circumferential widths.

Wrap a strip of thin cardboard around the base and mark the centres of two adjacent feet. Set out the curve of the arch between the feet (to taste) and cut a template from the cardboard. Apply your template to the feet centre lines and mark out the arches. This ensures that they are all the same shape (i.e. unless your bobbin sander is a little "unruly"). Cutting out the arches is better left until the bowl construction is complete.



WHAT TO DO WITH LITTLE BITS OF WOOD

by Roy Guthrie




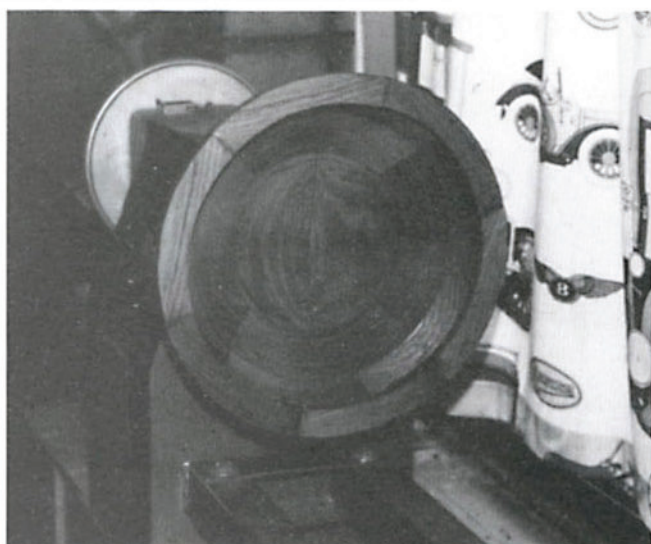
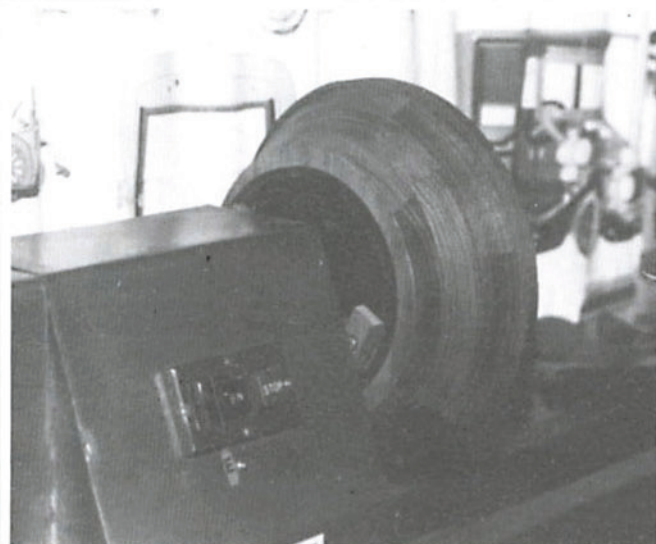
Next, turn a backing plate with a spigot to fit inside the base and glue (with hot melt glue) base and backing plate in 3 or 4 spots, preferably where the arches are located. If there is any tendency to pull a piece of the timber when bowl and backing plate are separated then this will occur in the portion

to be discarded. You can now proceed as before with the upper part of the bowl.

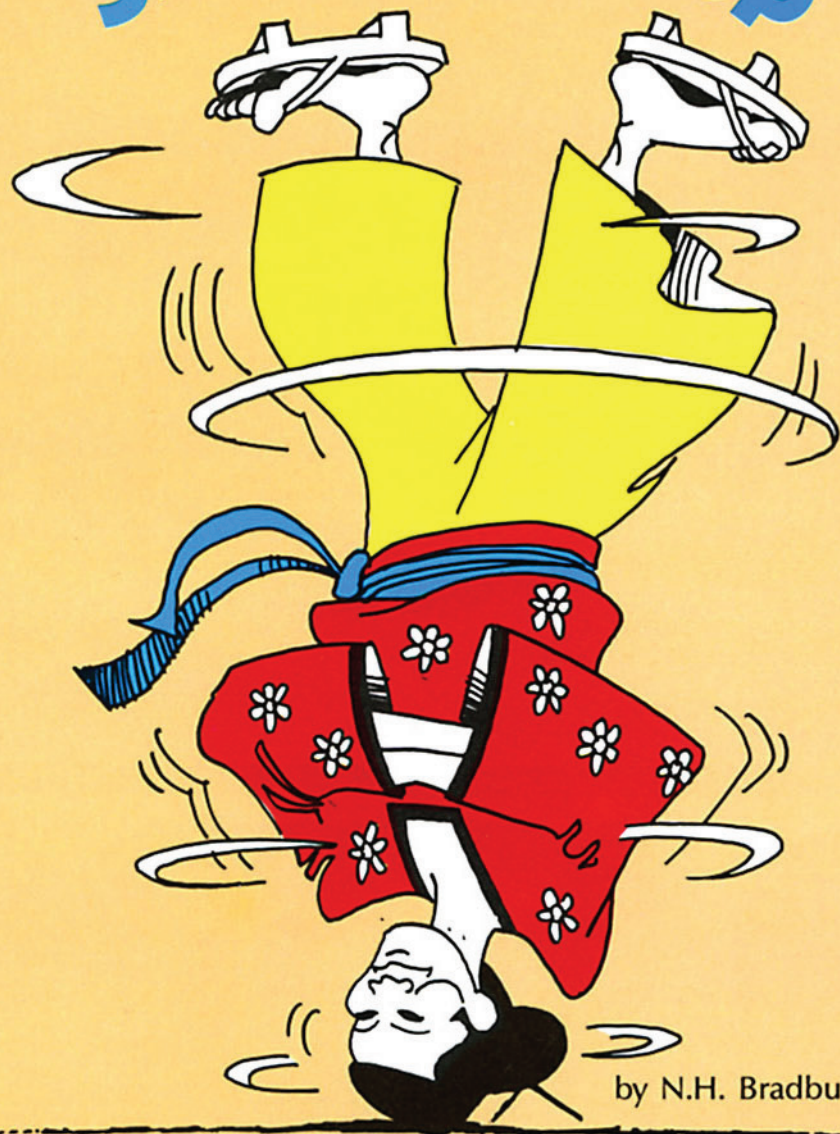
The photographs illustrate items made from "off cuts" of Radiata Pine (bowl with feet), Tasmanian Oak (platter) and Blackbutt (bowl). The platter construction can also be applied

to bowl making thus avoiding the use of a single piece blank for a base and hence no turning across the end grain. These pieces were all finished with several coats of polyurethane.

Enjoy your (segmented!) bowl turning. 



THE REMARKABLE JAPANESE SPINNING TOP



A spinning top is a favoured toy for kids, both big and little, the world over. I am a big kid at heart and was delighted to be given a top during a trip through Japan with my daughter several years ago. Our host in Hirosaki, in the far north of the main island, took us to see a wood-turner in

that city. This craftsman concentrated on knick-knacks, toys and, of course, the traditional wooden doll.

His lathe was designed specifically for face-plate and chuck turning. It had a massive headstock assembly, but no bed, tailstock or adjustable toolrest. The toolrest was a fixed wooden bar

parallel with and set about 200mm from the centre line of the headstock. The bar showed considerable wear where he rested his tools.

The chuck he was using during our visit consisted of a ferrule about 30mm in diameter with walls about 2mm thick chamfered on the inside edge. The end grain of the wood to be turned was simply hammered on to the sharp edge of the ferrule. I have had such a chuck made and have found that it works well with soft wood, but tends to buckle and stretch with the harder Australia woods.

His gouge was similar to our ring gouge, but was shaped more like a bent fore finger and bore the marks and texture of wrought iron. I would say that he forged it himself.

All the dolls shown in the photograph have a perfect finish with no scrape marks or lifted grain. With such skill he would have little use for sandpaper, but I did notice that he gave each finished turning a quick rub with a handful of leaves.

The paint he used for the features of the dolls and for the bands on my top was perfect for the job. It dried in an instant, did not run on the unprimed wood, came in a variety of bright colours and had good coverage. The photograph shows my daughter applying the bands of colour to the top which was still spinning in the lathe. When this was done, a wax finish was applied and the finished top was parted off and presented to me. The wood-turner also made a doll, the one with the rings around its feet in the photograph, for my daughter.

The top is unlike any I had seen before (or have seen since). It is mushroom shaped with a round dome, a hollow where the gills would be and a stem. When set spinning on the dome it turns through 180° and finishes spinning on its stem. The colours are an integral part of the design and give a changing pattern during the spinning manoeuvre.

On my return home I set out, full of confidence, to make a copy. The first one was a failure. I took a few more measurements, another try — another failure. After a third failure I concluded that the top was very finely balanced and that templates would have to be made to get the dome and hollow exactly right. I made these templates out of a piece of aluminium plate.

Even with the templates and lots of stopping, fiddling and testing my success rate is still so-so. On average, out of ten attempts I have found that

one top has to be discarded because I have taken off a little too much wood. Three out of the ten will work well. The remaining six I re-mount in my lathe (I have made a special mandrel and cup chuck for this purpose) and sand a little here and scrape a little there testing frequently. By this means (lets call it Remedial Work B) I might get another two to work.

I have discovered that a tack driven into the end grain of the stem apparently gives it just that little bit of extra weight to pull it down (let's call this Remedial Work D). This is cheating I know, but it does get another three to work. The last obstinate rogue still refuses to perform and so ends up as firewood.

Why does the top turn over the way it does? First, a little theory. There are two forces acting on a spinning body:

- centrifugal force which tends to fling off parts of the body.
- centripetal force which tends to draw the parts to the centre, that is, to reduce the radial distance between the axis of spin and the "centre of gravity" of the area swept out by the spinning mass.

Thus, a hard boiled egg set spinning with its long axis horizontal tends to turn so that its long axis is vertical. This comes about because the centripetal force reduces the radial distance.

Furthermore, the product of the angular velocity (revs per minute if you like) and the radial distance always remains constant. Reduce the radial distance and the object will spin faster. Take as an example a skater spinning slowly with body horizontal and leg and arms outstretched. When she raises her body and draws in her arms and leg, she will spin faster.

Back to the top. This is my guess as to why it works: When set spinning in position A as shown in Fig. 1 it turns through position B to position C for the same reason that the spinning hard boiled egg turns on to its end. The top might take four to five seconds to reach position C. If, however, it remains spinning in position B and goes no further, I then carry out Remedial Work B.

Having reached position C, circumstances change. Consider an ordinary conical top spinning on its point. As it loses momentum it begins to wobble, then falls on to its side, gives one or two dying spins and comes to rest. If it could be speeded up when spinning on its side the conical top would return to its vertical position. (Again compare this with the egg.) The Japanese top is



Fig. 1



Traditional Japanese wooden dolls. The one made for my daughter is the one with the



Applying the colour to the top. Note the wooden tool rest, the chuck and headstock assembly.

still spinning very fast when in position C and with an audible scrape springs in an instant to position D. A lot of its energy is lost through friction at this point so that it remains spinning in position D for only two or three seconds. In cases where the top does not spring up I try Remedial Work D.

Gyroscopic forces will also have

some effect in addition to the forces mentioned earlier. I know nothing about these and have been told that the mathematics are horrendous.

All that now remains is to apply the colours; I use ordinary enamel. After giving the top a coat of varnish I remount it in the lathe. To get a sufficiently low speed I have rigged up a drill

to turn the lathe via a belt and two homemade wooden pulleys at about 150 revs per minute. The paint is flung off at higher speeds.

The total time I spend per working top is in excess of an hour. The time spent by that master craftsman with his unerring eye in a remote corner of faraway Japan was only ten minutes.

W

**MAY/JUNE
SPECIALS
LESS 10%**

LUNA WOODWORKING MACHINES

Machines delivered or ordered
in May & June 1988
less 10% of List Prices.

LIST
\$5590

SAVE **\$599**



W50 Combination Machine

300mm (12") Tilting Arbor Saw
250mm (10") Planer
250mm x 235mm Power fed Thicknesser
Sliding Table & Slot Mortiser opt.
Optional Scoring Unit

READER
SERVICE
12

SAVE

\$229

LIST
\$2990



L18 Circular Saw

300mm (12") Tilting Arbor Saw
Sliding Table optional
Optional Scoring Unit
240V/415V available

LIST
\$3690

SAVE

\$369



Planer Thicknesser L38

250mm (10") Planer
250mm x 235mm Power fed Thicknesser
Optional Slot Mortiser
240V/415V available

QUALITY EUROPEAN MACHINERY AT REALISTIC PRICES

N.S.W.

Luna Machinery
303 The Horsley Drive
Fairfield, N.S.W. 2165
Phone: (02) 728 3399

Victoria

J.C. Walsh & Co. Pty. Ltd.
Cnr. Webb & Howe Sts.
Airport West, Vic. 3042
Melbourne Agent
Phone: (03) 335 1011

Qld.

Luna Machinery
3 Carlyle St.
Springwood, Qld. 4127
Phone: (07) 808 2211

For over 4000 years, the joining of fibrous/woody materials has been achieved by the drying of sticky gelatinous substances applied to the adjacent surfaces. The earliest known reference to the process is on the walls of the Egyptian tomb of Rekhmara where the spreading of glue is depicted in the laying of a veneer for an elaborate cabinet.

There are references, too, in more "recent" times — Ecclesiastics 22.7 (ca 200BC) and Job 42.16-17.

"They are joined one to another. They are glued together that they cannot be sundered."

("gluere" in Latin means to draw together and "gluten", also in Latin, means glue.)

The fact that hide glue has been around for 4000 years is, perhaps, a good enough reason to try it. But, as we shall see, there are other reasons why I use it almost exclusively in my own workshop.

Hide glue is made from abbatoir surplus — cartilage, hide, tissue or bones.

The soft material is washed, then treated with alkaline additives to remove solids such as hair and other impurities, to produce a substance called collagen.

The collagen is neutralised with acid, heated in steam vats and converted into glue. The by-products of this process are tallow and oil.

The hard material (bone) is crushed and treated to remove fats and meat. After being pressure cooked, glue is again produced from the collagen. The by-product here is used for stock-feed or fertilisers.

The glue produced by both processes is dilute and must be cleaned of suspended matter. The water is then evaporated carefully (overheating will cause quick deterioration) to achieve a concentrated solution ready to be converted into dry glue.

The study of colloidal chemistry has enabled chemists to better understand the nature of glue.

It is interesting to note that although its use is at least 4000 years old, the earliest patents recorded are in the 18th century (fish glue) and the beginning of the 19th century (the manufacture of glue from bones).

Once the glue has dried, it is graded and blended to produce the final product. Hide glue is classified according to five main characteristics:

a) Gel Strength — this measures the

H G

I L

D U

E E

by Paul Gregson

rigidity of the jelly when the glue is allowed to cool. It is essential that a jelly does not form before a joint is unioned. A glue with a high Gel Strength sets quickly, one with a low Gel Strength sets slowly.

b) Viscosity — this measures the resistance to flow or spreading ability of the glue and is also related to the melting point.

c) pH — for general use, the acidity must be kept low and the pH should therefore be in the 5-7 range. High acid glue breaks down rapidly if heated over any length of time.

d) Shear Strength — this is tested by making a lapped joint. The glued joint is then subjected to forces in excess of 145 kN/sq.m (kilonewton per square metre); usually, the timber breaks before the glue.

Foaming and Colour are two other characteristics which are important to some users.

Animal glues commonly used in woodworking come in several grades: Cabinet, Joiner's, Russian (this has a higher Gel Strength and is quicker

setting compared with the others) and Rabbit-Skin and in the form of either Powder or Pearls.

While the common way of fixing wood to wood is by one or other form of adhesive, there is nevertheless the notion that the whole process is a messy, sticky affair (and why can't I just nail it?) that has to be got out of the way as quickly as possible.

My attitude here is the same as for finishing — the timber is a medium for construction and the final shape must last a reasonable length of time. This demands that gluing be done with care, thought, precision and cleanliness.

Naturally, it demands care in the selection of the glue itself and that brings me to what I believe are the most important advantages of hide glue.

1) it has a short Gel time so it "sets" quickly. A joint need only be put aside for a few minutes for it to set, so allowing further work to continue almost immediately (providing, of course, that this work does not ask for the maximum strength of the glued joint — see later).

2) it has a high tensile strength which is retained for many years.

3) joints are not subject to creep in the same way as those made with "emulsion" adhesives. The common term for the breakdown of hide glue is that it desiccates. I do not subscribe to this view since the set glue is absorptive. I believe it is reasonable to assume that the glue in a piece of furniture stabilised at 15% moisture content has also stabilised at 15%. Instead, what appears to happen in deterioration is a general breakdown of the complex protein molecules.

4) clean up is with hot water only, both on the wood just glued and the equipment used.

5) contrary to popular belief it is cheap around \$5/kg. (That's one heck of a lot of liquid glue when you consider made-up glue might have about 30-40% water, by weight.) The cost of heating the glue in my workshop at the moment, using a thermostatically controlled glue pot, is less than 20¢ for 32 hours — the maximum time the glue should be kept hot, once it is made up.

6) machinability — wood with dried glue on it can be put through machinery without any harm to the cutters. This would, however, rarely be necessary since the glue can be so easily removed.

7) non-staining, non-poisonous (the household dog will eat cold jellied glue — whole protein!).

Despite these benefits, the glue has many critics who continue to perpetuate what I can only describe as myths. For example:

a) high cost — as stated before, I consider it cheap.

b) difficult to control temperature — to maintain 60-65°C is easy with a thermostatically controlled element but even with just a water jacketed pot and a simple thermometer, it is not all that difficult.

c) low moisture resistance — very few of our wooden goods are made to be left in the rain. Even so, if joints are properly made, there should be little or no penetration of (cold) water even if it is poured all over them for a short period.

I have worked on Indonesian/Malayan Colonial furniture glued up in hide. The humidity in those countries is fairly high, but the joints were sound with no moisture or bacteria breakdown evident in the glue BUT the hardware sure had rusted. (Time has not allowed me to study the long term effect of time/humidity on wood glue joints, but I nevertheless believe that my observations are relevant.)

4) too much trouble to keep clean — the importance of gluing is surely sufficient to warrant ensuring that a clean bench and clean equipment are available for the work.

The basics of preparation are straight-forward.

The basic equipment needed is a double-jacketed glue pot. These come in a variety of sizes and most woodworkers would be familiar with them. Perhaps you've even inherited one made from either cast iron or cast aluminium.

If you can't lay your hands on one, an old double saucepan or even a couple of tin cans can be pressed into service, provided you are careful and persistent.

Decide how much gluing will be done and add the appropriate amount of water to the inner pot. (Absolute cleanliness is essential. The whole pot (inner and outer) must be cleaned with hot water after each use and occasionally "bathed" in a chlorine solution to kill any bacteria.) Add the glue — we'll assume it's in the Pearl form which is probably the easiest to use — stir and leave to soak with the water level well above the pellets. It will take between one and two hours for the pearls to swell in size; they will also take on a whitish appearance.

NOW POUR OFF THE EXCESS WATER in the inner pot, add clean water to the outer pot and put the inner pot inside the outer. The amount of water in the outer pot should be well above the level of the glue in the inner pot. Otherwise it won't be an effective "water jacket" for heating the glue.

Now put the glue pot on a gas or electric hotplate — set to LOW. A thermometer should be put into the glue (until familiarity with your own equipment becomes second nature) and the heat adjusted to maintain between 60°C and 70°C. Above this temperature, the glue is subject to hydrolysis which reduces its performance; below, the glue is unmanageable due to thickening; also it is not as spreadable, so penetration is reduced.

The glue should be stirred occasionally as it heats. If the glue pot has no lid, the glue may "skin". This should be re-constituted back into the solution by

gentle stirring or removed. (The manual dexterity of a magician is sometimes needed here). Some moisture loss will occur and hot water can be added to keep the glue at a working consistency. (But DRY glue MUST NOT be added to stiffen up a solution!!).

Bristle brushes are cheap to use but paint brushes of any size dependant on the job at hand are adequate.

In cold weather (for those who don't have a centrally heated workshop!) it is worthwhile heating the wood before glue is applied, otherwise the sudden cold will chill the adhesive too quickly, resulting in a bad joint. But bear in mind that wood is a bad conductor of heat.

Whilst the glue "sets" quickly, its drying time is governed by water loss. In very humid seasons, this can be extremely slow but under "normal" conditions, maximum strength is obtained after seven days.



It must be understood that the wood in the vicinity of the union has been saturated and this moisture has to get out. There is only one way it can go and that is through the cellular structure of the timber.

After you are finished, clean all brushes and equipment in water. An easy way is to let them soak overnight — pour out the jelly and wash in hot water.

Finally, these are some basic rules for using hide glue:

- 1) MAKE SURE utensils are clean. The growth of bacteria can be prevented by washing all utensils with scalding water and bactericide. The bacteria gives rise to enzymes which have the function of decomposing organic material. Highly resistant spores can be created which can pass from batch to batch in an uncleaned glue pot.
- 2) DON'T add dry glue to a solution to strengthen the batch.
- 3) DON'T overheat the solution. The water in the jacket should NEVER boil.
- 4) DON'T reheat cold glue. This habit probably filtered down from the Northern hemisphere where it was

practised religiously in cluttered workshops with putrid utensils — reheated daily — added water — added glue — and to heck with the encrusted glue, dead flies and wood chips. No wonder some people think hide glue stinks. Anything would if it was treated like this.

If, at the end of the day, the glue is finished with and cannot be kept hot overnight, then discard and wash out the pots.

5) DON'T guess the temperature. Use a thermostatically controlled glue pot or at least a thermometer.

6) LEARN as much as you can about the nature of glued joints. Here are some of the factors that determine the quality of a glued joint.

The quality of the joint itself. Don't be misled by the term "gap filling". It's all too often an excuse for not making a good joint in the first place; in my opinion, it's a pity the phrase was ever dreamt up.

The porosity of the timber. The varying porosity of wood means that some timbers require sizing before gluing.

Temperature. The temperatures of the glue in the pot, the wood, the glue when applied and of the workshop itself.

The time the joint is under clamps and the time that elapses before the joint is stressed (if it is less than that taken for the joint to reach its final strength)

My profession is the preservation of antiques in wood and I think it is nothing short of sacrilegious to consider (let alone use) other than hide glue for this work because:

- (a) the antiques were made with it
- (b) repairs on my work will be able to be done long after I have departed the workshop.

I hope I have convinced you that the use of hide glue is nowhere near so difficult, nor messy, as it is often claimed to be. But even if it were, where else can you find a glue with a 4000 year warranty?

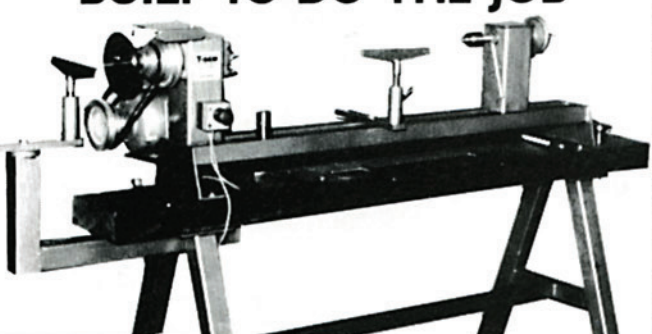
Reference: My thanks to Davis Gelantine (Aust.) Pty. Ltd. for permission to use "Glue for Industry & Workshop" (currently out of print) as reference for this article.

T-GEM T-GEM T-GEM T-GEM T-GEM

T-GEM

WOODWORKING LATHES

BUILT TO DO THE JOB



Two models available.

Max Dia. over bed 406 457	4 speeds 500 1000 1700 3500
Max Dia. outboard 660 760	Live centre, Hollow tail stock
Between centres 914 1219	No. 2 Morse Tapers

BARNWELL ENGINEERING DEVELOPMENTS
Unit 5, 2 James Street, Bayswater
Western Australia 6053

Phone: (09) 272 8033 for details

N.S.W.: Expressway Engineering Supplies: (042) 71 1066
Hare & Forbes Pty. Ltd.: (02) 633 4099 Trend Timbers: (045) 77 5277
VIC: The Machinery Centre: (03) 877 7211
TAS: Machinery International Pty. Ltd.: (003) 44 9899

READER SERVICE 13

T-GEM T-GEM T-GEM T-GEM T-GEM

HEGNER Precision Table Workshop MK 4

*Miniature table workshop
for the model maker, home worker and craftsman*

*available for cutting, routing, sanding
drilling and woodturning operations
on one machine, with one motor used for
routing and a second motor for general use*



FOR FURTHER INFORMATION
MIK INTERNATIONAL
504 Glyburn Rd., Burnside S.A. 5066
Phone: (08) 333 2977

READER SERVICE 13



THIS IS THE WOOD SHOW YOU'VE BEEN WAITING FOR

Sponsored by the Timber Promotion Council with over 7000 sq metres of displays and demonstrations and the largest audience of professional and weekend woodworkers ever seen in Australia.

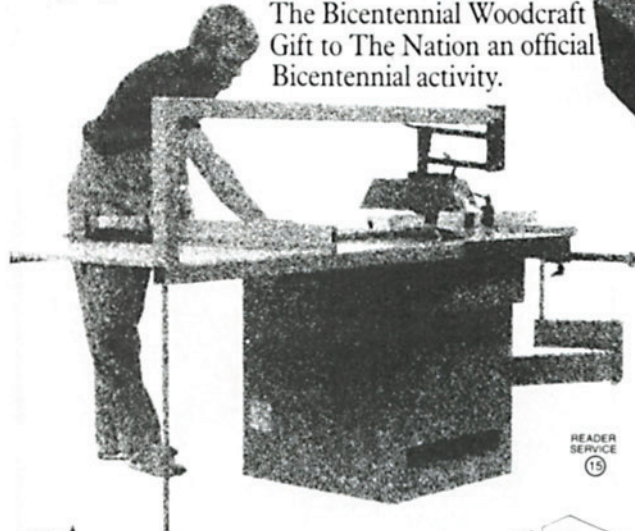
More than a spectacular trade show.

With tradespeople from every segment of the industry looking for the very latest in industrial woodworking machinery. Your products just have to be there. Do it yourselves will be there in their thousands, viewing vast displays of timber products, tools and equipment, demonstrations, videos and participating in workshops.

The National Woodwork Exhibition.

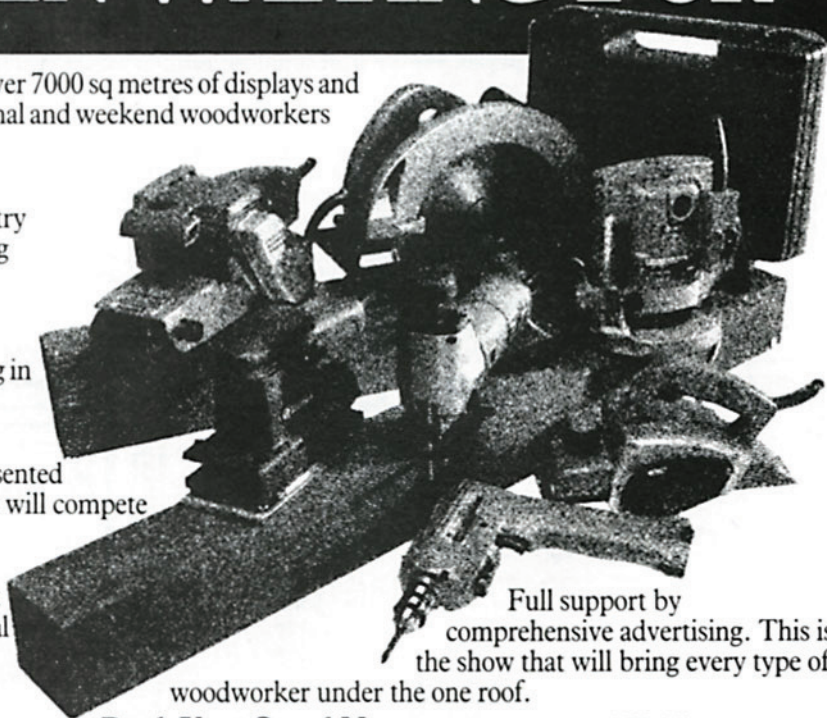
Woodwork Clubs throughout Australia will be represented by exciting displays and Australia's top craftspeople will compete for prestigious awards and prizes.

A highlight of the Show will be the selection of The Bicentennial Woodcraft Gift to The Nation an official Bicentennial activity.



Endorsed Bicentennial Activity

Official Carrier



Full support by comprehensive advertising. This is the show that will bring every type of woodworker under the one roof.

Book Your Stand Now. Phone Interwood Holdings on (03) 648 2411 or (059) 68 1753 for your free brochure and application form.

TIMBER INDUSTRY



ROYAL EXHIBITION BUILDINGS, MELBOURNE, AUSTRALIA · 21-23 OCTOBER 1988

Sponsored by The Timber Promotion Council, Tel: (03) 347 6322.
Organised by Interwood Holdings Pty. Ltd., Livio Drive, Gembrook, Victoria, 3783.
Tel: (059) 68 1753

For information regarding the National Woodwork Exhibition please telephone Melbourne (03) 240 8461 or write to Natwood c/o P.O. Gembrook Victoria 3783.

CLAMPS & CLAMPING

Clamping glued joints has several purposes. Firstly, it holds the joint while the glue sets — an essential requirement, particularly where the joint could easily move (eg. edge joining of boards). Secondly, it forces the glue into close contact with the surfaces being joined and thirdly, it reduces the thickness of the glue line.

All of these factors effect the strength of the finished joint.

As you would expect, a joint made with thick viscous glue will require more pressure than one made with a thin adhesive. Epoxies, for example, require relatively light pressure to achieve a satisfactory glue line.

PVA glues, being thicker, require somewhat more pressure and this pressure should be maintained at least overnight and preferably for the 24 hours or more that it takes most PVA glues to achieve their maximum strength.

Some texts argue that greater pressure is needed for hardwoods than for softwoods, but this gets us into the grey

area of how much distortion of the timber we should tolerate around a glued joint. If the joint itself is well made, all our clamping should have to do is to bring the parts into intimate contact.

Even so, clamps should be strong enough to do their job without a whimper. There is a wide variety of clamps available; they range from G clamps (in sizes from about 75mm up to monsters with capacities of around 350mm) to bar clamps with capacities of well over a metre.

The essential characteristics to look for when selecting clamps are a) the freedom with which the various bits work and b) the rigidity of the frame and/or bar.

It's not uncommon to be told that a stiff clamp screw will "free up when it's used". Maybe. But more likely you'll still be soaking it in Penetrene six months later.

It's harder to test the frames/bars in the shop — although you can always try screwing the clamp up tightly while the shopkeeper isn't looking. If you can go on turning the screw well past the point where the clamp surfaces mate, it's obvious that the pressure is being

relieved by distortion of the frame. A little bit of this is a good thing but too much means you can't get the clamp to tighten properly.

Of course, if you tighten the clamp so much that it breaks please don't mention that you got the idea from this magazine!

In the above, we have assumed that the clamps are made from metal but they may also be made from wood (there are some excellent cam-actuated clamps on the market) or from belting (with quick grip/release buckle arrangements to secure them). The latter are used to hold multiple joint assemblies such as barrels.

The whole point of clamping is to arrange an even pressure — large or small, depending on the size of the joint and the glue being used. At the least this will often mean the use of timber pads to distribute the clamping pressure over the joint but it also frequently means using many clamps.

Unlike the tools that "do" things, the clamp's passive role tends to make them seem less important but the end quality of your woodworking joints will depend largely upon the quality of your clamps and how well you use them.


W

MACHINE TOOLS — SIDCHROME — WOODLATHES — ELU — CIG
WOODTURNING CHISELS — RADIAL ARM SAWS — AEG — NORTON — FESTO — RYOBI
ATLAS COPCO — BOSTITCH — TRITON — MAKITA — LUNA

LIMITED STOCKS


MOF 177-00
\$450
INC. SALES TAX

MOF 177-02
\$550
INC. SALES TAX




Plunge Stroke	62mm	62mm
Motor output	1600 Watts	1850 Watts
No load speed	20,000 rpm	8,000 - 20,000 rpm (infinitely variable)
Weight	5.1 kg	5.1 kg

HEGNER MULTICUT-2

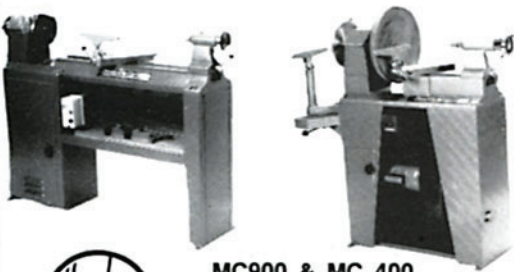


\$1250
INC. SALES TAX

C2100 8" COMBINATION SAW
10" x 6" planer/thicknesser, spindle moulder, mortiser, tenoning




AEG **NOW ONLY \$5300***




MC900 & MC 400
\$1895
PLUS TAX

READER SERVICE 16

TGS 172




SAWBENCH POSITION
Saw head 90° - 0-70mm
Saw head tilted 45° - 0-38mm




\$1550*
* 1100 WATTS


BENCH DRILL
CDP 16 speed
1/4 hp No 2 mt
Special




\$280
+ TAX



FACE PLATE CHUCK




STANDARD FACE PLATE



SCREW POINT CHUCK

SUPER CHUCK TO SUIT TOUGH, ELU, WOODFAST, HYCO & DURDEN



\$160*

1. Clamp and drill recess in project with cutter supplied
2. Simply lock chuck assembly into recess
3. Screw loaded chuck to lathe spindle and commence turning

*** PLUS SALES TAX**

EXPRESSWAY ENGINEERING SUPPLIES

Cnr Orangegrove & Doyle Ave, Unanderra. Ph (042) 711066
Monday to Friday 8-5, Saturday 9-noon

SANDVIK — INDUSTRIAL ABRASIVES — WELDERS — INDUSTRIAL MACHINE TOOLS



THE BIG BLOW

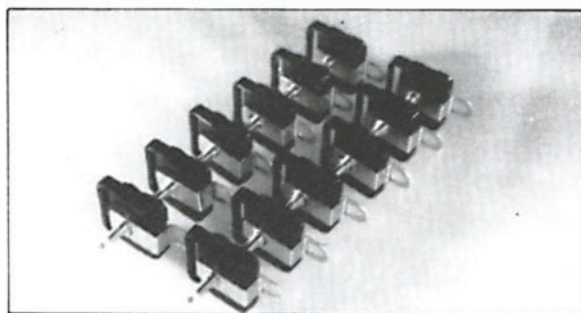
Four people died and an estimated 15 million trees were blown down in the savage storm that hit southern England late last year.

These photos give no more than a hint of the destruction. Taken in Kensington Gardens (London) in January, they show a small part of the clean-up that is still in progress. In typical English style, some wit has penned the word "SOLD" on the butt of a short log left impaled upon the Bayswater Road fence.

But this disorder in a formal English garden does little to even suggest the wrecked landscapes in the forests south west of London. Thousands of trees are still flat, one upon the other, left where they lay — domino-style — the morning after the storm.

The resources of the nation are nowhere near adequate to cope with this windfall and most of the timber will rot upon the ground. W

CHEAPER BY THE DOZEN!



Ultra Thin Quartz Clock Movements (55mm x 55mm x 15mm)

READER SERVICE
①

An extra large bulk purchase from a world renowned manufacturer enables us to renew our offer at an even better price. Each movement includes battery, hands, second sweep, hanger plate, washer and fixing nut (shaft length 9/16")

Quantity price:

12 Ultra thin quartz clock movements including packing, postage and Sales Tax \$144.00 Total

OR

12 Ultra thin quartz clock movements including packing and postage, Sales Tax excluded (official order required) \$132.00 Total



Woodwork Tool Supplies P/L

P.O. Box 297, Burwood, Vic., 3125.

— Mail and Phone Orders Only — Phone (03) 890 4596
— Cheque, Bankcard, Visa or money order accepted —



TIMBER TREAT

There are only 30 or 40 retailers in Australia who can fairly claim to be craft timber specialists. Spread unevenly across the country, they tend, naturally enough, to be concentrated in those States which combine the highest availability of timber with the largest populations.

Some have been in existence for fifty years or more, most are younger and some were established only in the past few years. A few are hardly as old as the latest woodworking movement.

Whatever their age and background, there are two characteristics that the most successful of them share — the clear intention to serve a specific part of the woodworking market and the ability to communicate with the people in that market, sharing information and offering assistance.

Increasingly, suppliers to the woodworkers of Australia appear to be using a variation of the "Trade Night" event to help them reach their customers. Timber suppliers are no exception as shown by the "demonstration day" staged recently by Trend Timbers of Musgrave, west of Sydney.

The event, one of several held each year by the company, saw scores of woodworkers visit the Trend timberyard to accept an opportunity to watch demonstrations of woodturning (Teknatool), scrollsawing (Hegner) and tool sharpening (Abbott & Ashby and PA Products) as well as the chance to cast covetous eyes on planks of exotic woods from far off parts of the globe. Although they keep some native timbers, Trend specialises in imported varieties and generally keeps more than 65 in stock.

One innovation we'd not seen before was the "blanks bench" — a table laid out with woodturning or woodcarving sized chunks, each carefully labelled with its price — all waiting to be carried off and made into something special.

Trend's next "demonstration day" will be on June 4 (8.30am to 5pm) at Cunneen St, Mulgrave, NSW; Michael Reid (Woodturning Centre, Brookvale) and Jack Williams (Dubbo) will be among the demonstrators. W



Precision tools
for
woodworking



READER
SERVICE
19

Saw Blades

Router Bits

Wood-boring drills

- Australian manufacturer of Carbide Tipped Router Bits
- Fully guaranteed against manufacturing faults
- Distributors in every State

Catalogues and Price Lists of our extensive range available from your local distributor or the manufacturer

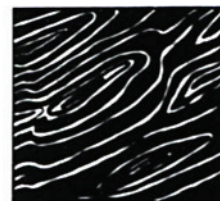
CARB-I-TOOL (AUST.) PTY. LTD.

76 Levenswell Road, Moorabbin,
Victoria, 3189, Australia.

Telephone
(03) 555 2966

Facsimile
(03) 555 8695





A BUSHMAN'S SAW

by D.L. Crisp

In the past three years, I've produced over 10,000 "split" fence posts using a chain saw. The two metre billets are rip-sawn 125 mm deep or so, rolling the billet for each cut. When the billet has been sawn for posts all the way around, the posts are then split off with a 2.7 kg hammer and steel wedges.

Setting up a chainsaw for ripping wood was something I had to learn before the job became economical. Now I have a special chain for rip-sawing and I find it extremely useful for other jobs. For example, I've used it to make 3x2's and other framing timber as well as cut large logs into slabs for another woodworker here on the Atherton Tableland.

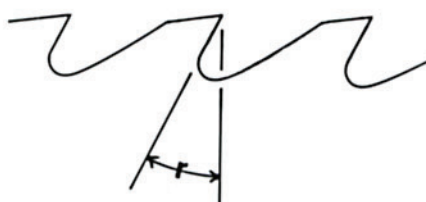
You will find that you can do your best work with a skip tooth chain. Some chain retailers call these ripping chains; they have two thirds as many teeth as a normal chain and the teeth are of the "super chisel" configuration. I've found that straight out of the box, these saw chains generally give only a "fair" cut, producing mainly sawdust, not saw chips. If my sawbench produces only sawdust when ripping, I get the saw fixed. Likewise with the ripping chain. I've found that I have to lower both the depth gauges and the file.

The recommended depth gauge settings for the chain are stamped onto the gauge in the factory — 25 means .025". How far you take them down really depends on how big your saw is. For my 75 cc saw, I use around .055". It's best to take them down .005" at a time and see how the saw works — keep going until you can make the saw work well but not over rev. (My saw always runs better after I've done some ripping as the work is constant and smooth.) An easy way to check your depth gauges is to put a straight edge over two teeth then use a feeler gauge over the bridged depth gauge.

When filing the teeth, I have to lower the file below the recommended depth of the file below the top of the teeth. But then, I cut hard wood. It's the same principle as for circular saws which also have a greater rake angle for cutting harder wood (see diagram).

When you lower your chainsaw file, it leaves a greater rake angle on the

tooth. The best filing angle for ripping is about 12°. This can be achieved in two ways. One is to hold the file at 12° and at right angles to the cutter bar. The other is to hold the file a bit lower than 90° to the bar. This has the effect of increasing the rake angle of the edge of the tooth.



A lot of people have trouble producing a flat surface with a chainsaw. The first thing you need to do if you want a good cut is to run a fairly tight chain. This allows you greater control over the saw and stops the chain from following the grain.

When I want to cut a log into slabs, I mark out the cuts with lumber chalk. I then run a string line between the high points and push the line down the middle with my finger to mark it out. The first slab should be off the side of the log with the log rolled so that the cuts are vertical. I make the rest of the cuts without quite sawing them off — leaving them all attached at one corner. If, instead, you separate each slab as it is cut, once you have about one third of the log off in slabs the whole thing rolls over and you can't set it up again. It's easier and faster to finish them all off together.

When you start cutting, just run around your marked cut with the tip of the saw taking out 5 or 10 mm and working forwards. If you don't, you will cover your line with sawdust.

You might have to repeat this a couple of times to get the line right. Then you can pour the power on, working from the front of the cut and back towards yourself. Keep the cutter





The Timber Page

bar at 45° to the wood, with both hands on the trigger handle. Stand behind the saw and keep your eye directly in line with the cutter bar.

Take out 75 or 100mm of wood during each pass, then go over it again. When you are well into the wood, you'll find that the best way to steer the saw is to watch the chain on top of the bar. If it's central in the cut, then your saw is running straight. You'll notice that I never swing the saw through the cut with the dogs sitting on the log and me pushing up on the handle.

For a big log you have to work both sides of it. If you've got a 24" cutter bar you can handle a 48" log. When I have to do this I stand the log up on its butt end and work right around it.

Using a chainsaw for breaking down logs into slabs or sawing the occasional large piece of timber or bit of scantling is fine. But don't use a chain saw to

build a house regardless of the fancy frame you've got your saw in. Too much of the log is discarded in sawdust and I've never seen a frame that allows the correct angle for the sawchain, thus overloading the chain, bar and motor.

Good luck with your wood hunting and don't forget your ear and eye protection. W



Editor's Note

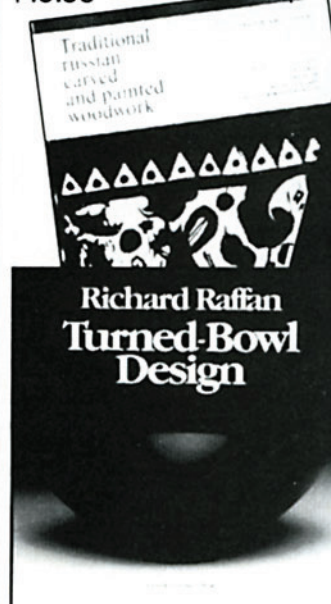
This article describes techniques which Mr Crisp has clearly found to work in practice. We should, however, comment that others may consider some of them unsafe.

The information is offered here as a contribution to our overall understanding of the many facets of wood-working. We do not suggest that any reader use the techniques mentioned without further thought and we stress the need for obtaining as much advice as possible before contemplating a change of factory settings such as the depth gauge of a saw chain.

The chainsaw is a notoriously dangerous machine which is only made safe by the exercise of extreme care.

Traditional russian carved and painted woodwork — colour throughout

\$19.95



**Richard Raffan
Turned-Bowl
Design**

**Woodturner
Magazine
\$5.95**



**Back issues
\$5.95**

**Turned Bowl Design
— \$26.95**

**BCF
BOOKSHOPS**

Specialists in Educational, Technical, Hobby & Handcraft Books
107 Elizabeth St., Brisbane, Qld. 4000. Ph: (07) 229 5616

POSTAGE: 15%
total amount
FREE Catalogue Avail.

READER
SERVICE
(19)

**END OF YEAR
SALE PRICE**

\$208 inc. tax.

**THE
MASTERCHUCK
SYSTEM**



READER
SERVICE
(20)

- True 2-way action
- Strong rigid design
- Automatic jaw spacing
- Full range of accessories



WOODTURNING SUPPLIES

Sole importer of the Masterchuck
3 Arkin Street, The Gap, Brisbane 4061

Tel: (07) 300 4545

Telex: 140472 User No. BR1709

Business Hours:

Tues/Wed/Fri — 10am to 5pm
Sat — 8am to 12 noon



Shavings

One of our readers who asks us to exhort you to BUY AUSTRALIAN, swears that this is the information contained on a card accompanying an imported air compressor:

Instructions

This is an excellent equipment with very few noises and excessive reliability. Though unfragile, it is also robust, and should not be belted.

Circuit arrangements ensure environments and input current is best at both temperatures, including snow and hot.

Very heavy fuses are supplied in plenty.

Stability is too good on full battery and this should be lowered, but the input may be reduced to danger level if desired.

The negative will be and the positive will not if supply polarity is incorrect, also, a humming noise will be introduced together with smoke.

When setting up, the best angle has no smoke and slight smell.

For accessibility without vandalism use the many entrances but switch them all off afterwards and before.

When aligning, twiddle for strong current and prevent

sparks.

The motor should be good for ever, but pregnant wear-out may occur after a few summers if heat is applied.

DO NOT DOUBT THE GUARENTEE, IT IS BACKED BY MANY YEARS WITHOUT ODOR, PATIENCE OR THREAT.

Amongst the more important hazards in publishing are typographical errors and the inadvertent use of ambiguous words. Either of these can reduce an otherwise sensible statement to gibberish or, worse still, give it an entirely wrong meaning.

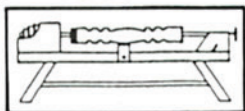
Of course, we're aware that despite our best efforts, we're guilty of both types of mistake. But that doesn't stop us fuming when we see publications — not necessarily magazines, but brochures and direct mail flyers as well — that fail to get their message across just because the writer hasn't bothered to get his (or her) facts straight.

We were doubly annoyed to find that a publication recently received in this office kept confusing "handsaws" with "portable power saws" — to the degree where the very important message of the publication was all but lost.

Time your visit to
EXPO 88 to
coincide with the:

THIRD INTERNATIONAL WOODTURNING SEMINAR

Woodturners Society
of Queensland Inc.



- DATES: 1 - 4 July 1988
- Theme: Bi-Centennial Celebrations of Woodturning Down Under.
- Venue: Griffith University, Brisbane, Australia.
- Activities:
- Lectures & Demonstrations by 11 Internationally acclaimed Woodturners
 - Juried Displays, Slides & Videos
 - Open Forums & Discussion Groups
 - Product Presentations
- Cost: \$200 (Includes lunches, morning & afternoon teas, wine & cheese evening and temporary membership of University Licensed Club).
- Convenor: Full information and registration form can be obtained by writing to Mr Neil Derrington, 64 Morningside Street, Alderley 4051. Telephone (07) 275 7277 (Business Hours) or (07) 356 1004 (After Hours).

Accommodation: Available on site if required for \$40 per night. (dinner, bed & breakfast)

EXPO 88: World EXPO 88 tickets are available from Australia Post.

POST SEMINAR WORKSHOPS:

- 6 - 9 July 1988, 9am to 4pm each day
- Mt Gravatt TAFE College (close proximity to Griffith)
- 5 Overseas Artists
- maximum 20 participants per class per day
- \$25 per day or \$85 for 4 days

READER
SERVICE
(21)

Shavings



When the heroine of a recently revived Australian telemovie was asked wasn't it time she got some reward for all the work she had put into writing, she replied: "My reward for writing a really good play will be writing a better one."
Not a bad philosophy for bowl turners, is it?

A writer in one of the woodworking club newsletters confessed:
"After making a lot of saw-dust and firewood from local timbers the (home-made) lathe was sold and Mark 2 was built. This lathe had so many pulleys, bearings etc. (12 speeds), that a ½ hp motor would stop on overloads before a chisel got near the wood."
It's refreshing to learn that other people sometimes have our problem of things not turning out the way they were intended.

You rarely see a Citroen Light 15 these days. After all, they're a pretty old car now. But whenever we see one, it makes us think of wild driving to meet a new son, nights of rabbit shooting and revelry — and trying to keep a piece of fancy French machinery alive and well in the Australian desert.

So we're not surprised that other people feel the same way about machinery they learned to love. Like the woodturner in a club newsletter who said:

"...after much rubbing and scrubbing the old green peril became my first machine...and I ventured into the mysteries in search of the elusive curly shavings...That old green peril has a lot to answer for...It's still producing large quantities of excellent work and, no doubt, still spotting its owner's shirt with "black measles"...I often think of it and of the good times we had together whilst the basic moves of an ancient craft were slowly revealed amongst the dust and the shavings...More power to you old friend and may your bearings never grow sloppy."

Craft Australia

Australia's most widely read crafts magazine

Find out about some of our finest artists in wood and other media.

Craft Australia is available by subscription or from selected newsagents and stockists.



Call your local Crafts Council for subscription details.

Ashley Iles

woodcarving & turning tools
made in the old tradition



All carving tools supplied honed ready for use

Now available from

Woodworker's Supply Company

181 Through Rd,
Brookvale Vic.
Tel: (03) 836 8249
Fax: (03) 836 4182

READER SERVICE
22



A Well Loved Classic

The Craftsman Woodturner by Peter Child

From time to time we receive a letter or contribution from a woodturner who makes reference to the books he found important in his development. Inevitably, Peter Child's "The Craftsman Woodturner" is amongst them.

Indeed, one could simply state the dates of printing and leave the matter there, for no review of a book could outweigh the commendation of numerous reprints: first published in 1971, reprinted in 1973, 1974, 1976, 1977, 1979, 1981, new edition published in 1984, reprinted in 1987.

Anything more than a brief glance at the book offers good reason for its popularity. It is at once a teaching text, in the main straight forward and easy to read, a book of projects, each described in detail for the person working alone and, finally, it is a book that demonstrates the author's own individual philosophy. Well illustrated with generally large and clear photographs and a small number of drawings, the book is divided into

two major sections — I. Principles of Turning and II. Practical Examples.

Section I begins with a description of the woodturning lathe and assumes practically no knowledge on the part of the reader. It covers the most important techniques beginning with drilling in the lathe, spends three chapters on bowl turning, another on flat work and two more on turning between centres. The essentials of safety and a discourse on most of the ancillary equipment in general use are also included.

The practical Section deals with a wide variety of projects — handles,

goblets, egg cups, peppermills, an automatic tea dispenser, a cheese chopping board, table and standard lamp bases, shallow dishes, round containers... the list is enough to keep the tyro happy for many workshop hours.

The Craftsman Woodturner by Peter Child

Softcover, 247 pp, 190 mm x 245 mm

Published by Unwin Hyman Limited (London).

Our copy from Allen & Unwin Australia, 8 Napier St, North Sydney NSW 2060.

R.R.P. \$34.95

WOODWORKING INTERNATIONAL

From enthusiastic woodworkers around the world comes a new and exciting subscription magazine which celebrates in words and pictures the international world of wood and the people who enjoy working wood.



Send for full details of this exciting new publication by Guild of Master Craftsman Publications (UK).

One year subscription: \$25

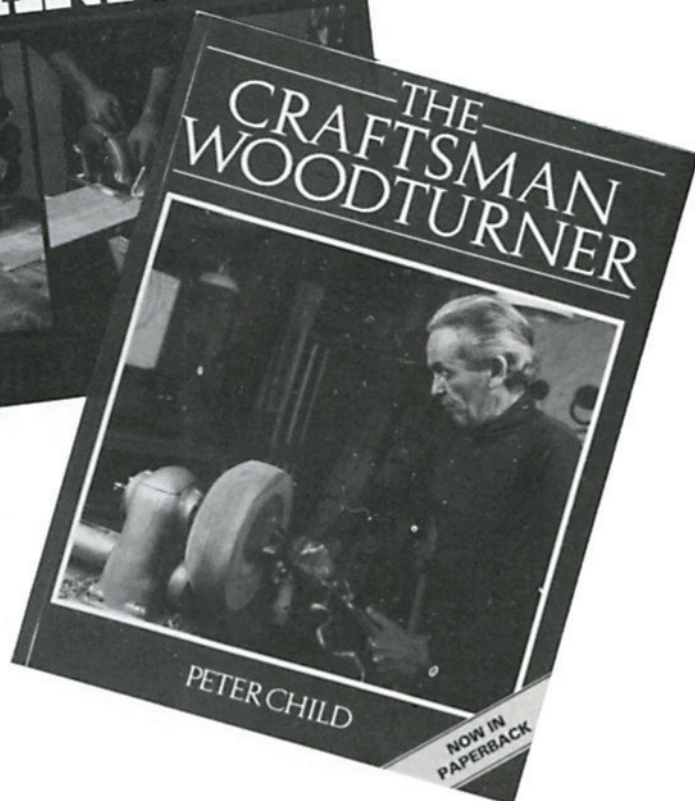
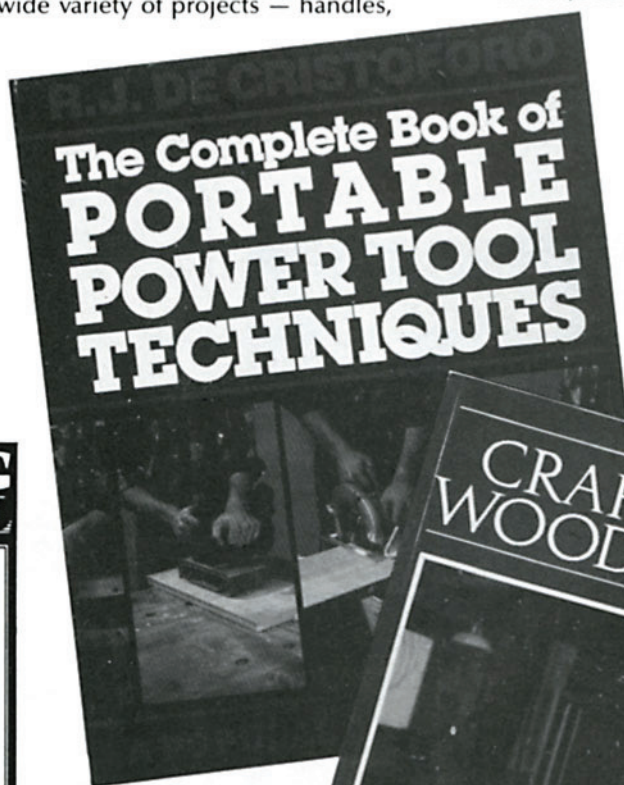
Two year subscription: \$45

(or send Bankcard/Visa/Mastercard number and expiry date) to:

Skills Book Publishing

P.O. Box 421

Rozelle, N.S.W. 2039



Book Review

Getting the most from your Power Tools

The Complete Book of Portable Power Tool Techniques
by R.J. De Cristoforo

Nick Engler, in his foreword to this book has this to say about the author: "The last time anyone counted, Cris had over thirty books and a thousand magazine articles to his credit."

Despite the fact that Engler goes on to say that "quantity doesn't tell the whole story" and that "Cris' innovation with tools is legendary...", we approached the book with caution. Was this perhaps a "formula" book, written in the slick fashion of the many ephemeral offerings that are loaded onto the market each year?

Well, after reading the book carefully, we feel that, yes, it does have a certain slickness about it, the sort of slickness that we have come to associate with Popular Science

books generally, but that's a compliment rather than a criticism.

The book deals in detail with practically all of the portable power tools. These include the Circular Saw, the Sabre Saw (we call them Jigsaws), the Reciprocating Saw (they are just beginning to come on the market here), the portable Electric Drill, Router, Belt Sander, Pad (Orbital/Finishing) Sander, Disc Sander and Polisher, Power Plane, Hand Grinder and Flexible Shaft. There are also notes on such tools as Portable Bandsaws, powered Metal Shears and Electric Staplers.

But the book is more than just a description of the tools and how they work. It also deals with how they are used, introducing the reader to the basic techniques and, in addition, a number of ancillary devices that can be made to increase the usefulness of some of

the most popular power tools — a jig to convert a belt sander into a stationary sander, for example, and a jointer jig for a power plane.

The Appendices concerned with timber and panel materials are less useful because of their US origin but a couple of the others (on abrasives and hardware) are interesting despite this.

The book is best described as a good read with enough meaty bits to make you want to try out the ideas in your own workshop.

The Complete Book of Portable Power Tool Techniques

A Popular Science Book

by R.J. De Cristoforo

Softcover, 258pp, 210mm x 260mm

Published by Sterling (U.S.)

Our copy from Skills Book Publishing, PO Box 421, Rozelle, NSW 2039.

R.R.P. \$24.95

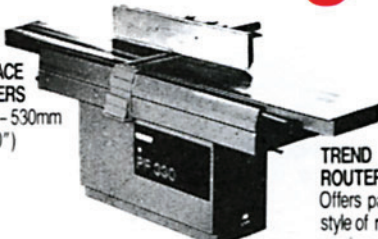


The Woodworking Specialists.



As seen on T.V.
"Towards 2000"
SYMTEC LATHE
Will reproduce
exact copies
without the use
of hand held chisels.

**SURFACE
PLANERS**
150mm - 530mm
(6" - 20")



**TREND
ROUTERGRAPH**
Offers pantograph
style of routing and
carving on a 1:1
basis. Sold
complete with
Bosch POF
Router.

We have the full range of
woodworking machinery for the
professional or enthusiast. Phone,
send the coupon or call into our
showrooms for more information on
top quality woodworking
machinery.



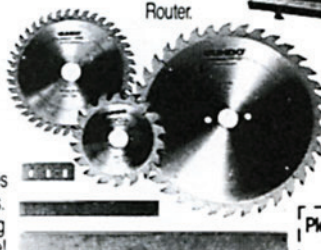
READER
SERVICE
(23)

**JYDEN MITRE
GUILLOTINE
MODEL**
For cutting frames
and mouldings.
Foot operation or
pneumatic.

BREVETTI
Back stapler
inserting machine
with coils & cartridge
magazine suitable for
picture and furniture
frames.



SAW BLADES
• Planer Blades
• Bandsaw Blades
• Chisels and Bits
• Saw Sharpening
• Plus many more!



**PORTABLE DUST
EXTRACTOR**
• Economical.
• Single phase.



HUGH W. BROWN (AUSTRALIA)

HEAD OFFICE
1301 Albany Hwy,
Cannington, W.A.
Tel (09) 458 4488
Fax (09) 451 6289

VICTORIA
The Wood Machine Shoppe
Showrooms: Factory 6, Diligent Drive
North Bayswater
Phone (03) 729 3399 Fax (03) 720 5170

Wentree:
Wollenden 1981 (Australia)
Phone (03) 749 5312
Fax (03) 749 6331

Please send more information

Name: _____

Address: _____

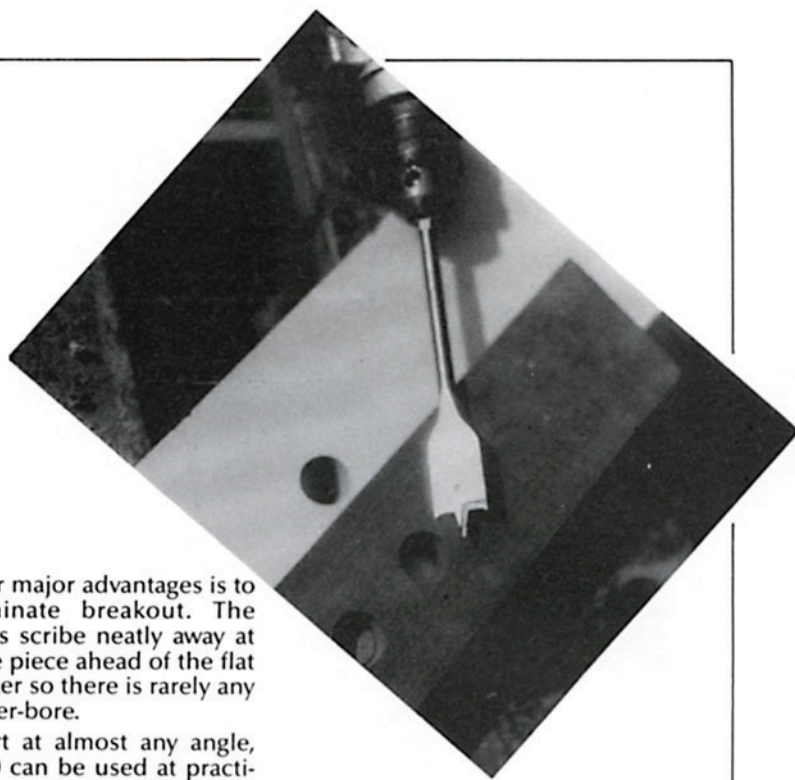
P/Code

Send to: **Hugh W. Brown**
PO Box 114, Cannington, W.A. 6107.

USER REPORT

Speedbore 2000

by The Woodman



It had to happen. Design a better mousetrap or whatever, and... you know the rest. Having used other flat bits over the last twenty-odd years I have come to know most of the perils and pitfalls of using bits that burn timber, break out the back, overheat and warp, refuse to start a cut, or generally frustrate the busy woodworker/carpenter to the point of madness.

You can sharpen flat bits, custom-shape them or do whatever you wish to make them bite better, cleaner, faster but I doubt if anything you do will make them comparable to Speedbore 2000 bits. I found these new bits unequalled for boring quick, clean, accurate holes in softwood, hardwood and composites.

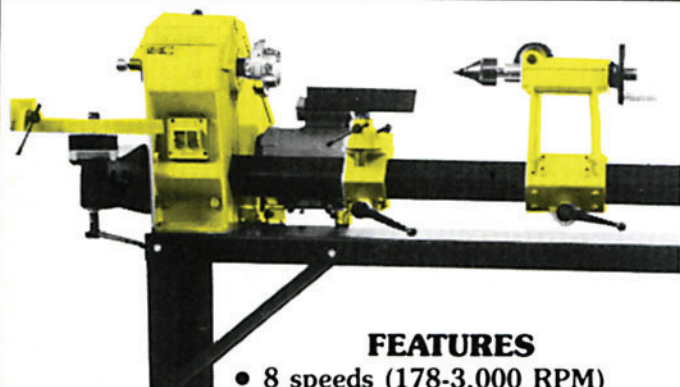
One of their major advantages is to virtually eliminate breakout. The extended spurs scribe neatly away at the back of the piece ahead of the flat part of the cutter so there is rarely any need to counter-bore.

Easy to start at almost any angle, Speedbore 2000 can be used at practically any speed and there is a wide range of sizes to suit most applications.

Bits can be resharpened with a fine triangular file but care must be taken to closely follow the angles of the various cutting edges and to remove only the dull edge.

When I received my Speedbore 2000 bits, they were just being released in Australia but by the time this Report is published you should be able to get them at many hardware stores.

W



READER
SERVICE
23

FEATURES

- 8 speeds (178-3,000 RPM)
- Cast headstock & tailstock
- Outboard turning facilities
- Large heavy duty sealed bearings

teknatool®

INTERNATIONAL

Woodturning Specialists

A LATHE THAT'S GOT WHAT IT TAKES, AT A PRICE THAT WILL REALLY SURPRISE YOU!

The Teknatool® TL1000 — Precision built to international standards — packed with features — fully supported with over 50 specialist accessories to develop your woodturning the way you want to — including the comprehensive MULTICHUCK II chucking system, the AV CENTRE SYSTEM and HITURN High Speed Steel Chisels... Teknatool®

FOR INFORMATION OR DETAILS OF YOUR NEAREST RETAILER contact:

NSW

Sydney
The Woodturning Centre
(02) 938 6699
Armidale
LW Burgess Pty Ltd
(067) 72 2227
Ballina
Woodfield Trade Supplies
(066) 86 3666
Coffs Harbour
Coffs Harbour Power Tools
(066) 52 2949
Dubbo
Jack Williams
(068) 82 8355
Gosford
Sterland Bros.
(043) 24 2211

Mittagong
Highland Machinery
(048) 71 3371
Mudgee
The Mudgee Woodturners
(063) 72 2190
Newcastle
Newcastle Saw Service
(049) 61 3601
Nowra
Direct Tools
(044) 21 0227
Orange
IVN Enterprises
(063) 62 1999
Taree
Country Comfort Woodturning
(065) 59 2962

Ron Day Woodturning Supplies
(065) 52 6488
Wagga
Koorringal Hardware
(069) 22 6927
Windsor
Trend Timber
(045) 77 5277
Tamworth
T.G. Treloar & Co.
(067) 66 2953

ACT

Artists in Wood
(062) 80 6969
Mike St Clair
(062)30 2430

QLD

State Agent
Gregory Machinery
1 Vulture St
West End 4101
(07) 844 4433
Miami
Miami Power Tools
(075) 52 8717
Yeppoon
Central Qld. Woodturners
(079) 39 1838
Cairns
North Qld. Woodworking
Machinery Supplies
(070) 51 3531

VICTORIA

Dandenong
B & G Machinery
(03) 794 7362
Glen Waverley
Glen Syndal Tools
(03) 232 1173
East Malvern
Malvern Machinery
(03) 259 9031

S.A.

State Agent
ASW Machines
13 Young St
Adelaide 5000
(08) 51 9669

N.T.

Electric City
Alice Springs
(089) 52 4232

W.A.

State Agent
Northern Machinery
5/136 Balacatta Rd
Balacatta 6021
(09) 344 5884

Products



COMBINATION ROUTER

Hitachi, makers of one of the world's most powerful routers, has introduced a lightweight (2.3kg) machine specifically for those tasks that demand a lighter touch.



Well-balanced and ergonomically designed, the new FM8 is actually two tools in one — a full-featured plunge router and, with the plunge-frame removed, a versatile, hand-held gouging and grinding tool. Powered by a 700W motor with a no-load speed of 27,000rpm (the full load speed is 13,600rpm), the FM8 is built to the same industrial quality standards as Hitachi's larger machines.

High cutting efficiency is ensured by careful design of motor size, weight, handle placement and shape. A fully incremental scale on the depth stop

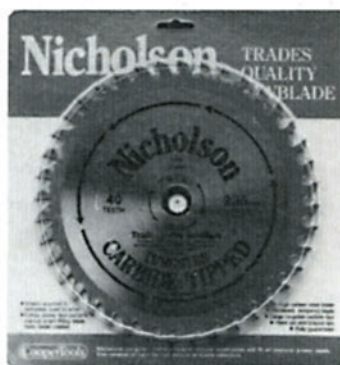
allows accurate repetitive work to be performed and features such as the switch position have been determined so as to afford easy, safe operation.

Hitachi Sales Australia Pty Ltd
153 Keys Rd Moorabbin
VIC 3189

READER SERVICE NO. 36

TRADE QUALITY SAWBLADES

Cooper Tools have released a new range of Nicholson Tungsten Carbide Tipped Circular Sawblades specially designed and made for the rigorous demands of the all day, every day



tradesman.

Nicholson Trades Quality sawblades range in size from 180mm/7¼" through 210mm/8¼", 235mm/9¼" to 235mm/10". Trades Quality blades are hardened, tempered and polished to give true,



SPECIALISED HIGH QUALITY COATINGS



Fine Buffing Oil — A rich, oil wax designed to restore the mellow, natural lustre of timber.

Proof Tints — A range of concentrated transparent stains to colour timber to various shades and may also be added to WeatherProof, SatinProof and FlatProof to achieve lighter tones.

SatinProof and FlatProof — Clear polyurethane finishes for interior applications such as furniture and panelling.

WeatherProof — Tough, UV resistant interior/exterior polyurethane finish.

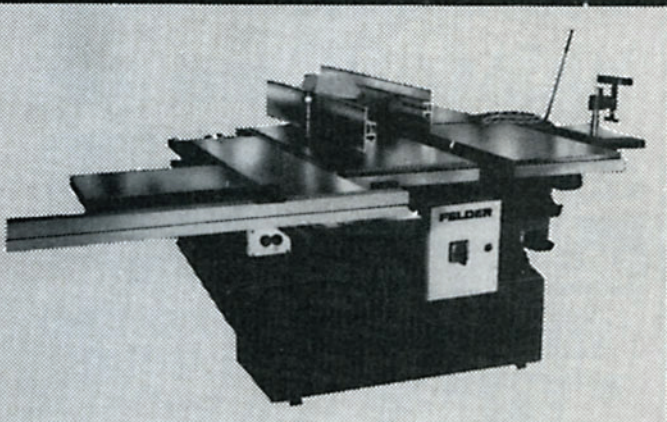
Decking Oil Fungi-Shield



For your nearest distributor contact:
Feast Watson & Co. (02) 698 1914

FELDER

Woodworking Systems



COMBINATION MACHINES
1,450mm CROSS CUT
PANEL SAWS & SPINDLE MOULDERS
PLANER THICKNESSERS
ALL IN SOLID CAST IRON



**A PLEASURE TO WORK WITH
FELDER MACHINERY**

66 Wadhurst Drive, Boronia West. Vic. 3155
Phone (03) 801 7728 Fax (03) 800 1706



Products

accurate cutting under the harshest conditions and the range of teeth to the different size blades allow everything from regular rip or crosscut use to finer joinery cutting.

The sawblades are available at most hardware stores and are packaged on display cards for protection. They feature a re-usable tip protection sleeve around the edge of the blade.

For composite use, all Nicholson TCT sawblades are fitted with arbor reduction bushes.

Nicholson TCT sawblades have large re-sharpenable tungsten tips. They are

suitable for cutting both pine and Australian hardwoods, plastics, laminates, chipboard, thin brass and aluminium.

Cooper Tools Pty Ltd
PO Box 336 Albury NSW 2640

READER SERVICE NO. 37

EASY CHUCK

A new, patented keyless chuck is now fitted to the National range of Cordless Power Tools.

The keyless chuck holds the drill or screwdriver bits in place — in forward or reverse motion. The unique mechanism allows bits to be changed quickly



and easily, whilst the streamlined close-to-the-tool design retains the balance for which National Drill/Drivers have become renowned.

National have incorporated the new keyless chuck into four types of one hour charge, Super-Torque Drill/Drivers, all with automatic spindle lock for manual screwdriving and a 5 stage adjustable clutch — the EZ 562 and EZ 566 (7.2V two speed Reversible Drill/Drivers), the EZ 570 (a

NORTHERN MACHINERY

are proud to announce their appointment as W.A. agents of the following

WOODWORKING MACHINERY

VICMARC WOOD LATHES

teknatool WOOD LATHES AND ACCESSORIES

schepbach WOODWORKING MACHINERY

TRIMBRIDGE LTD EDGEBANDING EQUIPMENT

ACN PANEL SAW WITH TILTING BLADE



NORTHERN MACHINERY PTY LTD

Unit 5, 136 Balcatta Rd, Balcatta WA 6021
Ph: (09) 344 5884

Please send more information on
Name
Address
Postcode

END OF YEAR SALE

WOOD CRAFT SUPPLIES

UP TO
50% OFF

PFEIL WOODCARVING TOOLS - ASSD. TYPES & SIZES	LESS 50%
CLOCK DIAL BEZELS - BRASS & SILVER 6" & 8"	LESS 20%
CLOCK NUMERAL RINGS - BRASS & SILVER 8"	LESS 20%
DRINK SERVER, BOTTLE OPENER, CORKSCREW (GOLD FINISH)	LESS 20%
CHROME LIGHTERS	LESS 15%
CLOAKROOM FITTINGS	LESS 30%
SANDTIMERS - 15, 30 & 60 MINUTES	LESS 20%
GLASS CHIMNEYS - VARIOUS SIZES	LESS 15%
CHEESE DOMES - 160MM & 250MM	LESS 15%
SUPER CHUCK KITS	LESS 10%
SCREW CUP CHUCKS	LESS 10%
SCREW SPIGOT CHUCKS	LESS 10%
SORBY 824H ROUND SIDE CUTTING SCRAPER	LESS 30%
SORBY 7902H LEFT HAND SIDE CUTTING SCRAPER	LESS 30%
SORBY 8200 UNIVERSAL SCRAPER	LESS 30%
SORBY HIGH SPEED STEEL AND CARBON WOODTURNING TOOLS	LESS 20%
SORBY HANDTOOLS - FIRMER CHISELS/GOUGES, PARING CHISELS, REGISTERED FIRMERS.	LESS 50%
SAW TOOTH BITS - VARIOUS SIZES 10-50MM DIAM.	LESS 20%
RUSTINS FINISHES - DANISH OIL/PLASTIC COATING	LESS 10%
BRIWAX	LESS 10%

MANY OTHER PRODUCTS AVAILABLE - SCREW BOXES • CLOCK MOVEMENTS • CERAMIC CLOCK TILES • SORBY PRECISION COMB. CHUCKS & ACCESS. • HONING STONES • BOOKS • VIDEOS • VELCRO SANDING SYSTEMS • PEPPERMILL MECH. • COFFEE GRINDERS • WALKING STICK PARTS • NUT CRACKERS • LAZY SUSAN BEARINGS • WOODLATH ACCESSORIES • FACE PLATES • CENTRES ETC.

DISCOUNTS APPLY TO CURRENT SUGG. LIST PRICES AND TO EXISTING STOCKS ONLY.
SPECIAL DISCOUNT OFFER COMMENCES 1ST MAY AND ENDS 30TH JUNE 1988, OR UNTIL SOLD OUT.

WOODFAST
MACHINERY CO.

912 PORT ROAD, WOODVILLE
STH. AUST. AUSTRALIA 5011
TELEPHONE (08) 45 2577
TELEX WDFAST AA 82899

Products



compact 9.6V two speed Reversible Drill/Driver) and the flagship model EZ 571 (a variable two-speed Drill/Driver with a Super-Torque of 165 kg/cm).

LMS Australia Pty Ltd
PO Box Mt Waverley VIC 3149

READER SERVICE NO. 38

CLEAR TIMBER FINISH

The Sikkens Coating System is designed to protect timber from weathering and to maintain the original grain and surface texture.

Sikkens Exterior Coatings are neither paints nor stains. They are pigmented wood finishes which

contain the preservatives and U.V. protection necessary to enhance the beauty of wood and to keep its original appearance for years to come. Extremely water repellent, they can be easily applied, smoothly and evenly without streaking.

Tenaru Pty Ltd
PO BOX 768 Darlinghurst
NSW 2010

READER SERVICE NO. 39

OFFSET SNIPS

PROSNIP offset snips, manufactured by Petersen Mfg Co Inc (makers of Vise-Grip pliers) are now



being distributed throughout Australia by Harold J Beer Pty Ltd. PROSNIP offset snips are designed to provide distortion free cutting of light gauge metals. They can be used for straight cutting, cutting sharp angles in one direction or 125mm circles in the other. In addition, an exclusive pinch-point wire cutter is provided.

PROSET offset snips have forged steel blades, a large omega spring and robust


nut and bolt construction. The curved handle has a plastic grip designed for maximum comfort and support. Green Grip model 20SR are for right cutting and Red Grip model 20SL are for left cutting. Both are available from most hardware stores.

Harold J Beer Pty Ltd
328-334 Johnston St
Abbotsford VIC 3067

READER SERVICE NO. 40



DASTRA



Wood carving tools.

Warehouse open Monday to Friday, 9am-4.30pm. Mail orders welcome. For illustrated catalogue with current price list send \$1 postage stamp. Bankcard, Visa or Mastercard accepted.

SOLE AUSTRALIAN AGENT

Colin B. Walker.

1 Campbell Street, Collingwood, Vic., 3066
Phone: (03) 417 2281 (A.H. 861 9797)

READER SERVICE 29

NEW INCA SWISS WOODWORKING MACHINES



PRECISION SAW BENCH RANGE

with sliding carriage/extension table

MASTER



250mm Blade Diam.

PROFESSIONAL



305mm Blade Diam.



**PROFESSIONAL PLANER
THICKNESSER**
400mm x 216mm capacity

CALL IN/MAIL IN FOR BROCHURE



280 Parramatta Road
Granville 2142
Phone (02) 637-9055
Fax (02) 682-1427
Importers Dugco Australia P/L

READER SERVICE 30



BOSCH RE-INVENTS SAW

The Bosch PFZ 55E all-purpose saw, which has met with great success overseas, has been released in Australia.

The saw does handyman jobs, reaching into awkward spots that are virtually impossible for any other power saw.

A full range of Bosch blades allows the powerful 550W all-purpose saw to slice through everything from timber to steel, fibreglass, plastic, plaster, even expanded concrete.

With a special bi-metallic blade, the PFZ 550E can saw at an angle or cut

flush with a surface.

To develop this unique, versatile product, Bosch had to "re-invent" the saw, using the latest techniques in design. As a result, the PFZ 550E, weighs only 2.6kg, utilises electronics for speed adjustment and looks like no other saw — yet it performs all of the roles of the handsaw, jigsaw and chainsaw.

It can be used by left or righthanders to cut quickly and neatly through wood up to 150mm thick and steel up to 8mm thick. A movable baseplate mounted at the throat of the machine acts as a cutting guide, allows adjustment of the cutting



depth and permits cutting into the centre of sheet materials without the necessity for drilling a pilot hole.

Robert Bosch (Australia) Pty Ltd. Cnr Centre & McNaughton Rds Clayton VIC 3168

READER SERVICE NO. 41

WOODTURNERS

Talk to an expert about your needs
— Lathes, Tools, Chucks, Project Components, Finishes, Abrasives, Tuition.

at

THE WOODTURNING CENTRE

• 6 ROGER STREET, BROOKVALE. 2100

Phone (02) 938 6699



AGENTS FOR

TEKNATOOL LATHES
& WOODWORKING EQUIPMENT

DABAR LATHES

VICMARC LATHES

READER
SERVICE
31

CROSS ELECTRICAL SUPPLIES PTY. LTD.

NOW AT



8 Pitt Way
Myaree, W.A.
Ph: (09) 330 3137

90 Blair Street
Bunbury, W.A.
Ph: (097) 21 5858

Direct importers of woodturning accessories, waxes, polishes, varnishes, books, magazines, chisels — woodturning & carving. Large range woodlathes — Tough, W/Fast, Durden, "T" GEM, etc. Woodworking machinery, power tools & accessories.

READER
SERVICE
32

THE COMPLETE WOODWORK CENTRE

Everything for Amateur & Professional

At the National Woodworking Conference late last year, we extracted a promise of an article from Jim Svensson of Queensland.

A man of his word, Jim sent us this User Report showing ecstatic praise for his Vicmarc VL250

USER REPORT

Vicmarc VL250

Vicmarc Machinery manufacture a number of different types of lathes, varying in price. The VL250 is the top of their range.

When I first began to talk to Vic and Marc, the brothers who manufacture these machines, it seemed a woodturner's dream to be told: "This is a prototype. Use it — anything you feel could be better — we'll change." Yet the statement was genuine and in the end I got a lathe with a differently designed stand, lay shaft and tool rest. This is now the production model.

For the serious woodturner, I consider the VL250 to be the ultimate machine. Well machined, with a cast iron bed, headstock and tailstock, and an outboard toolrest of novel design, it is a very comfortable and versatile lathe to use.

My VL250 has handled with ease, out-of-round logs one metre plus long and 450mm in diameter (albeit, I needed a hand to get the log in the lathe), natural edged bowls one metre wide outboard and a half metre inboard, and a variety of smaller objects including miniatures. The machine is not bolted down. If there is any vibration, I simply lower the speed — no problems!

To avoid any accident to oneself, I believe the power of a lathe transmitted to the headstock should be such that the turner can physically stop the turning wood with the tool being used.

Many turners get around this aspect of safety by having a "slipping belt". The VL250 lay shaft system is designed to

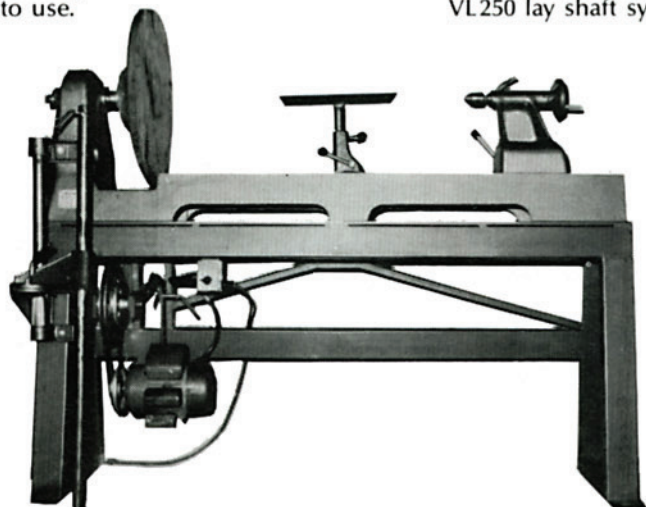
give ample power, even at the slowest speed, without undue danger to the user.

The outboard toolrest design is excellent with the bar that holds the toolrest going to the floor and absorbing the jar of the tool and the rest. It can be swung around and used to turn the back of pieces mounted on the internal faceplate. Fantastic idea! You can genuinely turn a 600mm platter or 500mm bowl inboard. The internal tool rest is not in the way of the revolving wood.

The tool rest is secured by a camlock action on the bed and a lever lock on the post. Strong and functional — simple edge with minimal tool post interference. It is very easy to adjust and use.

I have found Vic and Marc extremely obliging, being prepared to ensure user satisfaction with a willing manner and an astute awareness of customer needs. Within the gambit of fairness and their factory's limitations, they are prepared to change, alter, reconstruct anything the customer desires.

In summary, the VL250 is a robust and versatile lathe, simple to use with the capacity to handle almost all aspects of turned work. W



VL250 Specifications

Swing over bed	500 mm
Swing over gap	600 mm
Distance between centres	1300 mm
Spindle nose bored	No. 2 Morse Taper
Hole through spindle	13 mm
RH & LH spindle nose thread	M 30x3.5
Tailstock spindle bored	No. 2 Morse Taper
Hole through tailstock barrel	10.5 mm
No. of speeds	8
Spindle speeds rpm	144, 288, 360, 576, 720, 1440, 1800, 2880

Net weight	160 kg
PRICE (excl. S.T.)	\$2930

Copy attachment for VL250

Max copy length	1000 mm or 1250 mm
Max copy diam	300 mm
PRICE (excl. S.T.)	\$755

Perkins

As well as being the trusted name in Paper Paste, we can now supply P.V.A. Type, Craft, Hobby and Woodworking Glues.

50ml	Bottle with spout
250ml	Bottle with spout
500ml	Bottle
2.25L	Bottle
20L	Pail

Phone (02) 637 9357

Fax (02) 637 9253

or write

PERKINS PRODUCTS PTY LTD

14 George St. Granville NSW 2142

(Interstate phone for name & address of local agent)



Directory

New South Wales

Don & Greg House

LICENSED DEALERS IN SECOND HAND TOOLS

Specialising in Hand tools,
Stanley & Record Planes etc.,
Woodturning Lathes —
Bandsaws — Table Saws —
Jointers — Hand Power Tools

ST. IVES — SYDNEY N.S.W.
(02) 44 4549 — (02) 449 9140

New South Wales

Anagote Pty. Ltd.

*Rare & unusual
Australian timbers
for any special purpose*

98 Taylor St.,
Annandale, N.S.W. 2038
Tel: (02) 660 1382

New South Wales

RENNIKS

NEW, USED, REBUILT
WOODWORKING MACHINERY

All Equipment
Accessories & Sundries

CHAS. E. SKINNER PTY. LTD.

Established 65 years
39D College Street,
GLADESVILLE, 2111
(02) 816 4144

New South Wales



PROFESSIONAL ADVICE ON

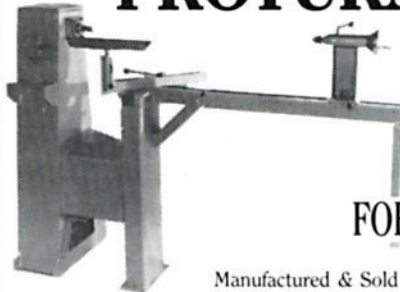
- Tax-Efficient Investment
- Insurance Bond (Tax-Paid)
- Rollovers
- Annuities, Deferred Annuities, A.D.F.S.
- Superannuation: Company Fund, Director, Key Man.

For further information contact
Norman Yuen **(02) 412 0219**

Zenith Centre
13/821 Pacific Hwy, Chatswood 2067

New South Wales

PROTURN LATHES



- Comes Ready To Use
- Long Bed - 1100mm cap
- Diameter - 1120mm

**PROFESSIONAL MACHINE
FOR PROFESSIONAL RESULTS**

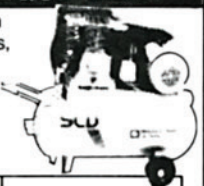
Manufactured & Sold by **HILL O'BRIEN ENGINEERING**
Unit 2, 47 Lawson Cr., Coffs Harbour, 2450. (066) 51 1720

New South Wales

BEST DEALS IN ELECTRIC & AIR POWER EQUIPMENT



- Specials on Generators, M.I.G. Welders & Bench Drills, Electric Motors, Macraft 12" Blade Site Saws, Combinations & Panel Saws, Scroll Saws, Overhead Routers, Horz./Vert. Boring Machines.
- Best advice on Power Tools including A.E.G., Bosch, Hitachi, Makita, Ryobi, Rupes, Metabo, Compressors, Nail Guns, etc.



WOODWORKING RANGE					
SAWMASTER	DURDEN	ELEKTRA	INCA	METABO-WOODFAST	
RADIAL ARMS	MASPORT	BECKUM	DUGCO	PANEL SAWS	
GRANVILLE 280 Parramatta Rd. (Next to Bob Jane) 637-9055 FAX: 682-1427	LIVERPOOL 389 Hume Hwy. (Cnr. Reilly St) 601-4353	CARINGBAH 84 Captain Cook Rd. (Opp. Caltex Garage) 524-6867	CITY 52 Wentworth Ave. (Opp. Goulburn St) 211-0516	MINCHINBURY HOMETOWN (Hometown Shop 18) 625-2461	

PP732

New South Wales



AVRO DISTRIBUTORS

LUNA • EMCO • DURDEN Woodworking Machinery

METABO • ELU Power Tools

BESSEY Clamps **3M • SELLEYS** Abrasives, Adhesives

LUNA • HENRY TAYLOR • PFEIL Chisels

TAMWORTH (067) 65 7799

P.O. Box 417 Tamworth 2340

New South Wales

Buy your saw direct from the manufacturer



CHAPMAN SAWS

Six generations of sawmakers to Australia

**Sales and Service
to the whole of Australia**

- Full repair & sharpening service
- Large range of Tungsten saws and standard lines ex stock or saws manufactured to order
- For industry, builders & handymen
- Bandsaws & router bits sold

H. T. CHAPMAN PTY. LTD.

9 Rothesay Ave., Ryde (Meadowbank) N.S.W. Australia 2113
Tel: (02) 80 3746 (02) 807 6216 Fax: (02) 807 2005 7.00am-4.00pm Monday-Friday

Directory

New South Wales

J. SKINNER PTY. LTD.

Competitive Prices on
Quality Used Machinery

- WOOD LATHES
- THICKNESS PLANERS
- RADIAL ARM SAWS
- PEDESTAL DRILLS
- DUST EXTRACTORS

All classes of machinery, purchased and sold.

Inquiries and inspections invited.

(02) 698 1963 690 1833

Fax: (02) 319 3283

59 Botany Road Waterloo 2017

New South Wales

NEWCASTLE

TOOL SPECIALISTS
POWER TOOL WAREHOUSE
TOOL AND MACHINERY
SALES AT WAREHOUSE PRICES

Tool Specialists
40 Brown Road
Broadmeadow
N.S.W. 2292

(049) 69 2978 OR 69 3186

New South Wales

coffs harbour **POWER TOOLS**
522 844

37 Lawson Crescent, Coff's Harbour 2450

Northcoast Distributors
for Teknatool,
Sorby, Chisels, Chucks



Woodturning
Accessories

New South Wales



AKARM
TOOLS & EQUIPMENT

HITACHI

BOSCH ELU
RUPES METABO

GENERATORS

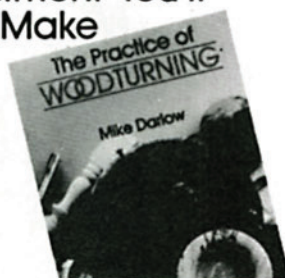
- POWER TOOLS
- WELDERS OF ELECTRODES
- AIR TOOLS
- WOODWORKING MACHINERY
- COMPRESSORS
- ABRASIVES
- NAILING GUNS
- FIRE EXTINGUISHERS

LISMORE 21 2081

SHOP 2, 132 DAWSON STREET, LISMORE
(NEXT TO CAR WASH)

New South Wales

The Best Woodturning
Investment You'll
Ever Make



"The Practice of
Woodturning" by
Mike Darlow

Not just a re-hash of other
books — this new book
explains the why as well as the
how of woodturning.

For your copy of The Practice
of Woodturning, send \$32.95
(includes post & pack) to The
Melaleuca Press, 20A City
Road, Chippendale, Australia
NSW 2008

New South Wales

GES TRADING
All Engineer's Supplies

LARGE RANGE

- MACHINERY
- POWER TOOLS
- HAND TOOLS

**COMPLETE RANGE OF
ABRASIVE BELTS & DISCS**

24 3333

332 MANN STREET, GOSFORD

New South Wales



ACADEMY SAW WORKS PTY LTD

16-18 MURIEL AVENUE, RYDALMERE 2116

(02) 638 4099

READER'S DISCOUNT 10% — ASK FOR RON
REPAIRS AND SALES

All Types of Circular and Bandsaw Blades for Timber • Tungsten-Carbide Tipped
Saws, Router Bits, Boring Bits, Spindle Cutters, Groovers, Profile Cutters, Square
Edgers, Jointer Knives, Trench Heads, Dado Sets • Laminated and Solid HSS
Moulding Knives • HSS Thin Jointer, Spindle and Planer Knives • Moulding
Heads and Spindle Collars • Mortise Chains, Drills and Chisels • Saw Chain

ALL STANDARD ITEMS EX STOCK

New South Wales

**TRANSWAVE
CONVERTER**

240V SINGLE 415V 3 PHASE

Now you can use your industrial
motors/machines at home.

W.J. ATKINSON — "ULANDI"
MARSDEN RD. LOWTHER 2790

(063) 59 3268

New South Wales

DISCOUNT PRICES ON

HAFCO - WOODFAST - LUNA - DURDEN - SCHEPPACH
NEW & USED ENGINEERING & WORKSHOP EQUIPMENT
LATHES, MILLS, DRILLS, COMPRESSORS, WELDERS

HARE & FORBES PTY LTD (02) 6334099 180 GEORGE ST PARRAMATTA 2150

FREE 1987 20 Page COLOUR CATALOGUE with PRICES on our huge range of New & Used Machinery

Please send to: NAME

ADDRESS P/CODE

Directory

New South Wales

KUTZALL®



Rotary Burrs

KUTZALL Carbide Rotary Burrs for all cutting and carving. Available with 1/4" or 1/2" shanks in five shapes and two grades — sliver (coarse) for roughing-out and gold (fine) for finishing. Write or call for details & prices.

CARBRAVE Pty. Ltd.
P.O. Box 509, Coffs Harbour
N.S.W. 2450 Tel: (066) 53 1726

New South Wales

Epoxy Resin

WEST System: The ultimate water proof coating and timber glue.

Easy to use dispensers for accurate, no mess mixing.

Rapid Cure: 4 Minute Epoxy in 1/2, 1/4, and 2 litre packs for volume users.

(02) 938 3733 for stockist.

New South Wales



FORSTNER pattern
Wood Machine Bits
CLIFTON Planes.



Chisels and Gouges



Vices Planes

MAGNET SERVICES
68 VISTA ST. SANS SOUCI
N.S.W. AUSTRALIA 2219

PHONE
(02) 529 7935

New South Wales

make sure it's an



Paint Brushes - Paint Rollers
Painting Tools - Aluminium &
Fibreglass Ladders - Power Rollers
Electric Airless Spray Guns
Aluminium Mobile Towers

Head Office: 29-31 Alfred St., CAMPSIE
787 2111

BRANCHES IN ALL STATES

New South Wales

DUGCO AUSTRALIA represents

DUGCO
WORKBENCHES



Precision Woodworking Machines from
Switzerland.



Garrett Wade
Specialty Hand Tools, ex Europe
— USA — Japan, etc.
Books and Catalogues.



Garrett Wade — DIRECT
MAIL CATALOGUE SERVICE
— Bankcard, etc. available.
A wide selection of the worlds
finest specialty woodworking
hand tools for cabinet makers,
turners and carvers.

DUGCO PTY LTD (Australia) 280 Parramatta Road, Granville 2142
Phone: 637-2101. Fax: 682-1427.

PP740

New South Wales

BENCH GRINDER & PA MULTI-TOOL

A MUST IN EVERY WORKSHOP



ABBOTT & ASHBY PTY LTD
18 TREACY ST. HURSTVILLE 2220
Ph. 02 570 3033

Victoria/ACT



ADAMS TIMBER
FINE TIMBER SPECIALISTS

Melbourne 45 km Post
Maroondah Hwy
Coldstream VIC 3770
Ph: (03) 739 1255

Canberra
'Cuppacumbalong
Woodworks'
Naas Rd.
Tharwa ACT 2620
Ph: (062) 37 5119

TIMBERS IN STOCK INCLUDE:
Tasmanian Blackwood, Huon Pine,
Celery Top Pine, King William Pine,
Myrtle, Sassafras, Walnut, Rosewood,
Ash, Oak, Ebony, Zebrawood, Rock
Maple, Cedar, Camphour Laurel, Jarrah,
Jarrah Burls, Blackboy Roots,
Mahogany, Kauri, Jellytong, Silky Oak,
She Oak, and many more.
Dressing, resawing and kiln drying
services available.

Small and large orders welcome.

New South Wales

POWER TOOL SALES & SERVICE CENTRES

Tool repairs, spare parts
and accessories

- Shop 9, No 2 Chard Road,
Brookvale (02) 938 3958.
- 174 Penshurst Street
Willoughby (02) 958 8739

Victoria

WOLFENDEN

Machinery Manufacturer's & Merchants

**A LARGE RANGE OF QUALITY MACHINERY
FOR EDUCATION, INDUSTRY AND THE CRAFTSMAN**

**WOODFAST
SUPERSAW
HEGNER**

**DURDEN
WALDOWN
WOLFENDEN**

Allen Wolfenden Machinery Pty. Ltd.

4 Halsey Road, AIRPORT WEST, Melbourne, Vic. 3042 Tel: (03) 338 3300

Directory

New South Wales

STURT SCHOOL FOR WOOD



The School offers a thorough training for the committed woodworker providing a sound foundation in the craft.

Alan Wale The Director,
Sturt School For Wood,
Range Road, Mittagong,
N.S.W. 2575. Tel: (048) 71 2175

A.C.T.

The Gallery

GINNINDERRA VILLAGE
Barton Hwy. Gungahlin
ACT 2617

Featuring leading artists
including Pro Hart and John Guy.
Selected pottery and woodturning.
Resident woodturner: Mike St. Clair.

(062) 30 2686

GRAHAM &
MAREE SHINNICK

A.C.T.



Ginninderra Village
Barton Highway
Gungahlin, ACT 2617
Tel. (062) 30 2430

OPEN 7 DAYS A WEEK
PHONE (062) 30 2430
Please phone between 4 and 5 p.m.

Specialising in
Teknatool Lathes and accessories
Woodfast, Daybar lathes and accessories
Sorby and Ashley Iles H.S.S. gouges
and steels for wood turning Sorby super combination
chucks, Sanding Disks and Papers

A.C.T. Agents for Watsonia oils and finishes,
Rustins Plastic Coatings, Sanding Sealants,
Waxes, Woodturning Books

Makers of Hand Crafted Timber Articles, Regular
Workshops and classes conducted by Mike St. Clair,
Resident Woodturner

Victoria

Woodworker's Supply Co.

Ashley Iles Tools,
French Polish requisites,
& Ceramic Tiles.

Contact John Daley

179 Through Rd, Burwood Vic.
Tel: (03) 836 8249
Fax: (03) 836 4182

Not connected with
any other company.

Victoria

CENTRAL POWER TOOL REPAIR CO. PTY. LIMITED.

* For Personal Service
See Len, Chris, Arthur,
or George

* All Brands Of Power
Tools Expertly
Repaired

CENTRAL

POWER TOOLS-SALES & SERVICE

455 Heidelberg Rd., Fairfield 3076 Phone (03) 481 7353



Victoria

DIRECT IMPORTERS OF THE COMPLETE RANGE OF SCHEPPACH MACHINES

plus PANEL SAWS, PLANERS, DUST EXTRACTORS ETC

Distributors in all states

Call or write:

WMS

Woodworking
Machinery
Specialists

726 Heidelberg Rd.,
Alphington, Vic 3078
Phone (03) 497 2966
Telex 152841

Victoria

Shoda Travers (Australia) Pty. Ltd.

Incorporated in Victoria



Saw & Cutter Specialists • Sharpening Service
Manufacture and Suppliers of Woodworking Cutters

174 Boundary Road, Braeside, Victoria 3195
Telephone: (03) 580 7055 Fax: (03) 580 6171

South Australia

The Woodcarvers World

PFEIL Woodcarving Tools,
SPANNSAEGE Woodturning Tool,
HALLS ARKANSAS Sharpening Stone,
HEGNER Scroll Saws, CONOVER
Spokeshave, RIFFLER Files,
Special 15% discount on CONOVER
SPOKESHAVE, all German
Woodturning Tools and corner and
splicing clamps.

Demonstrations Given
THE WOODCARVERS WORLD

504 Glynburn Rd.,
Burnside S.A. 5066 Tel: (08) 333 2977

South Australia



durden
WOODWORKING MACHINERY

PACEMAKER
UNIVERSAL WOODWORKER

SAWS! — MITRES! — PLANES! —
REBATES! — MOULDS! — GROOVES!

JUNIOR JOINER

The Transportable Home Woodworker.

It's compact, it's tough and it's competitive!

Saws, Grooves, Mitres, Planes, Rebates, Drills, Bore-Sands

**ELECTRIC POWER TOOL
SERVICES PTY. LTD.**

1 Whitmore Square Adelaide 5000 Tel: (08) 212 5444
48 Research Rd. Pooraka 5095 Tel: (08) 349 5344

Directory

Victoria

CERTIFICATE OF APPLIED ART WOODCRAFT

- A two year full-time or equivalent part-time course providing a high level of training in woodcraft.
- Areas of study include drawing, construction, turning, technical drawing and wood technology.
- For further information and enrolment contact

Kevin Breheny 051 52 6711
Box 886
Bairnsdale
3875



Victoria

veneers

Specialists in beautiful timber veneers for use in cabinet making, marquetry, boat building, furniture restoration, etc. Enquiries welcomed from all States. Large and small quantities available.

Ranger Timbers Pty. Ltd.
9 Alfred St. Blackburn Vic 3130
Phone: (03) 877 6767, (03) 894 1981
Fax: (03) 894 1976

Victoria

BENCH GRINDER & PA MULTI-TOOL

A MUST IN
EVERY
WORKSHOP



KAYLOCK PTY LTD
39 IRELAND ST. BURWOOD 3125
Ph. 03 288 7355

Victoria



Woodman Group

THE AMAZING
TEKNA TOOL
WOOD LATHE

- Hollow spindles
- 2M1 Standard boxes accept wide range of centres
- Eight Speeds. It is important to choose the right turning speed. These eight speeds are carefully selected to cover a wide range from large bowls to small spindle work.

STANDARD EQUIPMENT

- 150mm (6") Faceplate Right-hand
- Spur (Drive) Centre 2M1
- Tailstock Centre 2M1
- 200mm (8") Toolrest
- Motor Switch • Motor Belt
- 8 Speed Motor Pulley (1/4" Bore)
- 8 Speed Headstock Pulley
- Adjustment Spanners and Locks
- 24 Division Spindle Index
- Lathe Manual

ACCESSORIES:

- MULTICLICK II
- AV CENTRE SYSTEM
- HITURN HIGH SPEED STEEL CHISELS WITH REPLACEABLE TIPS

DANDENONG B & G MACHINERY 113 Chertsey Rd (03) 794 7362	GLEN WAVERLEY GLEN SYNDAL TOOLS 15 Coleman Pde (03) 232 1173	MALVERN EAST MALVERN MACHINERY 1822 Malvern Rd (03) 259 9031
---	--	--

Queensland



AUSTRALIA'S
LARGEST

You can **"DO-IT-YOURSELF"**

CLOCK SPECIALIST

CLOCK MOVEMENT SUPPLIERS
1 Medora Street, DURACK.
BRISBANE 4077. QLD

Send for these catalogues at \$2.00 ea. or all (5) for \$8.00 posted free.

Queensland



156 Ipswich Road
Woolloongabba 4102

Phone (07) 393 0924

- Large range of H.S.S. tools, chucks, plans, clock and weather station parts and accessories for turning and carving.
- Stockist of Golding & Teknatool lathes.
- Turning and carving lessons given.
- Bankcard, Mastercard, Visacard accepted.
- Mail orders a pleasure.
- Visit our New Show Room and Workshop for interest and inspiration.
- Ample off street parking at rear.

Queensland

WOODTURNING SUPPLIES

- Quality Lathes, Chucks, Turning & Carving Tools
- Henry Taylor & Sorby High Speed Woodturning Tools
Pfeil Carving Tools

- Project Accessories — Barometers, Clocks, Salt & Pepper Mills, Ceramic Tiles, Finishes

CLASSES ARRANGED — MAIL ORDER A SPECIALTY

3 Arkin St., The Gap, Qld. 4061
Ph (07) 300 4545. Closed Mon & Thurs.



South Australia

TOY PLANS MAIL ORDER CATALOGUE.



Over 4 dozen plans
to choose.
\$4.00 plus \$1.50 post.
(Postpak Bag used.)

Roger Jenkins,
P.O. Box 162,
Yorketown, S.A. 5576.
Enq: (088) 52 1660.
(7 days, evenings
preferred.)

If in area, call in at Showroom/sales office.

Directory

Victoria

MELBOURNE
SCHOOL OF
WOODCRAFT

03 4194094

The School offers a Two Year, Full-Time course in Woodcraft, a series of semester based Woodcraft courses and workshop space for the practicing woodcraft person.

219 ARGYLE ST
FITZROY 3065

Victoria

SPECIALISTS IN
WOODTURNING TOOLS
(CHECK OUR PRICES BEFORE YOU BUY!)

SOLE AUSTRALIAN IMPORTERS OF
RUSTINS DANISH OIL
RUSINS PLASTIC COATING

LARGEST RANGE OF
WOODTURNING ACCESSORIES AND
TIMBER BLANKS IN AUSTRALIA

THE WOODSMITH

43 Lwr. Heidelberg Rd, Ivanhoe 3079

Phone: (03) 497 4595

Open: Wed, Thurs, Fri: 1 — 5 pm

Sat: 9:30 — 12 noon

Queensland

**POWER TOOLS AND
WOODWORKING MACHINERY**



**SALES,
SERVICE
& REPAIRS**

MIAMI POWER TOOLS

1 Avalon St., Miami, Gold Coast 4220

PH: (075) 52 8377

Queensland



TULK MANUFACTURERS
IMPORTERS & SUPPLIERS
OF QUALITY CLOCK PARTS

- QUARTZ MOVEMENTS RANGE
mini, pendulum, chiming, striking.
- ACCESSORIES — large selection
hands, dials, numerals, domed glass bezels
- Large Range Sports & Trophy Dials
- New English Cutlery Blanks
- GRANDFATHER CLOCK
MOVEMENTS

Write for brochure by 66 QUEEN'S ESP.
sending 4 standard THORNESIDE 4158
letter rate stamps. TEL. (07) 207 2743

South Australia

FLEX-I-GRIT SANDING FILM

The patented revolutionary sanding
film on polyester. Flexible, tough,
re-usable.

Does everything sandpaper does —
except crack, peel, tear, clog, scratch
or wear out quickly.

**AT LAST AN END TO THE FRUSTRATION OF TORN AND
RAGGED BITS OF SANDPAPER**

All the important abrasives on tough, tear resistant polyester film — engineered
for maximum bond and flexibility.



Moyco S.A.
567 Portrush Rd.
Glenunga S.A.

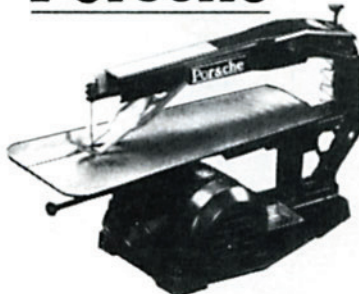
Ph. 08 79 2725

Tlx. AA186332

Distributors enquiries welcome

South Australia

Porsche



FLINTWARE (S.A.) Pty Ltd

62 Grote St.
Adelaide 5000

1198 South Rd.
Clovell Park 5042

Ph (08) 51 5707

Suppliers of Top Quality Hand &
Power Tools including:
Henry Taylor Turning & Carving Tools
Porsche Workshop Equipment
Dremel Creative Power Tools
Bosch Hitachi
Makita AEG etc.

National

AUSTRALIA'S LARGEST RANGE OF
CLOCK MOVEMENTS
DELIVERED NATIONWIDE

THE AUSTRALIAN
& NEW ZEALAND
CLOCK BUILDER



Send for your copy
These two publications combine to form
a beautiful book illustrating D.I.Y.
clocks, dolls houses, woodworking
kits, toys and over 500 other
project plans for the home &
garden.

For your copy send \$5 with
your name & address to:
"You Can Make It"
615 New South Head Rd.
Rose Bay 2029, Sydney.
Ph: (02) 326 1450



National

T-CUT

SUPER SAW

From the manufacturers of

T-CUT

Router Bits

**Jig Saw Blades
Router Bits**

E & F STANLEY PTY. LTD.
P.O. Box 73, Rozelle, N.S.W. 2039
Tel: (02) 555 1722

AND ALL LEADING HARDWARE STORES

Directory

Tasmania

MORRISONS SAWMILL HUON PINE

Catering for the Furniture Maker,
Turner, Boatbuilder and Carver.

- buy more cheaply from primary industry
- transport arranged on all sawn timber.

ALSO AVAILABLE Craftwood
\$120 per tonne (own transport must
be arranged)

P.O. Box 8 Strahan 7468 TAS
PH (004) 71 7235 B.H.

Tasmania

HEGNER UNIVERSAL



SCROLL SAWS

4 Models. Full Accessory Range.

BUY DIRECT & SAVE.

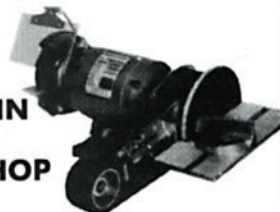
MIK INTERNATIONAL.

P.O. Box 70, Burnside. 5066
Ph. (08) 333 2977

Tasmania

BENCH GRINDER & PA MULTI-TOOL

**A MUST IN
EVERY
WORKSHOP**



ALLEN LEWIS AGENCIES

139 CAMBRIDGE ST. LAUNCESTON 7250
Ph. 003 44 5089

*Say
you saw
it in
"The
Australian
Woodworker"*

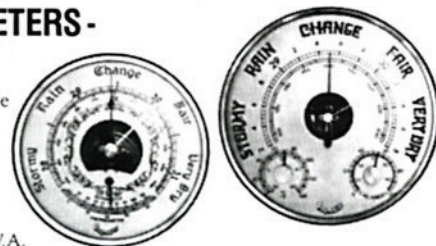
National

BAROMETERS - THERMOMETERS - CUTLERY BLANKS etc

Top English quality accessories available
direct from sole Australian
agent/Importer at wholesale prices.

Quantity Discounts

Send \$1 (stamps) for details and prices —
refundable on first order over \$10. Please
indicate area of interest. All States except W.A.



CRAFT IMPORTS

P.O. Box 163 Applecross Western Australia 6153 Ph.(00) 364 4470

National

Luna International

AGENTS FOR

**LUNA MACHINES, HSS CHISELS, TORMEK WET
GRINDERS, NOBEX MITRE SAWS.**

EMCO Metalworking and Woodworking Machines.
Suppliers of all types of machinery and power tools for
the professional hobbyist and tradesperson.

NSW

303 The Horsley Drive Fairfield NSW 2165
Ph: (02) 728 3399 Fax: (02) 724 7814

QLD

3 Carlyle Street Springwood QLD 4127
Ph: (07) 808 2211 Fax: (07) 808 4947

National



"The Chief Australian Abrasives Company"

Offers a complete range for
the Australian Woodworker.

Enquiries

Melbourne	463 0211	Sydney	638 7422
Brisbane	343 2011	Townsville	79 2048
Adelaide	47 1644	Perth	247 8126
Launceston	44 2686	Darwin	84 3653

National



AUSTRALIAN VENEERS PTY LTD

We supply quality quarter and crown sliced
veneers to the decorative wood veneered
panel industry and furniture industry
throughout Australia.

Production includes:

Tasmanian ash and oak, Tasmanian sassafras
both golden and black heart, Myrtle and
blackwood are at times available.

For all enquiries including your custom slicing
requirements, write to:

Australian Veneers Pty Ltd
Boyer, Tasmania, 7140
or Phone: (002) 61 3317

Western Australia

QUALITY QUARTZ CLOCK MOVEMENTS

High precision and reliable
Japanese made instruments at
discount prices backed by a
2 year warranty. Large range of
hands, numerals and accessories.

WAGEN PTY LTD

2 Harcourt Place

Bullcreek, WA 6155

Tel: 09 332 4481 Fax: 09 332 6811

Western Australia

GRANDFATHER CLOCK MOVEMENTS



"Urgos" German made
solid brass, Westminster
chimes, free plan with
each sale.

Quartz Battery
movements
**Cabinet Craft
Imports**

095 342818 Mandurah, A/H
or Box 58, P.O. Wembley 6014 W.A.

Please send S.A.E.

Directory

Western Australia

BENCH GRINDER & PA MULTI-TOOL

A MUST IN
EVERY
WORKSHOP



ABBOTT & ASHBY P/L
2/22 BOAG AVE. MORLEY 6062
Ph. 09 275 5254

Directory Advertising

Small (5.5 x 5.0 cms)
\$180 for 3 insertions
Large (11.0 x 5.0 cms)
\$360 for 3 insertions

Payment Terms: payable with order
Special Instructions: Ad production is included. Please send rough layout with text for ad, logo/s etc.
Deadline: 6 weeks prior to 1st of month of publication.

Classifieds

POWER FRET SAW

— New development in lower price range. Suitable Hobbyist Woodie — but will do everything expensive machinery will do. For literature and pricing contact:
SCCAV 20 Halgh Ave. Nowra N.S.W. 2541 or phone (044) 21 2905. Trade enquiries welcome.

C. MORAGUES PH: (049) 433 744

Woodcarvings made to order for bedheads, coffee tables, mirrors, legs, tops, columns etc. Also Woodcarving Lessons. 66 Kahibah Rd., Highfields, 2289 N.S.W.

WOODTURNING — A PROFESSIONAL WAY.

Two-day woodturning courses. Individual tuition to concentrate mainly on spindle work. Learn a professional technique whilst enjoying the beautiful Otway Ranges. Course will include visit to local sawmill specialising in Blackwood timber. Accommodation available locally.
Phone Alistair Watt (052) 373 263, or write "Otway Blackwood Furniture" Lavers Hill, Victoria 3238, for details.

WOODTURNING & WOODWORKING BY VIDEO

6-part series, 1 hour each

- A — Spindle Turning
- B — Face-Plate Turning & Bandsaw
- C — Grinding & Sharpening
- D — Wattle Finish & Woodcraft designs
- E — Router Safety & adjustments
- F — Router Operations

\$39.50 each plus \$4.00 p&p.

Bankcard, Mastercard, Visacard.

Woodmill Craft & Education. (02) 489 2682

6 Balmoral St, Waitara 2077

WOODWORKERS' SUPPLY COMPANY

OPEN 7 DAYS

Specialising in Ashley Isles carving tools, sanding disks and papers.

Agents for Watco, Haymes and Constancia products, sealing sanders and grain sealers, French polish, ceramic tiles, stellacs, powders.

NOT ASSOCIATED with any other business.

179/181 Through Road, Burwood 3166,

(03) 836 8249, John Daley

NEW PRODUCT

Electric glue pot with electronic temperature control. Made especially for animal glues as used by discerning craftspersons in cabinetmaking, conservation and restoration, and musical instrument occupations. \$207. Write **B.D.S. Manufacturing, 8 Sunda Ave., Whalan, 2770, or telephone (02) 625 0728.**

BOOKS — BOOKS — BOOKS

Liquidation sale — out of prints — unobtainable titles. "MUSICAL CLOCKS, DRILLING MACHINE, ELEMENTARY STAIRCASE, MYFORD MLIO LATHE MANUAL, MINIATURE BUILDING CONSTRUCTION" ETC. ETC. Send S.S.A.E. complete list and prices. **Bob Young 6/2 Schofield St. Riverwood 2210**

WOODCARVING/WOODSCULPTURE

Weekend Workshops held regularly. Evening classes running continuously. All tools provided. Agent, "pfeil" Swiss carving equipment. Hegner electric fret-saws. **Michael Gill. Red Cedar Workshops. 1 Bank St. Pyrmont 2009. Ring (02) 660 7357. Please do not call-in before ringing.**

WORKBENCHES:

For Sale: Solid Tasmanian Oak Workbenches with traditional end-vice \$950.

Freight included.

Smaller model \$600.

Steven Smit, 8 Quarry Road, Launceston,

Tas. 7250. (003) 341 347.

NATIONAL WOODWORK EXHIBITION

MELBOURNE, 21-23rd OCTOBER

Selected exhibition of fine woodwork with awards in various categories.

For entry form please telephone:

(03) 240 8461

or write to:

**NATWOOD,
P.O. GEMBROOK,
VIC 3783**

Classified Advertising

\$11.50 for 20 words (including title, address, phone no. etc) plus **\$5.00** for each additional 10 words.

Minimum Charge: \$11.50

Multiple Insertions: 10% discount for 3 or more insertions in separate issues.

Payment Terms: payable with order

Special Instructions: Please note whether ad to appear under 'State' or 'General'.

Deadline: 5 weeks prior to 1st of month of publication.

Can you take a few minutes to tell us about yourself?

1. We don't need your name or address,
just your Postcode:

2. Age: yrs.

3. Working ☐
4. Occupation ☐
5. Semi-Retired ☐
6. Retired ☐

**PLEASE SEND COMPLETE QUESTIONNAIRE TO
THE AUSTRALIAN WOODWORKER
FREEPOST 4
PO ROZELLE
NSW 2039**

Note: If you don't wish to damage your magazine, simply
photocopy this page or write out the numbers 1 to 28
and tick in accordance with the instructions above.

My main woodworking interests are:

7. Woodturning ☐
8. Cabinet-making ☐
9. Woodcarving/Sculpture ☐
10. Marquetry ☐
11. Built-in Furniture ☐
12. Home Renovation ☐
13. Boat Building ☐

Please tick each of the regular features below
that you usually read:

14. News ☐
15. Forum ☐
16. Timber Page ☐
17. Book Reviews ☐
18. Gallery ☐
19. Product News ☐
20. User Report ☐

Please tick each of the articles below that you would
be likely to read:

21. An article about making a piece of furniture ☐
22. An article about a woodturning technique ☐
23. An article about making a wooden toy ☐
24. An article about woodworking design ☐
25. An article about a well-known woodworker ☐
26. An article about a carving project ☐
27. A photo story about an Exhibition ☐
28. A review of available tools or machines ☐

29. I usually spend hours a week woodworking.

Information P.O. Box 421 Rozelle N.S.W. 2039

THIS SERVICE IS FOR THE PROVISION OF INFORMATION ONLY. Purchase of goods or catalogues or requests which must be accompanied by an s.a.e. should be arranged direct with the advertiser.

Name: _____

Address: _____

1988 Source Book

To receive this invaluable guide to the major (and many of the minor!) suppliers to Australian woodworkers: Send \$3.00 plus \$2.00 postage to the address below or subscribe for a two year subscription to *The Australian Woodworker* and receive a FREE copy of the Source Book.

Australian Woodworker May/June '88 63

Qty	Title/Author	price	p&h for 1 book
	Sharpening and Care of Woodworking Tools and Equipment by John Sainsbury	\$25.50	+ \$2.50
	Gluing & Clamping by Patrick Spielman	\$19.95	+ \$5.00
	Woodworking Plans & Projects	\$25.50	+ \$2.50
	67 Prizewinning Plywood Projects by Alfred W. Lees	\$26.95	+ \$5.00
	Making Toys in Wood by Charles Hayward	\$14.95	+ \$2.50
	Encyclopedia of English Period Furniture Designs by Jose Rubira	\$26.95	+ \$5.00
	Router Handbook by Patrick Spielman	\$18.95	+ \$5.00
	Table Saw Techniques by Roger W. Cliffe	\$26.95	+ \$5.00
	Radial Arm Saw Techniques by Roger W. Cliffe	\$26.95	+ \$5.00
	Turning Miniatures in Wood by John Sainsbury	\$24.50	+ \$2.50
	Working Green Wood with PEG by Patrick Spielman	\$17.95	+ \$2.50
	Scroll Saw Handbook by Patrick Spielman	\$23.95	+ \$5.00
	Japanese Woodworking Tools by Henry Lanz	\$23.95	+ \$2.50
	Woodcarving: A Complete Course by Ron Butterfield	\$26.00	+ \$2.50
	Handcrafted Wooden Toys by Ralph Buckland	\$22.95	+ \$5.00
	Windsor Chairmaking by Thos. Moser	\$16.95	+ \$5.00
	Making Games in Wood by Katharina Zechlin	\$12.95	+ \$2.50
	Making Small Wooden Boxes by James A. Jacobson	\$17.95	+ \$2.50
	Craft of Woodturning by John Sainsbury	\$19.95	+ \$5.00
	Small & Unusual Woodturning Projects by James A. Jacobson	\$24.95	+ \$5.00
	Making Cabinets & Built-ins by Sam Allen	\$29.95	+ \$5.00
	Woodcarver's Pattern & Design Book by E.J. Tanagerman	\$29.95	+ \$5.00
	The Complete Book of Portable Power Tool Techniques by R.J. De Cristoforo	\$24.95	+ \$5.00
	Making Old-Time Folk Toys by Sharon Pierce	\$16.95	+ \$2.50
	Scroll Saw Pattern Book by Patrick Spielman	\$23.95	+ \$5.00
	Wooden Toys: Projects & Plans by Heinz Graesch	\$12.95	+ \$2.50
	Measured Shop Drawings for American Furniture by Thos. Moser	\$37.95	+ \$5.00
	176 Woodworking Projects by The Workbench	\$23.95	+ \$5.00
	Woodturners Project Book by Phil Jones & Charles Mercer	\$24.95	+ \$5.00
	Making Wood Boxes with a Band Saw by Tom Crabb	\$16.95	+ \$2.50
	The Home Cabinetmaker by Monte Burch	\$26.95	+ \$5.00

P'Code: _____

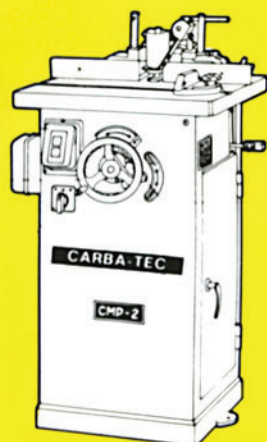
**MAIL
ORDER**

CARBA-TEC

SERVICE

COMBINATION SPINDLE MOULDER + ROUTER

2 speeds with forward and reverse, accepts 1/4" and 1/2" router bits plus 52 different moulder blocks. Unique versatility — affordable price!



Supplied ready to use with solid cast iron table, fences, hold down spring, mitre, collets, spindles, etc., etc.

**\$1250 plus tax —
\$1456**
EX BRISBANE

SPECIFICATIONS:

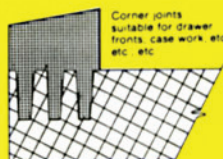
MODEL	CMP-2
Motor Single Phase	1 1/2 h.p.
Speed of Spindle	9000/12,000 r.p.m.
Change Spindle Size	1/2" or 1/4" or Router Chuck 1/2" or 1/4"
Spindle Vertical Travel	65 mm (2 1/2")
Table Area (L x W)	500 mm x 500 mm 19 1/4" x 19 1/4"
Table Height	850 mm (33 1/2")

FINGER JOINTER CFJ01



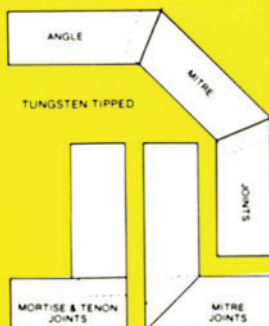
Will fit 1/2" ROUTER or 1/2" MINI SPINDLE SHAPER — this bit was conceived to join large composition board sheets. As it turned out, applications for this cutter in all types of woodworking are almost limitless. You will find it a fast, accurate alternative to many types of spline and scarf joints, as well as some mortise and tenon joints — also very useful for mitred joints.

Cutter supplied in 3-wing configuration with 3-blade stack (9 cutter edges). Extra blades available for use on thicker material.



CFJ-02 TO SUIT "TRITON"

BUTT JOINTS, MANY USES SUCH AS CHAIR RAILS, TABLE SKIRTS, ETC.



CFJ-01 \$117 + TAX \$135

CFJ-02 (TO SUIT "TRITON") \$99 + TAX \$114.24

NEW!

Grooving, Moulding and Beading Bits... also ideal for rope or barley sugar carving on turned legs.



PR- 4
\$19
+ tax
\$21.92

PR-06
\$34
+ tax
\$39.23



CARBA-TEC AIR NAILERS AIR STAPLERS

CT-607 AIR NAILER 10-32 mm brads
\$168 + tax \$191.52

CT-671 AIR NAILER 19-64 mm nails
\$398 + tax \$453.72

CT-615 AIR STAPLER 10-25 mm staples
\$168 + tax \$191.52 (12.9 mm crown)

CT-6113 AIR STAPLER 10-25 mm staples
\$168 + tax \$191.52 (5.8 mm crown)

CT-673 AIR STAPLER 10-40 mm staples
\$398 + tax \$453.72 (5.8 mm crown)

+ \$8 per unit for postage within Australia and New Zealand.

**SEND FOR FREE MAIL ORDER CATALOGUE
OF OUR UNIQUE RANGE OF TOOLS**

CARBA-TEC

**406 LONDON RD., BELMONT 4153, BRISBANE,
QLD., AUSTRALIA**

TELEPHONE: (07) 390 8411 FAX: (07) 390 8398

BANKCARD — MASTERCARD — VISA accepted.
Quote Card Holder's full name, Card No. and expiry date.
ROUTER BITS POST FREE WITHIN AUSTRALIA

CARBA-TEC

**PRODUCTS ARE AVAILABLE BY MAIL ORDER DIRECT FROM
CARBA-TEC OR THROUGH SELECTED REAILERS INCLUDING:**

N.Q. POWER TOOLS 110 Buchan Street, Cairns, Qld. 4870. Ph. (070) 51 3531
GREGORY MACHINERY Pty. Ltd. 1 Vulture St., West End, Qld. 4101. Ph. (07) 844 4433

READER
SERVICE
24

EUROPEAN PRECISION



\$135

WAS \$220 Black & Decker PALM SANDER P63-01 (Imported from France, Industrial Quality)



**ELU
BISCUIT/GROOVER
MACHINE DS 140**

**WAS
\$650**

\$478



ELU
ORBITAL SANDER MVS 47
½ sheet 14.000 rpm

**WAS
\$385**

\$295



\$226

WAS ELU 13mm HAMMER DRILL
\$320 EMD 405 500 Watts
Reversing/Variable Speed



**ELU ROTARY HAMMER
DRILL EHD 323 20mm.**
In metal case

**WAS
\$415**

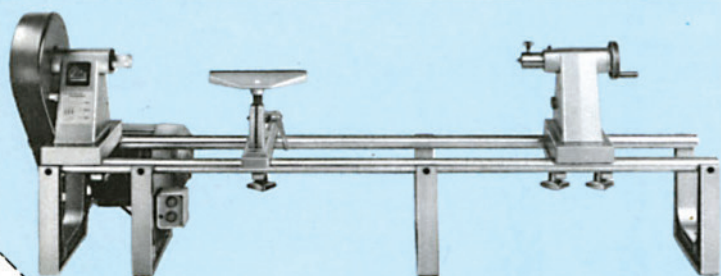
\$273



**ELU
ELECTRONIC
ROUTER
MOF 177-02
1850 Watt**

WAS \$580

\$430



**ELU
WOOD LATHE
DB 180**

WAS \$795

\$560

ELU
ORBITAL SANDER
MVS 94
1/2 sheet,
24.000 rpm

WAS \$375

\$300



**ELU
BELT SANDER
MHB 90-00**
100 x 560, 1000 Watt
WAS \$495

\$327



**Dewalt 10" RADIAL ARM
SAW DW 1253 3 phase**
380 mm Cross Cut

**WAS
\$1520**

\$950

[illegible]

WICKMAN FERROCAST



**BLACK &
DECKER**
E WALT

Wickman Australia Limited
605 Burwood Hwy, Knoxfield, Vic. 3180
32 Percy St, Auburn, N.S.W. 2144
332 Regency Rd, Prospect, S.A. 5082
331 Montague Rd, West End, Qld. 4101

(008) 33 8121
(03) 221 4855
(02) 646 2022
(08) 344 8626
(07) 844 7525

Delivery charge \$7.50 per item. All prices plus sales tax as applicable. Special offers whilst stocks last.