

The Australian

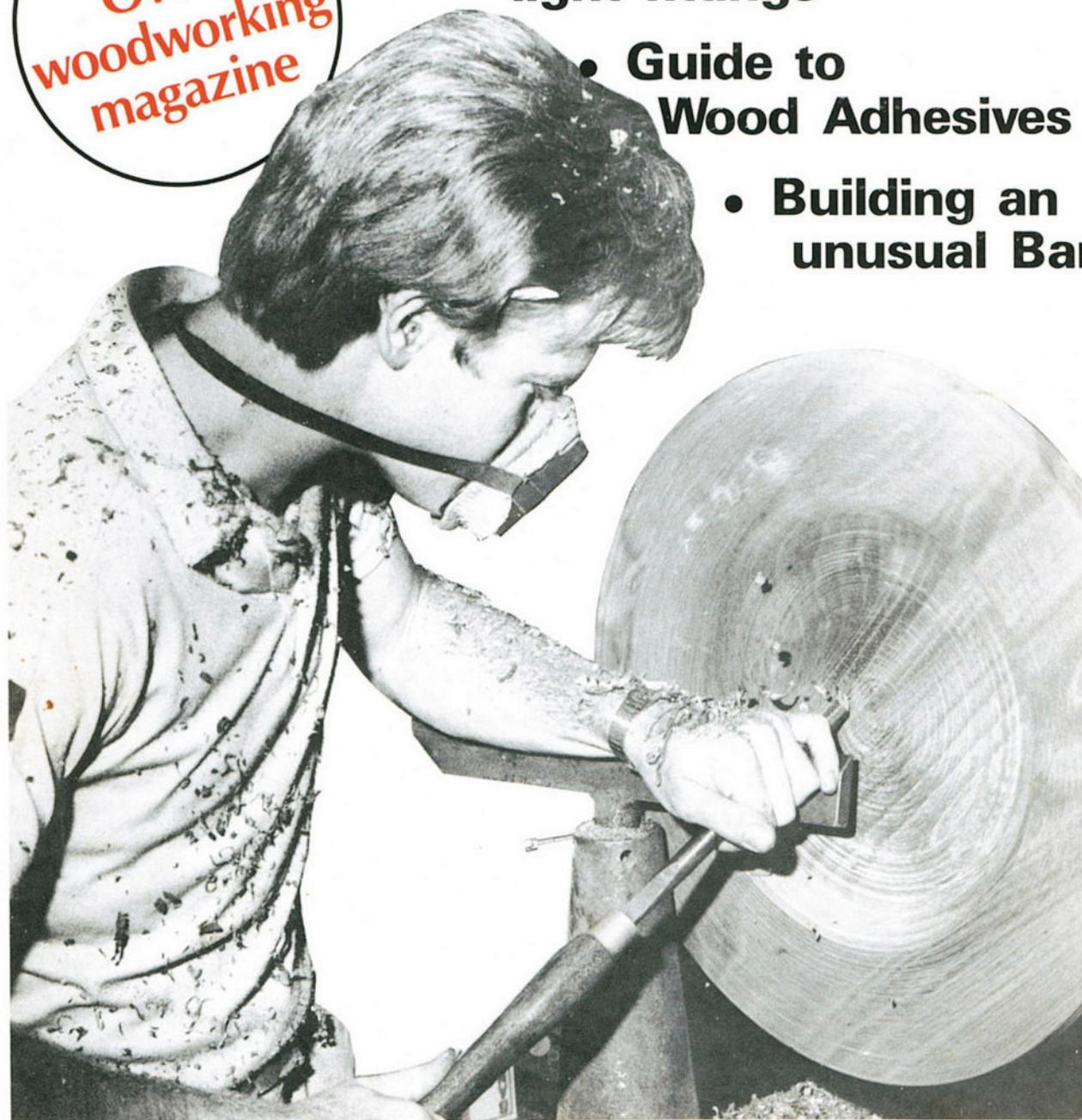
May/June '85

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Woodworker

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magazine

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- Design your own light fittings
- Guide to Wood Adhesives
- Building an unusual Bar



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The Australian
Woodworker

May/June '85

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Editorial

When the idea for this magazine was first mooted, we tried to define the "average" woodworker. If we could only do that, it was reasoned, we could design and produce precisely the right magazine for woodworkers in Australia.

Well, what is an "average" woodworker? After months of talking to woodworkers, reading and researching, we'd still like to know.

We've met master craftsmen who no one would doubt are woodworkers. Equally, we've met people, men and women, who don't have a workshop, rarely touch, let alone use a chisel or a plane, yet still regard themselves as woodworkers. One, we remember, has shifted home five times in as many years — and carried with him on every occasion two cherished pieces of cedar that weigh almost half a ton. He has plans for them, he says, and someday ..., someday...

There is, it seems, just one thing that woodworkers have in common. It is their love of wood — the look of it, the feel of it, sometimes even the smell of it. Beyond this, woodworkers may carve, sculpt, make furniture, toys or musical instruments, build structures, finish or decorate. Their interests are as many as the uses of wood itself.

A magazine for such a wide audience must necessarily cover a wide range of topics. But throughout the articles which appear in this magazine, now and in the future, we hope you will recognise a single theme — summed up by the statement "to pursue excellence on a budget".

To help you do your best work — with the best tools you can reasonably afford — these are the basic editorial objectives of "The Australian Woodworker".

And, hopefully, to entertain.

The Editor



CONTRIBUTIONS

"The Australian Woodworker" welcomes contributions on virtually any subject of direct interest to woodworkers in Australia. Wherever appropriate, articles should be supported by photographs. Contributions which describe woodworking projects must be illustrated with sketches (roughly to scale) with major dimensions clearly marked.

Letters and queries (on any woodworking subject) may be addressed to the Editor.

The editor reserves the right to shorten or alter any contribution, letter or query to improve its suitability for publication.

AUSTWOOD 85

Austwood '85, the "International Woodworking Machinery & Equipment Trade Exhibition" which is being billed as Australia's first ever Trade Fair specially for woodworkers, will be held at the R.A.S. Showgrounds in Sydney on September 17-20.

The Exhibition organisers expect that the range of machinery and equipment will be the largest ever displayed in Australia with well over fifty companies from all over the world presenting their wares.

Since Austwood '85 is directed solely to the woodworking trade, the Exhibition is not open to the general public. So, if you want to see the show, you have about five months to find a friendly professional or manufacturer to take you.

ENCOURAGEMENT ENCOURAGED

Craft woodworkers should be encouraged by the timber industry.

This is the view of Marketing Consultant, Ian Bracher, writing in a recent issue of the Australian Forest Industries Journal.

Mr. Bracher, who specialises in providing marketing services for the forest products industries, believes that craft woodworkers should be given active support and encouragement in their role as "ambassadors for wood".

"Their creative furniture designs", he says, "should be given as much exposure as possible so as to help stimulate the development of innovative solid timber furniture for larger markets."

SYDNEY EXHIBITION

The Annual Exhibition of work by the members of the Woodworkers' Group of N.S.W. will be held from June 10 to June 30, 1985 at the Sydney Opera House Exhibition Hall.

This is the yearly show at which The Group puts forward its best work. It offers an unusual opportunity for visitors to not only see woodwork of especially high standard but also to talk to the craftspeople responsible for it.

HAND CARVED FURNITURE

A display of hand carved furniture will begin at the Australian Design Centre at the Rocks in Sydney on April 4, 1985. These pieces are the work of the Constantia Partners of Adelaide. All three of the partners are members of the London Guild of Master Craftsmen.

SOUTH AUSTRALIA WOODGROUP

The South Australian Woodgroup, meets on the first Thursday of every month between 6.30 and 11.00pm at the School of Art, Stanley St., North Adelaide.

Among the objectives of the Group, which was formed in 1983, are to promote fine woodcraft in South Australia, enable amateur and professional wood craftspeople to meet and discuss woodcraft, to build up a woodcraft resources information centre and to arrange workshops with visiting woodcraftspeople.

Anyone interested in joining the Group is invited to attend one of the regular meetings or write to the Secretary, P.O. Box 191, STEPNEY, S.A. 5069.

2ND NATIONAL WOOD CONFERENCE

The South Australian Woodgroup will be host to the 2nd National Wood Conference which will be held this year in Adelaide between August 31 and September 2.

Venue for the three day seminar will be The School of Art, Stanley Street, North Adelaide.

Conference speakers are expected to include Professor Yoshiu Akioko from Japan who will be talking about traditional Japanese Woodworking and Woodworking Tools.

From closer to home, eminent Australian woodworkers who will address the gathering include Peter Carrigy (SA — the Conference Chairman), Ben Flack (Qld), Robert Dunlop (Qld), Gay Hawkes (Vic), John McLennan (Vic), Richard Raffin (NSW), Mike St Clair (ACT), John Smith (Tas), Carin Wilson (NZ) and members of the Constantia Partners group (SA).

In addition to the seminar, other activities associated with the Conference include wood craft exhibitions by a number of major galleries in Adelaide.

Registration forms are now available from:

The Treasurer,
South Australian Woodgroup,
P.O. Box 191,
STEPNEY, S.A. 5069

The cost of full registration is \$150 (\$140 if paid by June 1) or \$100 (\$90 if paid by June 1) for student or apprentice woodworkers. Visitors are also invited to several post-Conference workshops including a Japanese Woodworking demonstration (\$15).

BLACK & DECKER ACQUIRES 'ELU' WOODWORKING RANGE

Black & Decker's range of power tools has been further expanded with the addition of the highly-respected ELU range of quality woodworking tools.

Black & Decker is to purchase all the international activities of Eugen Lutz & Co., maker of the ELU range, outside of Germany.

Eugen Lutz has disposed of this segment of its business in order to concentrate on the German market and on its business in metalworking machinery.

Black & Decker, the big U.S.-based group which is already the world's largest maker of power tools, has bought worldwide use of the ELU name, patents and trademarks, plus the ELU factory in Switzerland with some 300 employees, and a distributor organisation covering Europe,

Africa and Australia.

Mr. Eric Rainsford, managing director of Black & Decker (A/sia), local offshoot of the U.S. parent, says the ELU move is an important step to reinforce and strengthen a major worldwide thrust into the industrial tools market.

"ELU has built up a high reputation as a specialist manufacturer of quality woodworking tools for industrial use, and holds a substantial market share", he says.

"Its product range is complementary to the B & D range of professional-quality tools, and will fill some significant gaps."

Black & Decker intends to continue the ELU operation as a separate business and to ensure the provision of high standards of support consistent with the ELU name and reputation.

A full range of ELU tools and

accessories is now being distributed in Australia through Black & Decker.

Mr. Peter Dorey, customer service manager, ELU Tools, is now based in the Croydon factory of Black & Decker (A/sia).

MEANWHILE LUNA IS ALIVE AND WELL...

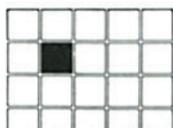
With Black & Decker's purchase of ELU, the LUNA range of products which were for some years associated with ELU in Australia, has shifted to new quarters.

Graham Phillips and Brian Laycock, previously directors of ELU Machinery Pty. Ltd. have joined forces again to continue to market the LUNA range under the name LUNA Machinery. They are currently hard at work building a nation-wide Dealer network.

As importers, says Brian

A CUT ABOVE THE REST..

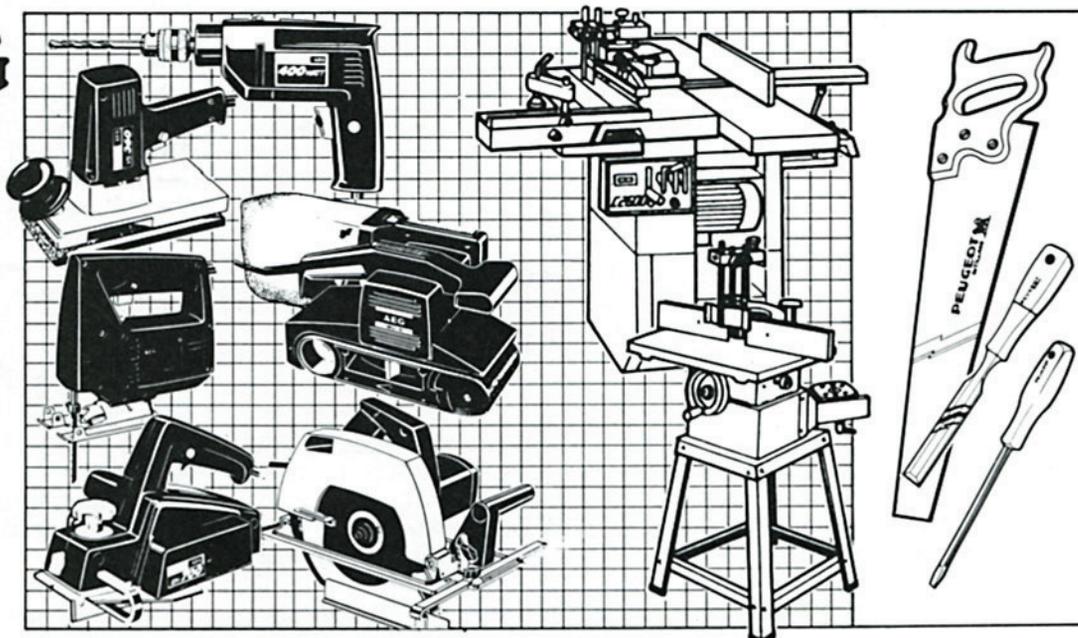
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Laycock, they will stock the majority of the range and will also ensure that ample quantities of spare parts and accessories are maintained in Australia.

In addition to ELU, the new company will market machines from ZINKEN in Italy and EMCO in Austria.

The ZINKEN range includes two combination machines with circular saw, spindle moulder, surface planer, power feed thickener and boring/mortising table. The smaller of the two is expected to retail at around \$1500 with accessories.

The group also carries the agency for Taunton Press in Australia. Taunton Press is the U.S. publisher of the magazines Fine Woodworking and Fine Homebuilding.

WOODWORKERS' CLUB OF N.S.W.

The Woodworkers' Club of N.S.W. was born in 1977, the child of Leon Sadubin, Alan Wale and Les Miller, who still form the core of the current committee.

From the outset, the emphasis has been on fellowship and co-operation with a determined lack of formality.

The members have contact with one another through general meetings (held every two months) usually in a member's workshop, with discussions, demonstrations, films and slides. A bi-monthly newsletter, edited by Michael Gill, is the most important line of communication with members and associates State-wide and with other woodworking groups throughout Australia.

An annual exhibition (see next page) is a primary focus for the Group's activities.

The Group's stated aims are:

1. *Cooperation and collaboration between members with complementary skills or facilities.*
2. *Rapid dissemination of new information of interest to woodworkers.*
3. *Improvement and widening of members' skills and knowledge.*
4. *Joint purchasing and*

exchange of wood through private negotiation or agreement.

5. *A lobbying voice which can put forward the views of independent craftspeople.*

6. *Promotion of wood and woodcraftspeople of N.S.W., together with an information and educational facility for the public.*

The Group assists in providing facilities and hospitality for visiting craftspeople, lecturers, artists-in-residence and also arrange talks, lectures and demonstration workshops.

Anyone may join the Group as Associate but to be accepted as a Member, one must be a practising woodworker (professional or amateur) whose best current work has been scrutinised by the Group's Executive Committee and deemed to fulfill the criteria of fine design and craftsmanship. Members have only one privilege over Associates — the right to submit work for exhibition.

Subscription rates for the Group are — Associates: \$30 p.a. and Members: \$40 p.a.

For further information about the Group, dates of meetings etc. please contact one of the following:

Chairman: Alan Wale - 74a Castle Howard Road, Beecroft, N.S.W. 2119. Tel: 869 8714

Secretary: Les Miller - 6 Balmoral Street, Waitara, N.S.W. 2077. Tel: 48 2682

Subscriptions: Paul Freeland - 4/29a Shirley Road, Wollstonecraft, N.S.W. 2065. Tel: 438 2907



CLUB SECRETARIES

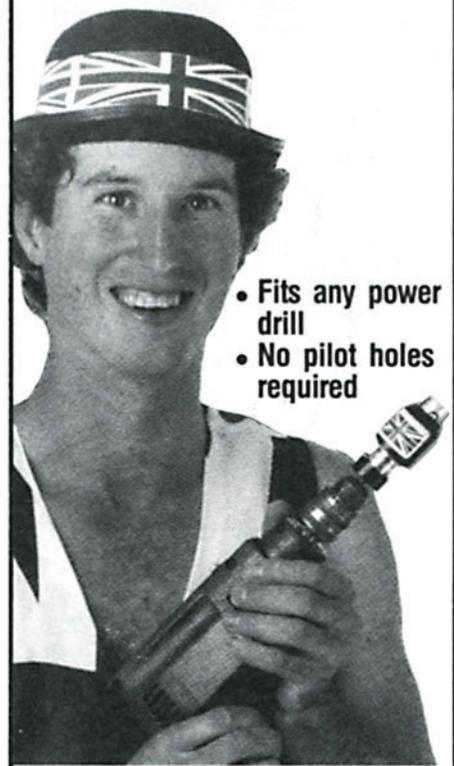
"The Australian Woodworker" welcomes correspondence from Club Secretaries listing woodworking group activities, dates of meetings, annual fees etc.



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WHY BUY

Of course, you never set out to buy woodworking tools or equipment that are rubbish, but, say some Australian importers, that is exactly what can happen unless you are careful to get all the relevant information before making a decision.

You may ask why not so good quality tools are available in the first place.

The reason, say importers, is that they satisfy a large section of the Australian market — a market segment which they believe isn't prepared to pay prices which are "realistic" by world standards.

Here's how one importer described the way some products reach the Australian market:

The importer goes to an overseas manufacturer with a rough specification for a product to be sold on the Australian market. The manufacturer checks through the specification, designs the product and maybe even builds a prototype.

The importer and the manufacturer then meet to discuss the good news (the product) and the bad news (the price).

"Sorry", says the importer. "By the time we add the

cost of shipping, our margin and Sales Tax, we will never be able to sell it in Australia. Can't you make it cheaper?" Certainly the manufacturer can make it cheaper — and does.

The result depends upon how much cheaper the product has to be in order to satisfy the Australian market — or, at least, the importer's notion of what the Australian market will be prepared to pay.

Much the same scene can be repeated between a distributor/wholesaler and a local factory except that local manufacturers say that they have to comply with many rules and regulations that don't apply to a factory in, say, Asia.

But whether it is made here or overseas, these are some of the ways in which a manufacturer can cheapen a product without altering its basic design:

1. Use cheaper materials.

For "cheaper" you can usually read "lighter". A solidly cast steel bed-plate might become a piece of rib re-inforced sheet aluminium — or a steel guard may be replaced with one made from plastic. It is not so much the choice of materials but the fact

that they are lighter and less strong or less rigid, which diminishes the quality at the same time as reducing the cost of manufacture.

2. Use cheaper components.

Electrical components, for example, can be made to a wide range of standards without making much alteration in the external appearance of the component. A sloppily made electric motor may appear to work just as well as one which is properly made — but it won't last as long. And, of course, it may be under-rated i.e. designed to operate for shorter periods under lighter loads. The motor therefore works well until the tool or machine is used for a big job over an extended period. Then, the temperature may rise to the stage where the motor "burns out".

Mechanical components, on the other hand, might be made to looser tolerances. For example, the length of an item may be specified as 45.50mm (– 0.02mm + 0.01mm). The figures in brackets are the tolerances. They tell the production engineer that the length of the component should be no less than 45.48mm and no greater than 45.51mm. Widening the gap between the two tolerances makes it easier to

manufacture the component and (usually) easier to fit the components together — so the whole product is cheaper. But it probably isn't as good.

Wider tolerances can even make it possible to use a completely different (and much cheaper) manufacturing process. As an example, take the collets in the chuck of an electric drill or router. These are the parts that actually hold the cutting tool (drill or router bit). On a high quality machine, the collets are precision

be the same. Since it was made to withstand only 110 volts, using it with our 240 volts substantially narrows the margin of safety.

Some small motors have "start" windings which are disconnected by a centrifugal switch mounted on the rotor shaft. When the motor is first switched on, the switch is in the "on" position so the "start" winding is energised. As the motor comes up to speed — usually at a point around 80 or 85% of the no-load running speed — the centrifugal switch operates

motor re-wound.

Probably the first question you would like to ask about all this is: "What controls, if any, are there to prevent poor quality products being sold in Australia?"

That isn't an easy question to answer — because it all depends upon what is meant by quality.

continued next page

RUBBISH?

ground to ensure that they move smoothly as the chuck is adjusted and, most importantly, they hold the cutting tool so that its axis lies exactly along the line of the axis of the drive shaft. For maximum efficiency and true cutting, this is essential. But lower the tolerances expected of these items and presto, the manufacturer can ignore the need for precision grinding altogether.

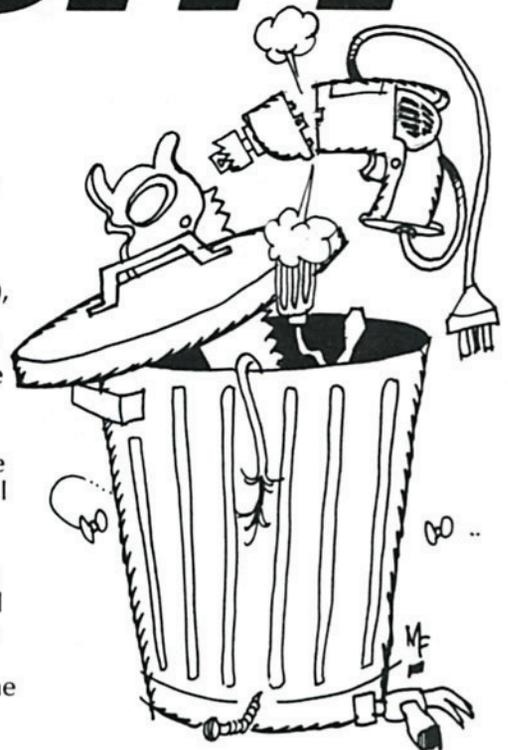
3. Use components produced for other markets.

This is really a variation on the same theme. Components made for the U.S.A. can be produced in far larger quantities than those for the relatively small Australian market. Motors have to be wound differently, of course, to take account of the higher mains voltage in Australia, but sometimes this is all that is done. The insulation, for instance, may

to cut off current to the "start" winding.

Rather than make a switch specially for this market, one made for the U.S. market can be pressed into service. Because of the difference in frequencies between the two main supplies (50Hz in Australia, 60Hz in U.S.A.), the centrifugal switch now cuts out at around 90 or even 95% of the no-load running speed of the motor.

This works fine in the showroom. It may even work fine for some months afterwards, until one day you place a little too much load on the machine. The speed drops below that at which the centrifugal switch cuts in and about seven seconds later there's a puff of smoke and the "start" winding ruptures. Then comes the expense of having to buy a new motor or having the original



WHY BUY RUBBISH?



Even the cheapest power saw will cut timber after a fashion. Provided it is safe (and we'll talk about that a little later on), it might be the best possible choice. Why would anyone buy an expensive, high quality power saw if it was only to be used for 10 or 20 minutes every couple of months to do jobs which aren't very demanding and the user doesn't mind a bit of noise? Quality, is after all, relative.

Clearly, there cannot be regulations that insist that everyone shall have the best possible tools whether they need them or not.

So far as safety is concerned there are a number of standards which apply to products which are sold in Australia. But not all products sold in Australia actually comply with those standards.



Take, for example, the Australian Standards of electrical safety. The basic system is one of "prescribed" items. These are items which the law decrees must be tested thoroughly before being sold here. They include such things as electrical appliances for the kitchen, fans and heaters. Most hand (portable) power tools are on the list. Many, if not most, bench type and free-standing woodworking machines are not.

It costs anything from a few hundred to several thousand dollars to have the tests carried out for just one product. This may be a small sum when spread across a large number of items sold but it can be an important part of the final price where the market for an item is relatively small. Recognising this, the various State authorities which administer this system generally place an item on the prescribed list only when it has proven "troublesome". In other words, where there have been unfavourable reports about one or more of the products in the particular category.

Some importers, however, submit their products for test even where they are not defined as prescribed items. They argue that it is in the interests of their customers and therefore, in the long-term, in their own interests to do this.

Where a product has been tested and approved, the manufacturer puts the Approval Number on the name plate of the product. This number begins with a letter (N for N.S.W., V for Victoria) followed by the approval number itself, the form of which varies from State to State.

Where the item has been voluntarily submitted, a CS (Certificate of Suitability) number is given.

The best way to sum this up is to say that where the product bears an Approval or Certificate of Suitability number, it is a plus for the purchaser, but the absence of such a number is not necessarily a minus. Safety, like quality, is relative. It is a matter of probabilities. Many countries have electrical safety standards which are less strict than those employed in Australia. Presumably, the responsible authorities in those countries believe that it is unnecessary to take into account some of the probabilities which

have been considered in framing the Australian regulations. But there are some products which may never have been tested for the real problem is that some products on the Australian market come from countries where safety regulations are lax and they may arrive here without ever having been tested for compliance with any standard.

Talking about safety regulations touches upon the notion that people working in the distribution chain should know and understand something of the technical aspects of products being sold.

There is no formal requirement for this although the introduction of consumer protection laws over the past two decades has made it increasingly wise for importers and wholesalers (at least) to be careful that the products they sell are reasonably safe.

To accomplish this objective, many importers and distributors believe that they must now have technical staff who can deal effectively with relevant government authorities and who can lead, not follow, in negotiations with local or overseas factories. Despite this, many importers and distributors still rely upon outside assistance.

So where does all that leave you?

Very simply, it means that amongst all the woodworking tools and machines on the Australian market, there are probably a few that shouldn't be on the market at all, many that would suit the home handyman's pattern of use but would represent poor value for the serious craftsman and, finally, there are some that are made to maintain their accuracy and performance even when subjected to continuous, heavy-duty usage.

WHY BUY RUBBISH?



But there are no lists, labels or catalogues which tell the prospective buyer which particular tool falls into which category.

Then how do you make sure that no matter what else other people want to buy, you get the products you want at prices that are fair and reasonable?

There are several ways of buying which you might consider:



Buying by country of origin

This is like judging books by their covers and about as hazardous.

Certain countries have very good reputations, others, very poor. But there are usually manufacturers of good products in countries with bad reputations and vice versa. You simply can't tell. Unless you are dealing with a special high tech machine, the chances are that the technology involved in the tool or machine you want to buy is already well known everywhere that it is likely to be manufactured. What differs is the ability (and the inclination) to make the machine properly.

Buying by brand

This is safer but still not completely reliable. The same brands are often put on products which come from different factories, or even different countries.

This may come as a shock to the unsuspecting buyer but it is a

fact of life for everyone in the trade.

What generally happens is that a manufacturer (or even an importer) achieves a good reputation for a particular brand name. The same brand name is then placed on products which are purchased "cleanskin". Obviously, the manufacturer or importer tries to make sure that the quality of the new product is the same as that of the original. But it's amazing how often it doesn't come off and a lot of buyers are left with products that they wish they'd never seen.

Buying by price

Buying by price clearly has its weaknesses — weaknesses which are often more apparent in the mid range where there might be several similar products all around the same price but with widely differing performance.

If you buy at the top price from a reputable dealer, however, the chances are that the product you get will more than fulfill your needs. Certainly, you will be putting a goodly sum in the dealers' pocket since the price you pay won't reflect the competitive pressures which exist further down the scale.

If this is your preference, then you may wish to comfort yourself with this piece of home-spun philosophy:

When the average price of a certain kind of product is \$100, then the person who buys a top quality product for \$120 risks paying \$20 too much. But the person who pays only \$80 risks the whole \$80.



Buying by Specification

This is the safest of all — provided, of course, that the specifications are complete (and honest) and you can understand them. And provided, also, that you **REALLY LOOK** at the products offered and make up your mind that the specifications are realistic.

In coming issues of "The Australian Woodworker", we'll be reviewing woodworking tools and equipment available on the Australian market. Wherever possible, we will consider not only the physical performance of these products, but also their specifications, relating one with the other.

Learning to understand specifications is a long, hard process and you can't expect to become an expert overnight. Meantime, if you must buy a new tool or machine, here are some suggestions to help you get a better deal:

Take your time

Don't buy the first one you see and don't start out looking for bargains. Once you've made your mind up what you really want — that's the time to start looking for the best price.

Check construction

Look for manufacturer's marks. (In spite of the problem mentioned above, good manufacturers try hard to make certain that every product that bears their name, upholds their reputation).

Check cutting edges — not just to see whether they are keen but to see if the steel is thick enough to perform without distortion and

continued next page



large enough to dissipate the heat generated by cutting.

If the whole tool or machine is small, pick it up and feel its weight. Remember what was said earlier about lighter and cheaper materials. If you can't test it by lifting, perhaps you can surreptitiously lean on it or give it a quick shove while the sales rep isn't looking.

Check the critical parts

Check, for example, the components that hold the tool bit, saw or blade. See that they look well-made and well-finished. If there are adjustments to the mechanism, make sure they look as though they will last, even if they are moved hundreds, if not thousands, of times.

Check power and speed

Compare the power and speed noted on the rating plate of power tools. You'll find some surprising differences — and sometimes (not always) the explanation for differences in price. Note that basic designs tend to vary from country to country rather than simply from manufacturer to manufacturer. So when you see that Japanese machines are rated at 2000 rpm or whatever and the German ones at 1600, ask why. If your retailer can't help, ask for the name of the distributors and call them. You'll find out a whole lot more about the tools you use and the way you ought to use them.

Try it for size

It doesn't matter how good it is

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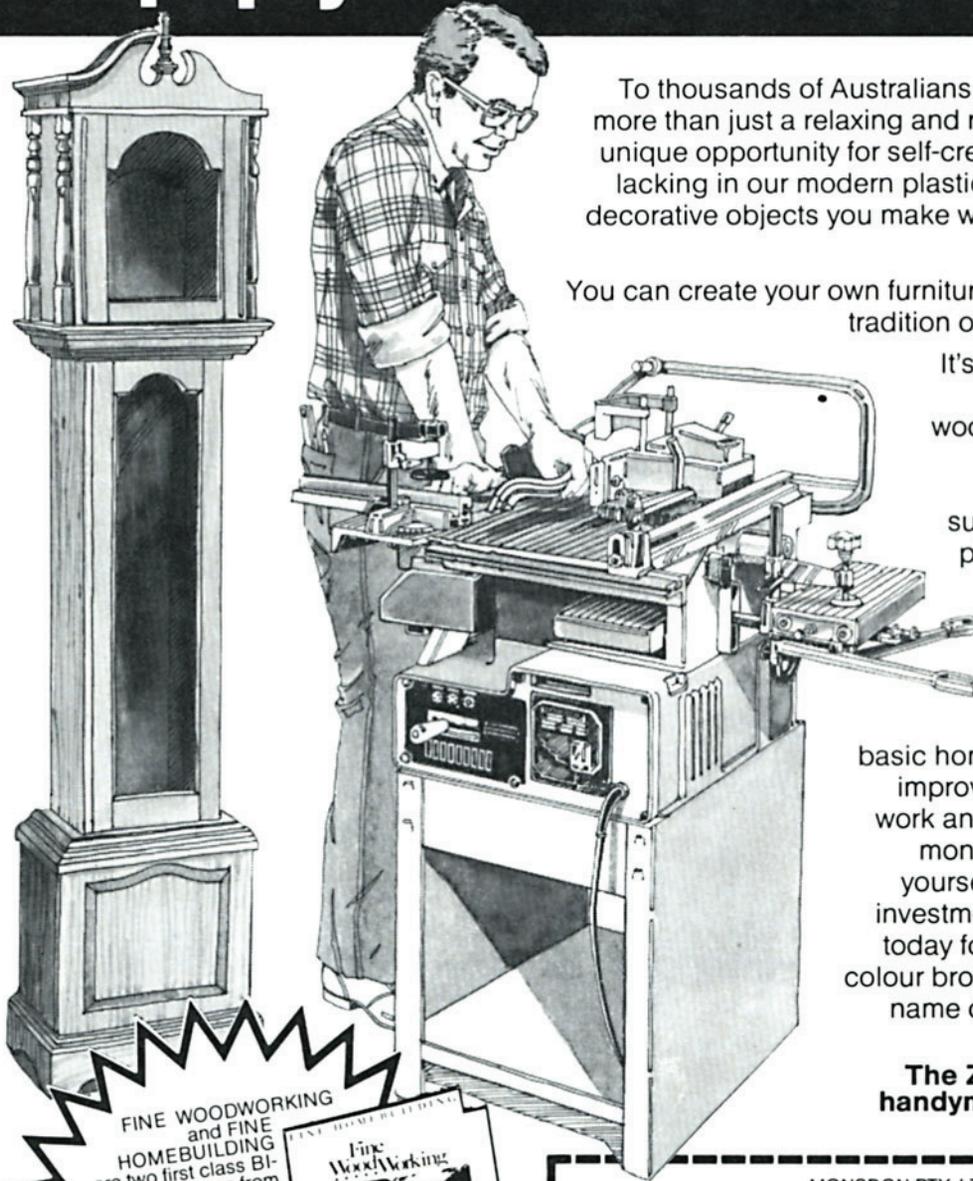
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The role of the domestic light fitting is unlike that of any other item found in the average home. It must be designed to achieve two specific — and very different — objectives.

By day, the light fitting is (at best), an ornament. Only at night does the fitting perform its true function — that of acting as a source of light for an area within or outside the home.

The use of wood as the major structural and ornamental material in a light fitting makes it relatively easy to achieve both these objectives. The colors and textures which can be obtained using a variety of woods and the manner in which the joints may

be featured in the design, allow the design and construction of light fittings to fit virtually any decor — whether they are lit by their own light or by normal daylight.

There are four basic types of light fittings, defined by the position in which they are used — Ceiling, Floor (Standard), Wall and Table. In this issue we will discuss only the first two.

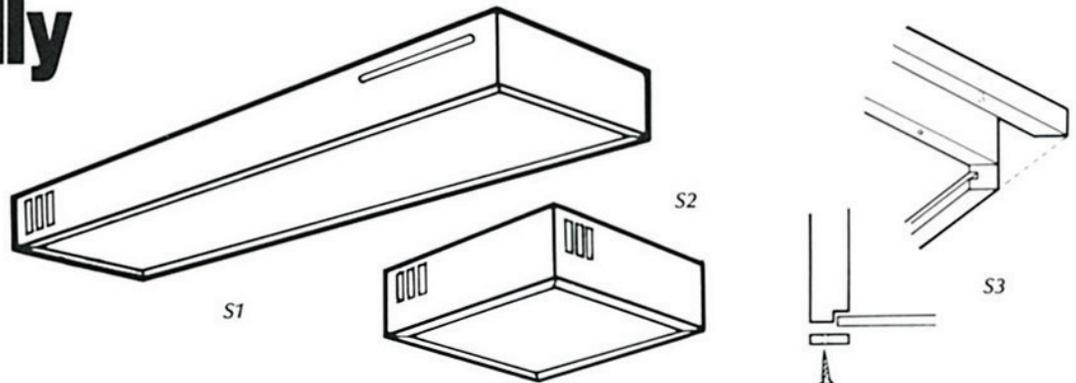
CEILING FITTINGS

Since ceilings vary widely, so do the general shapes of fittings which are used with them. For example, the low “modern” ceiling, approximately 2400mm high, requires a relatively shallow

should be relatively simple.

The accompanying sketches illustrate some of the possibilities. These, incidentally, are the sort of sketches you should draw for yourself when planning to construct a light fitting.

Some woodworkers begin work without ever drawing anything — but the least said about this bad practice the better. Others make only trade drawings which are good for showing how the fitting goes together but rather poor for showing the unity and harmony of the overall design. The result, therefore, is often stilted and the fitting looks “too technical”.



fitting unless it is placed over a piece of furniture or in some other area where the ability to allow people to move underneath is not important.

Chandelier type fittings are in general more suitable for high ceilings (either horizontal or raked).

With horizontal ceilings made of plaster or similar material, the chandelier should be relatively compact. It can, however, be of fairly complex design since it may be used to act as a counterpoint to the bland surface of the ceiling itself.

Raked ceilings are today frequently made from timber. Here the light fitting can be much larger but, since it must compete with the texture and colour of wood in the ceiling, it

There is nothing magical about making sketches. You don't have to show them to anyone so they don't have to be any better than is necessary for you to understand what they mean.

Take sketches S1 & S2. These drawings show light fittings which are very similar to a type which is available commercially. The commercial fittings are often poorly ventilated (see 'Electrical Notes' at the end of this article). To improve the circulation of air through the fitting, we have suggested the use of slots — either horizontal or vertical.

Remember that light will shine through these slots when the fitting is switched on, a fact which can be used to add to its visual appeal, although you may

have to do a little experimentation with similar slots in a piece of scrap wood and a suitable light source, before the exact width and length of the slots can be determined.

In designing this type of fitting, it is worth noting that if it is to be used in, say, a short narrow hallway, the fitting itself will rarely be seen. It is only when the angle at which the fitting can be viewed comes down to about 30° — as in larger rooms — that it is readily seen. It is in these latter circumstances that it is necessary to give consideration to the corner joints and decide whether they should be specially featured.

suppliers such as Mulford Plastics and ask where you can see samples. Again, the supplier will cut to size for you.

Try to keep the depth of the fitting as small as possible consistent with being able to install and change the lamp. Larger depths tend to make the fitting look “boxy” and destroy its modern appearance.

Speaking of changing the lamp, this can be a problem with this design. The diffuser has to be able to be removed and replaced fairly easily. Two ways of doing this are shown in sketch S3.

You can, of course, extend on the ideas for this kind of fitting

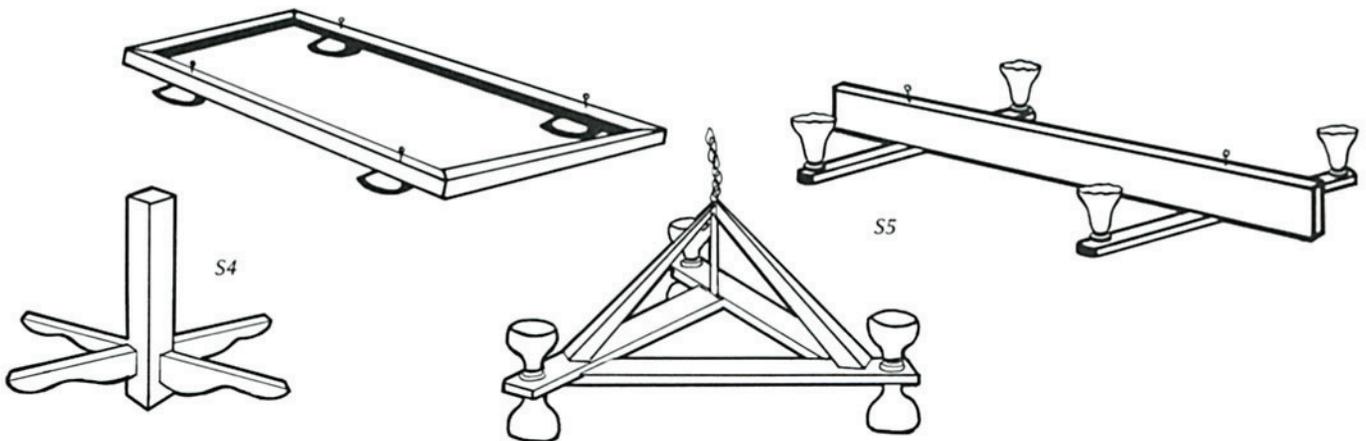
from glass or other material.

The whole fitting may be hung on a rope or chain passed through a hole in the top of the vertical, or special plates can be screwed to the side.

The central vertical may of course, be turned, instead of being square, or it may be decorated with wooden studs.

By making the vertical and horizontals in contrasting timber (the latter are usually made of darker wood than the former) an extremely pleasing appearance can be obtained.

Larger fittings of this type can add immeasurably to the appearance of a room — and get right away from the time-



Dovetails and projected and wedged mortise and tenons come to mind as the sort of “dramatic” joints which can be used.

The diffuser used in this type of fitting may be made of either glass or acrylic. Its purpose is to transmit as much light as possible whilst at the same time reducing glare. Glass diffusers may be either coated on the surface (the cheap way to achieve the effect) or made from translucent glass. Your local glass shop will show you what is available and cut to size for you. There are fewer “plastics” shops around but if you prefer to use acrylic (and there are, for example, some very interesting prismatic surfaced materials available) you might ring the local office of one of the larger

just by varying the shape of the surround. A diamond shape might be attractive in some circumstances, for example, or another possibility, particularly for the main hallway of the home, is to have several fittings of various sizes and heights, clustered together.

Sketch S4 shows a basic chandelier design. A vertical piece of wood supports two or more pieces which are usually horizontal. These, in turn support the lamps themselves. The individual light sources may be directed downwards or upwards (to bounce the light off the ceiling). They may be shallow fittings similar to those just described, they may be lampholders with naked lamps, or lamps set in shades made

honoured but not-very-imaginative light in the centre of the room.

Other ideas are shown in sketch S5.

FLOOR (STANDARD) LAMPS

There was a time when every home had a Standard Lamp. The base and “standard” were invariably of wood which was usually turned to an attractive shape — well, to a shape anyway. In some cases, goose-necked brass pipes were added or there were other strange aberrations to the norm.

Although still available, the standard lamp is no longer very popular. Yet a well made and well finished standard lamp is as much an attribute in the modern home as it was in the home of forty years ago.

The construction of a Standard Lamp differs little from the Table Lamp shown in the next article. The stem of the Standard Lamp may, if required, be made in two or three pieces.

ELECTRICAL NOTES

A light fitting is a structure which carries one or more sources of light, the most common of these sources being the ubiquitous 240V electric lamp. Wiring for even a simple lamp requires some knowledge of the potential hazards involved in dealing with mains electricity. This is the reason why there are various regulations prohibiting this work being done by anyone who has not been trained for it. Fortunately, if you cannot find a way of having this work done safely, there are alternatives (see 'Low Voltage Lamps' below).

The physical installation of the lamp also requires attention. Every care must be taken to ensure that the design and construction of the light fitting do nothing to cause possible damage to the electrical components. For example, if it is necessary to make holes in order to hide the flex from view these have to be large enough to allow the flex to be pushed through without too much effort.

The glass of the lamp must not touch other parts of the fitting and the lamp must be ventilated. Practically all of the power that is used by an ordinary electric lamp is wasted as heat; only a tiny smidgen turns up as light energy. The wasted heat has to be able to get away because if it doesn't the life of the lamp will be dramatically reduced and there is a strong possibility of scorching or even fire.

LOW VOLTAGE LAMPS

Scaled down versions of the ordinary lamp are available for use on 12 volts and there are still some 'rural' fittings available which are designed for 32 volt use. Both require the use of a plug-in or wired-in transformer.

Recently, tiny new 12 volt lamps have been introduced to Australia. Made by Reggiani in Italy they have light outputs equivalent to either 75W or 20W ordinary lamps but produce only a fraction of the heat. Of course, they also require a transformer and they are not cheap (although they are claimed to last very much longer). The size and coolness of operation of these lamps offer new opportunities in the design of light fittings. 

Turning a Table Lamp

by Mike Darlow

The methods used for the construction of this simple two-piece lamp are applicable to many other designs, both traditional and modern, merely by varying the proportions and detailing.

This particular lamp is made from Australian red cedar (*Toona australis*) and Queensland walnut (*Endriandra palmerstoni*) — richly coloured woods which complement the black shade.

Having obtained the shade, lampholder, other components and wood, the first steps are to turn the base and the collar. Ideally, the wood for these should be dressed flat on one face and then thickened. Alternatively, one or both faces can be finished flat in the lathe, the wood being held by a screw chuck.

The peripheries of both collar and base should be cut using a small spindle gouge, working towards the centre of the thickness of the discs and taking the shavings with that part of the cutting edge which is on the leading tip of the gouge nose.

As the wood is to be clear finished, it should be sanded to 320 grit, preferably using an opencoat stearate coated aluminium oxide paper.

If you have a drilling machine, mark the centre of the discs with the long point of a skew chisel while they are being turned. This will facilitate the drilling of the 1½" diameter holes. Alternatively, these holes may be bored in the lathe. If you use a Forstner or sawtooth bit, the discs will need to be mounted on a waste disc with the fixing screws outside the perimeter of the hole.

It is possible, of course, to drill the holes with the spindle gouge on its side, trimming the hole to its final size with the long point of a skew being used as a scraper. Inside calipers must be used regularly (with the lathe off!) to check the hole diameter.

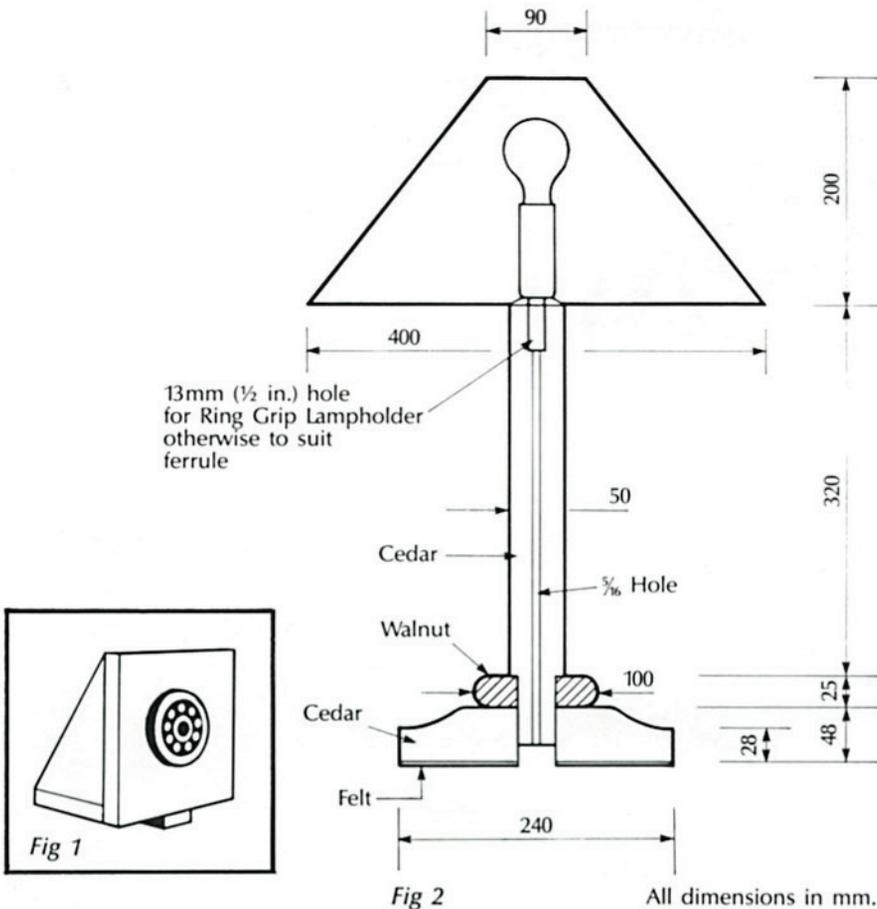
After removing the base from the lathe, the hole from the perimeter to the centre of the base can be drilled.

It is also necessary to drill through the full length of the stem. There are three methods of doing this:

1) Cut the stem in half (lengthways), plane the freshly cut faces true and plough or rout a groove along the centre of each face; then glue the two halves back together again, before turning the stem between the centres.

2) Drill vertically down the stem after it has been turned, supporting it in the collar and base. Preferably, a drilling machine should be used initially, the hole being completed using a hand auger or brace and auger bit.

3) Drill the stem in the lathe using a lamp-standard auger. This type of bit, when pushed along the centre of a rotating workpiece, will automatically seek to drill along the axis of rotation — providing that the lathe speed is not too low. A double-fluted



carpenter's auger with the screw point and nickers ground off to leave a rounded end is a reasonable and more easily obtained alternative.

As the stem is reasonably long, it needs to be supported at both ends during the in-lathe drilling. Some lathes have special tailstocks or accessories for long hole boring. If you don't have one of these, it will be necessary to manufacture a 'temporary' wooden tailstock to do this job. The wooden tailstock (Figure 2) incorporates a ball bearing race which allows the workpiece to rotate freely.

Prior to mounting the stem in the home-made tailstock, it will

need to be roughed to a cylinder. This is done using the conventional tailstock. At the same time, a short spigot and shallow shoulder are turned at the tailstock end. This spigot is a temporary measure designed to allow the workpiece to be held in the wooden tailstock. It should be a tight fit in the tailstock race and the shoulder should bear against the face of the inner cylinder (only) of the race. Note that since the spigot will be removed at the end of the job, its length should be taken into account when determining the overall length of timber required for the stem.

To drill the stem, the

workpiece is held between the driving centre and the special tailstock. Set the lathe at about 1000 rpm. If the speed is much slower than this, the bit will tend to wander off centre; if it is much faster, the carbon steel bit is likely to overheat and lose its temper.

It is easier to start the bit if a cone shaped starting hole is made with a gouge or if a large enough hole has been left by the tailcentre.

Drilling is straight forward. Push the bit in firmly about 20mm and withdraw it — flute upwards — to clear the waste. Use a piece of adhesive tape on the auger stem to mark the required hole depth. Otherwise, it is all too easy to try to bore through the driving centre!

The outside of the stem must now be finish turned, a spigot at the headstock end being calipered to fit neatly into the holes in the collar and base. The temporary spigot at the tailstock end can now be removed. When making the parting cut to remove this spigot, it is safer to stop the cut well before it reaches the central hole, remove the stem from the lathe and finish the cut with a saw.

Should a larger hole be required for the lampholder, this may now be drilled, either in the lathe or using a drilling machine.

The components can be polished separately in the lathe or they can be assembled and then polished.

The installation of the lampholder, the glueing of a little felt on the underside of the base, and the addition of the bulb and shade, complete this handsome lamp. W

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Old saws about saws

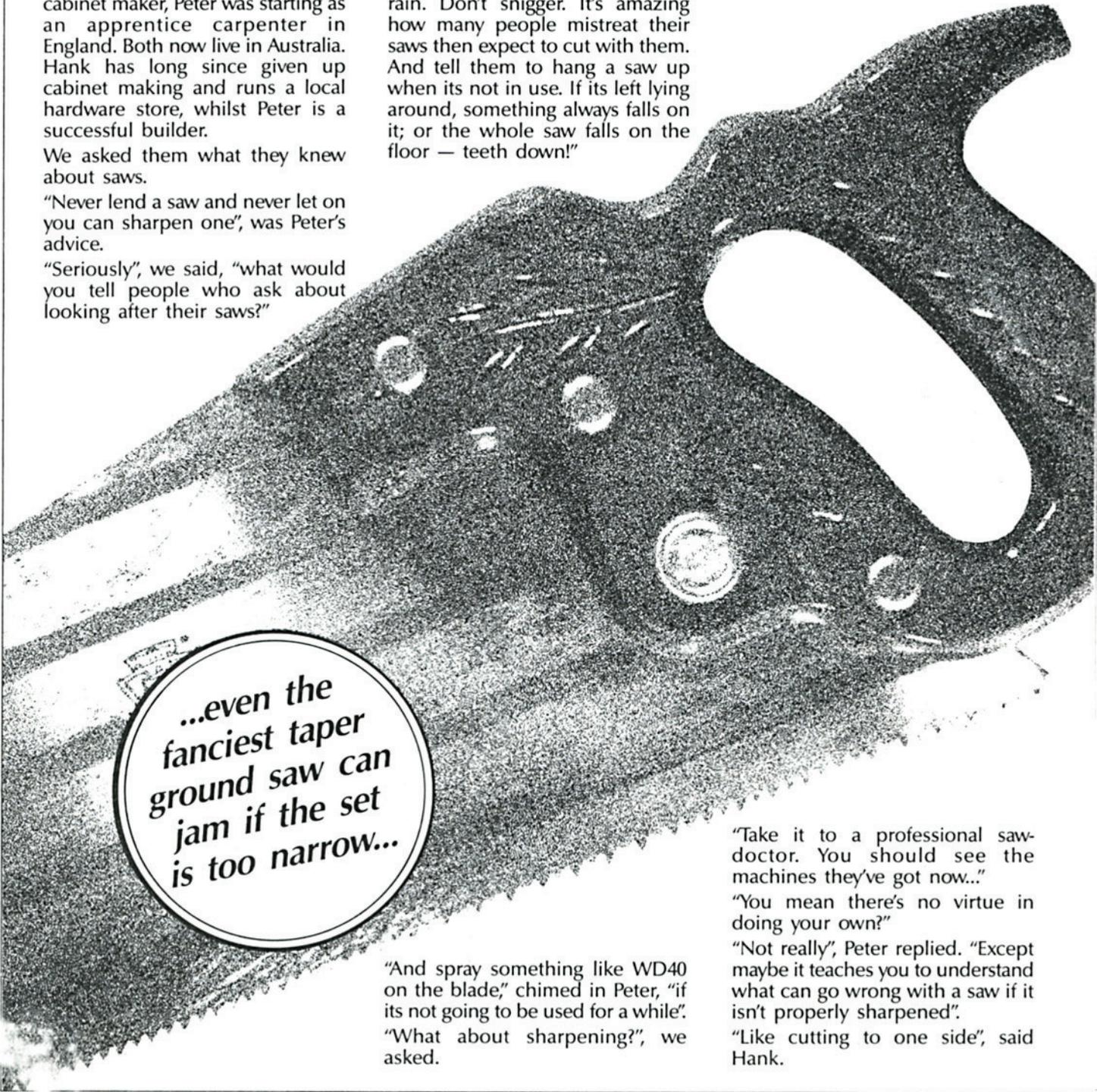
Hank is Dutch. About the time he was finishing his training as a cabinet maker, Peter was starting as an apprentice carpenter in England. Both now live in Australia. Hank has long since given up cabinet making and runs a local hardware store, whilst Peter is a successful builder.

We asked them what they knew about saws.

"Never lend a saw and never let on you can sharpen one", was Peter's advice.

"Seriously", we said, "what would you tell people who ask about looking after their saws?"

"All the usual things", said Hank. "Tell them to keep them out of the rain. Don't snigger. It's amazing how many people mistreat their saws then expect to cut with them. And tell them to hang a saw up when its not in use. If its left lying around, something always falls on it; or the whole saw falls on the floor — teeth down!"



*...even the
fanciest taper
ground saw can
jam if the set
is too narrow...*

"And spray something like WD40 on the blade," chimed in Peter, "if its not going to be used for a while". "What about sharpening?", we asked.

"Take it to a professional saw-doctor. You should see the machines they've got now..."

"You mean there's no virtue in doing your own?"

"Not really", Peter replied. "Except maybe it teaches you to understand what can go wrong with a saw if it isn't properly sharpened".

"Like cutting to one side", said Hank.

"Or being hard to start", said Peter. "Or needing too much shove to keep it going", added Hank.

"The first thing you have to do when you're sharpening a saw is to set it up so it's completely straight and rigid — all the way along the blade", said Peter. "You really need a saw horse but many woodworkers have probably never seen one. You can make your own but I'd settle for putting the saw between two hardwood splints and shoving the whole lot in a vice".

Hank looked pensive. "You need good light. I remember I always had trouble getting enough light on the blade to see what I was doing".

Peter ignored him. "You start by checking the height of the teeth. The idea is to put a straight-edge along the blade to check if all the teeth are the same height. If they aren't, the blade needs topping".

"That wasn't always true", said Hank. "I can remember when saws weren't made straight. The teeth bowed outward — so the saw followed your hand as you sawed".

His hand made a sawing motion,

arching slightly forwards as he thrust it down.

"Never seen one", said Peter. "Anyway, I'll bet all the saws in your shop are straight. As I was saying..."

"Wait a minute", we interrupted, "what happens if the teeth aren't the same height?"

"The saw's damned hard to use. It keeps running off to one side", replied Peter. "Usually, it's the teeth on one side that are higher than those on the other and this makes the saw cut either into or away from the line".

"Topping", he went on, "is done with a flat file. Any smooth file about eight or ten inches long will do, but I'd prefer an old one that's fairly worn. That way there's less danger of taking too much off. You simply hold the file along the length of the saw and draw it along,

taking the top off the teeth. It has to be held dead level and worked carefully. A couple of passes should be enough to touch every tooth — you can see by the bright spot the file leaves on the teeth".

"That's what I meant about having enough light", said Hank.

Peter went on. "Once you can see a bright spot on every tooth the saw is ready to be set and sharpened. But if you make several passes with the file and it still isn't touching some of the teeth, give up and hand the saw to a pro".

"Like that", we said.

"Like that", he echoed. "The saw is too far gone for an amateur to fix".

"That can happen with the shape of the teeth, too", said Hank. We all looked at him.

"I mean tiger teeth. If someone messes about with a saw they can sharpen it so the teeth are the same shape on both sides. Usually happens to cross-cut saws. I think they're illegal now, aren't they?"

"What are?" we asked.

"Tiger teeth. The saw doesn't start properly. It catches and jumps. Lose a finger quick as look at you".

We were duly impressed.

"To set a saw", said Peter, "you use a little gizmo called a saw-set. Read the instructions, set the angle, put it over the top of a tooth and squeeze — a plunger in the saw-set pushes the tooth over to the pre-set angle. You go along doing this to every second tooth one side and then the teeth on the other side".

"What if the set is already too large?" we asked.

"Another one for the pro", replied Peter. "The teeth must be pushed back. If you really have to do this, you can use the saw-set and work from the other side but you have to be very careful not to break the teeth, moving them back and forth like that".

"One thing for sure", said Hank, "buy a good saw-set — one that's properly made. If it's cheap and wobbly it'll just wreck the saw". He wobbled his right hand as he spoke. "And I'm not sure I'd stick to the rules completely, either. You're supposed to use a set that's about one and a half times as wide

as the teeth are high. For some jobs, I'd set a fraction larger and some smaller".

"Why?" we queried.

"Because it depends on what you're doing. The bigger the set, the wider the saw-kerf. That means you're cutting away more timber along the line, so it's harder work. But in soft or green timbers, the fibres are likely to jam the blade, so a wider kerf is a good idea".

"I agree with that", said Peter. "Even the fanciest taper ground saw can still jam if the set is too narrow for the particular job. But, of course, a wider kerf means the saw is harder to push".

"And what about sharpening?"

"Get a file — use a tapered triangular file — that matches the profile of the teeth and start filing".

"Always file towards the handle", said Hank. "You stand at the side of the blade and file towards the handle of the saw".

"That's for a cross-cut saw", Peter said. "The angle on a cross-cut is 65°. On a rip-saw, it's 90°. You file straight across. And make sure the file is sharp. If it's blunt, it's likely to wander and anyway, it's just hard work. You only file forward, not back, and you file until you've removed half of the clean metal left from topping. When you do the other side, you file until you take away the rest. That way you get sharp teeth that are the same height".

"Well, is that it then?", we said. "No other advice?"

"Yes there is", said Hank. "Peter's going to accuse me of wanting to sell more saws, but there is something else — and that's to make sure you have enough saws to do the jobs you want to do. Even some of the professionals that should know better try to get by with only a couple of saws. You might, for example, need two, three, or even more cross-cut saws. One could be an 8 point, set 8, another could be a 7 point, set 6. By having several saws you can save yourself a lot of back-ache and do a better job".

"And have them all sharpened by a saw-doctor", added Peter getting in the last word. 

STICK WITH IT



Adhesive is more than simply a modern name for glue.

Although it may be applied to any glue-like substance, the word adhesive is more often used to specify just those glues which exhibit engineering qualities. By this is meant adhesives which have quantifiable and predictable results — ones for which it is possible to say within fairly close limits just how strong a joint made with the adhesive will be.

This is a far cry from what we used to call glues — materials which were generally regarded as suitable only for temporary fixing or for the fixing of joints where failure was not critical.

When, for example, it was suggested that an aeroplane might be made from plywood held together principally with glue, many people close to the aviation industry were horrified. The very notion that pilots would have to trust their lives to glued joints placed under the extreme stresses generated by combat, seemed ludicrous. Yet the Mosquito was a highly successful aircraft that earned a special niche in its role as pathfinder for the precision bombing raids carried out late in World War II.

Many of the uses to which adhesives were put, only a little later, were equally revolutionary. The earliest roof trusses used in "factory-built" houses in the U.S.A. in the fifties had plywood gussets glued at the joints. (No, they didn't work as well as was hoped and were replaced by the multiple nail plate.) Heavy masonry slabs were (and still are) glued to the outside of

buildings.

In practically every sphere of technology, there has been a change in the role of adhesives. No longer merely a secondary method of joining materials, modern adhesives have, in many cases, actually replaced traditional methods of fixing such as rivetting, welding and bolting.

And with the increase of the new, there has been a decrease of the old.

In the construction of furniture, the animal glues which we knew in the forties and which could be bought in even the smallest hardware shop, have all but disappeared from the shelves — and from the workshops in which they were used.

Animal Glue

These were almost universally used for woodworking. There were only two types — light and dark. Both had similar properties but the colour was important since they stained the timber and it was generally necessary to use the one most likely to be disguised by the colour of the particular timber being joined.

Of course, they both shared another property. When heated, they stank to high heaven.

If you wish, you can still buy animal glue. It is sold in brittle flakes or small beads (called Pearl glue) which should be soaked overnight (to soften) and then melted in a special glue pot — a double boiler affair with the pot containing the glue suspended in the water which fills the outer pot. The whole contraption sits on a gas ring or electric element which simply keeps the glue hot and ready for use.

Animal glue has some advantages. It takes a long time to harden (about 10 or 12 hours) and in any case it can be readily softened if things go wrong, so

you can take the job apart and re-glue it. One modern use for animal glue is the repair of squeaky chairs. Small holes are drilled from beneath into the horizontal seat member to intersect with the (usually) dowelled joint. Animal glue is inserted into the hole with a large hypodermic syringe. If it is reasonably warm, it will stay fluid for long enough to penetrate along the opened areas of the joint — a result which is very difficult to achieve using more modern adhesives. The joint must be clamped for at least 24 hours.

The most important disadvantage of animal glue is that it has a poor resistance to water. This means that it can't be used for anything outside the home. Also, it tends to be susceptible to mould growth.

Fish Glue

Fish glues resemble animal glues except that they are liquid at room temperatures and dry after exposure to the air.

Casein Glue

It's hard to believe that this was once a "wonder glue". This cold mixed glue is made from dried milk curds and is available as a powder. Although there is now a non-staining type, it's wise to consider most casein glues as liable to stain — at least specific timbers. Casein glue has two peculiarities worth mentioning. The first is that when the powder is mixed with water, it must be left for about 10 or 15 minutes to thicken. During this time a chemical reaction takes place; if it is applied to the joint before this reaction is complete, it will not achieve its proper strength. The second is that it is liable to quickly dull cutting tools if the area is reworked after the glue is set.

Thermoplastic Adhesives

This is one of the two major groups of modern adhesives. It

is the one which includes the most popular woodworking adhesive in use today — polyvinyl acetate (PVA).

PVA

This adhesive, sometimes referred to as "white glue", is a ready-to-use liquid which has excellent adhesion properties when used with wood, has fair gap-filling properties, dries moderately fast and leaves a colourless glue-line. PVA adhesives cure (i.e. achieve their full strength) by losing moisture. This leads to the interesting fact that they are really only suitable for wood with a moisture content in the range of 6 to 12%. If the wood is drier or wetter than this it will absorb moisture either too quickly or too slowly for the adhesive to cure properly.

PVA adhesives take about 2 or 3 hours to set but the piece should not be further worked for at least 24 hours.

The one serious disadvantage of PVA in the past is that it is not waterproof but even this appears to have been recently overcome and new waterproof PVA adhesives are expected to become available shortly.

Aliphatic thermoplastic resin

Aliphatic thermoplastic resin is another form of polyvinyl resin. This yellow coloured adhesive is stronger than other polyvinyl adhesives and has other advantages such as greater heat resistance.

Hot melts

These are now commonly available in Australia together with relatively inexpensive electrically heated applicators which are necessary for their use.

Various hot melt adhesives may be obtained with different setting times. Some will allow you to work with the joint for an hour or more while others set within minutes.

continued next page

Although hot melts have been extraordinarily effective in industry and there is little doubt but that we are witnessing the beginning of yet another revolution in adhesives, they can nevertheless be tricky to use with wood. Often a wide glue line develops, which, if the joint is exposed, can seriously detract from the appearance of the work. Also, the woodworker should test joints before relying upon the strength of a particular type of hot melt, since their strength appears to vary widely.

Thermosetting Adhesives

The other major group of adhesives are the Thermosetting adhesives. These cure by means of a chemical reaction which occurs when the two or more components are mixed together.

Urea-formaldehyde

The powdered form of this adhesive needs only water to begin the chemical reaction although some urea-

formaldehyde adhesives are also supplied with a hardener to speed the reaction. It is strong, more water resistant than PVA (though not truly waterproof), has poor to fair gap-filling properties, sets in 4 to 8 hours and is relatively inexpensive, particularly in larger quantities.

Resorcinol-formaldehyde

These are very strong, highly waterproof adhesives which are ideal for harsh conditions such as those which occur in boat-building. The two components consist of a resin and a catalyst which are mixed together prior to application. Gap filling properties of this adhesive range from fair to very good and the adhesive sets in 4 to 8 hours.

Resorcinol-formaldehyde adhesives generally cause a dark stain on wood and where appearances are important, must therefore be handled carefully. Their other disadvantage is that they are usually expensive.

Epoxies

These are not often used with wood because although they are capable of producing very strong waterproof glue joints, epoxies are generally too expensive to use in the quantities required in woodworking.

There are a few one-part epoxies but most consist of two parts, one the resin, the other the hardener. Adding the two components starts the chemical reaction (which can be accelerated by the application of heat). The setting times range from several hours to a few days.

Contact (or Impact) Adhesives

These should really be termed cements. They are usually made of rubber suspended in a liquid and are used for such work as attaching plastic laminates to the surfaces of benches, etc..

The cement is applied to both surfaces and allowed to dry. The surfaces will then adhere on contact — hence the name.

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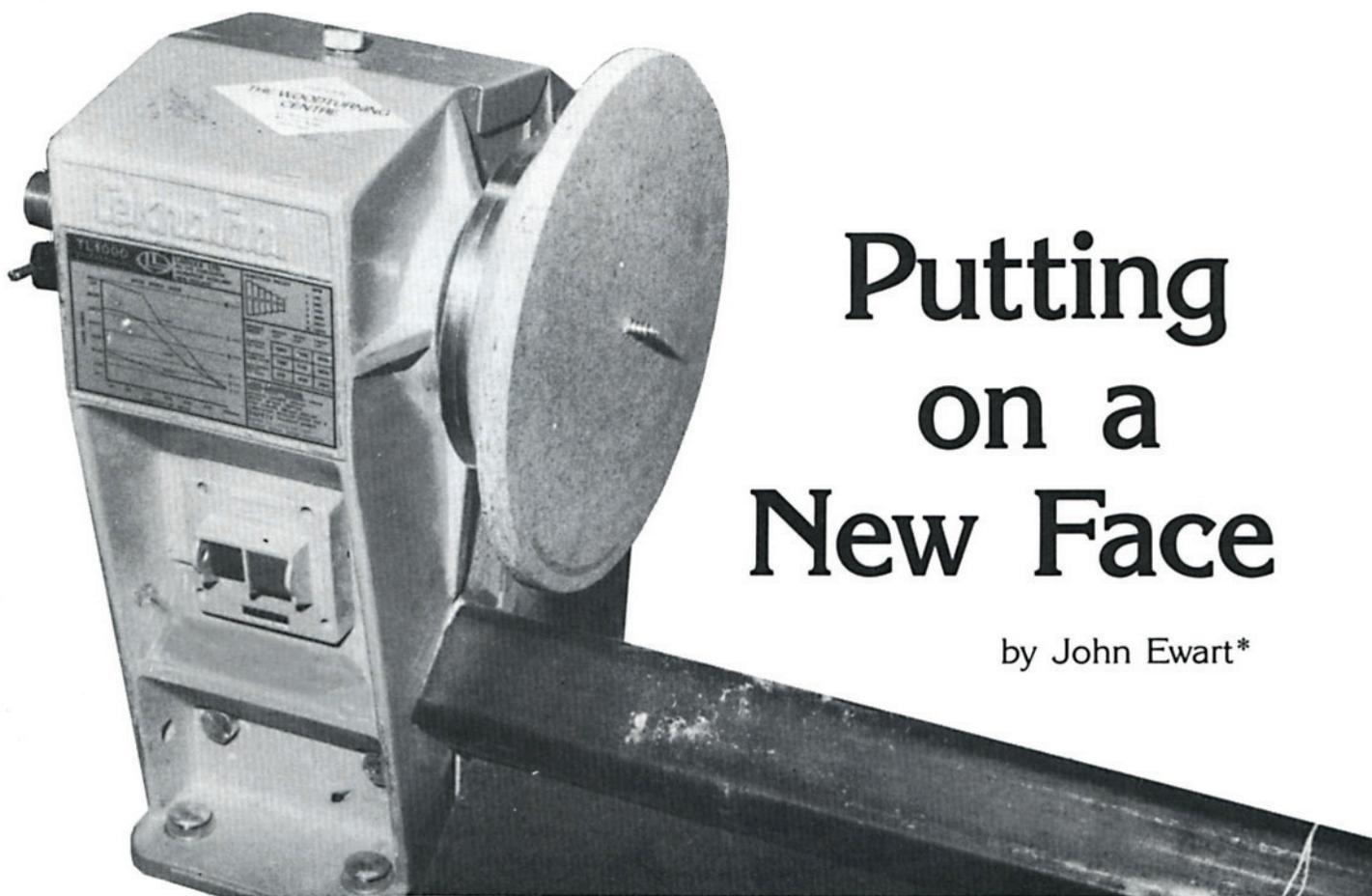
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Putting on a New Face

by John Ewart*

"Face Plate" turning makes up a substantial part of the turning performed by both hobbyists and craft woodturners.

Bowls, platters, clockfaces, breadboards, plaques, picture frames and bases of all kinds are among the articles which can be produced on a Face Plate in conjunction with wooden friction chucks or adhesive discs.

The Face Plate is simply a device which is used to secure timber so that the grain runs at 90 degrees to the axis of the lathe. Most lathe manufacturers supply both right and left hand metal Face Plates as standard accessories.

The basic method of securing a workpiece to the Face Plate is to drive fastening screws through the holes in the Face Plate and into the timber. This method has several disadvantages. First, it is

time consuming; second, it can restrict the design opportunities available and third, it can result in unsightly holes in the finished piece.

For small to medium sized work there is a simple and very effective alternative — the Centre Screw Face Plate.

The Centre Screw Face Plate is formed by driving a large screw through a wooden base plate which is, in turn, mounted on the metal Face Plate. By using different sized packing plates, a large variety of jobs can be firmly secured on the single screw.

The effective holding power is achieved by rotating the job onto the centre screw until a firm grip is established with the packing plate. To ensure a good contact area between the two surfaces, the packing plate must be nearly the same diameter as the job.

Once turning begins, the forces generated by the tool against the workpiece are such that they tend to tighten the job onto the screw.

The photographs show the first steps in turning a 300mm x 75mm bowl. This job was held securely on the single centre screw Face Plate for turning at appropriate speeds. But for jobs larger in mass, or for outboard turning, it would be advisable to use the basic multi-screw method with the metal Face Plate.

The well equipped woodturner will therefore have *both* a Centre Screw Face Plate (ideally 150mm in diameter) and a metal Face Plate (200mm or larger in diameter).

**Mr. Ewart has been involved in woodturning for more than 15 years. He is a lecturer in woodturning at the Sydney Technical College and also conducts courses at The Woodturning Centre in Mosman, Sydney.*

Constructing the Centre Screw Face Plate

The components:

Metal Face Plate - a metal disc which threads onto the nose of the lathe and has countersunk holes for screws.

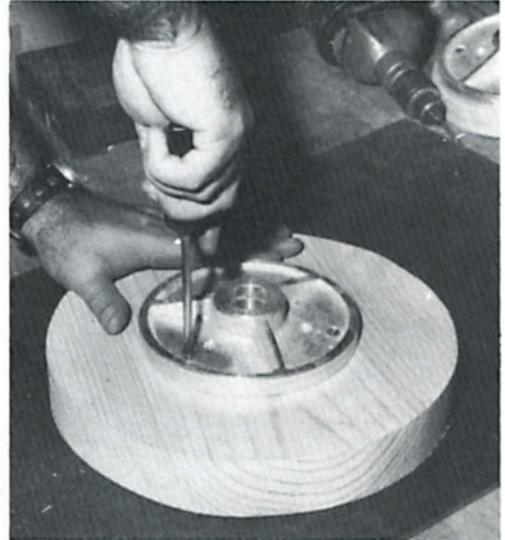
Centre Screw - a 50mm x 6mm coachscrew that is notched on the head (with a file or grinding wheel) to receive two small locating screws.

Base Plate - a piece of 25mm thick plywood or densified particleboard which supports the centre screw. The centre screw protrudes about 25mm from the face of the Base Plate.

To prevent tools coming in contact with metal, the Base Plate is made 12mm larger in diameter than the metal Face Plate.

Packing Plates - discs of plywood or particleboard of varying diameter and thickness. The 25mm screw projection from the Base Plate is unsuitable for jobs such as the 20mm thick platter shown in the photographs, since the screw protrudes through the front face of the job. The 25mm screw projection is therefore effectively reduced by placing a Packing Plate of suitable diameter and 13mm thick on the Centre Screw between the Base Plate and the workpiece.

A set of varying size Packing Plates enables a large range of jobs to be held on a 150mm centre screw Face Plate.



The basic method of securing a workpiece to the conventional Face Plate has several disadvantages which are avoided by the Centre Screw Face Plate.

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Step 1.

Bandsaw a Base Plate out of 25mm plywood or densified particleboard (18mm larger in diameter than the metal Face Plate).

Step 2.

Fasten the metal Face Plate onto the Base Plate with 25mm heavy gauge screws.

Step 3.

Mark one of the screw holes and the Base Plate adjacent to it with a pencil. (This is to ensure that the Base Plate can be removed from the Face Plate and then re-mounted accurately).

Step 4.

Screw the Face Plate onto the nose of the lathe.

Step 5.

True up the edge of the Base Plate and reduce it to a diameter 12mm larger than the metal Face Plate. Round the corners of the Base Plate (to prevent cutting your fingers!).

Step 6.

Position the tool rest along the face of the Base Plate and make a lead hole for a small drill.

Step 7.

Select a drill which is slightly smaller in diameter than the shaft of the coachscrew and place it in a pistol, brace or breast drill. With the lathe running, drill the centre hole through the base plate.

Step 8.

Take the Face Plate from the lathe and unscrew the Base Plate from the metal Face Plate.

Step 9.

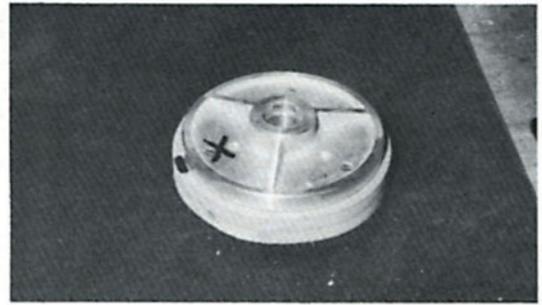
Fasten the notched head coachscrew into the back of the Base Plate. Tighten it firmly, then insert two small locking screws. (Epoxy glue can also be used to help prevent the coachscrew from rotating.)

Step 10.

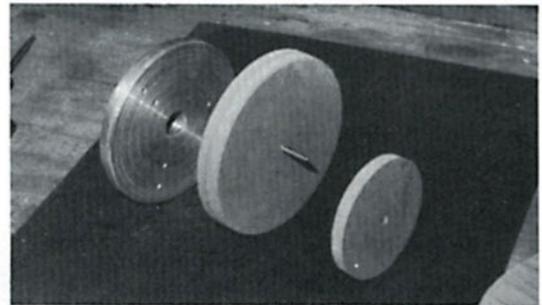
Rescrew the Base Plate to the metal Face Plate, making sure that the pencil marks line up.

Step 11.

Mount the Centre Screw Face Plate onto the lathe and check that the centre screw is running true.



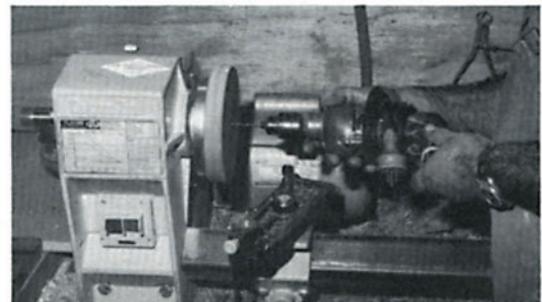
Components of the Centre Screw Face Plate.



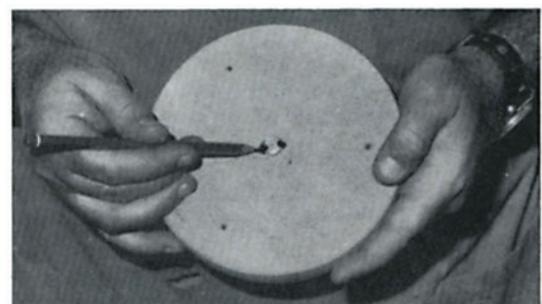
Remounting marks on back of Face Plate.



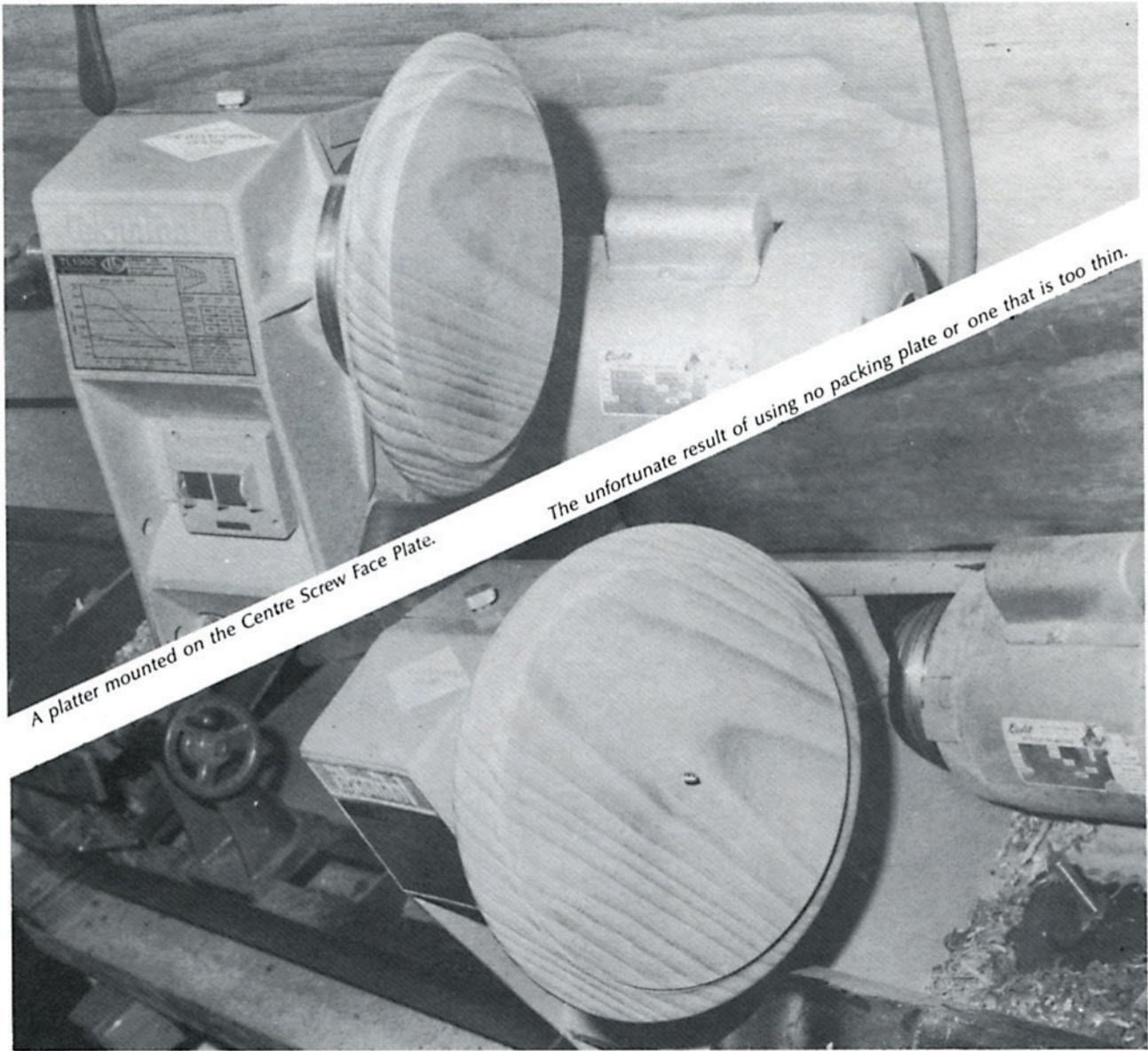
Making a lead hole for the coachscrew.



Drilling a centre-hole through the Base Plate.



Locking screws secure head of coachscrew to stop it rotating.



Operating Hints:

Before mounting a job on the Centre Screw Face Plate, select a suitable size Packing Plate. Remember, it must be slightly smaller in diameter than the job so as to support the back of the job whilst at the same time allowing the edge of the job to be turned.

The thickness of the Packing Plate determines the screw projection into the workpiece. For a small job, such as a 150mm x 25mm teapot stand about 10mm of screw projection will be enough to hold it firmly. For larger jobs, up to the full 25mm of screw projection may be required but, generally, 12 to 20 mm is sufficient.

To assist in locating and fastening the workpiece to the centre screw, a small pilot hole is drilled in the centre of the job. This hole should be slightly smaller in diameter than the largest threaded section of the coachscrew and of a depth suitable for the particular job.

If the timber to be turned is slightly cupped, always place the concave face against the Packing Plate i.e. drill the pilot hole on the concave face.

In selecting a safe, workable speed to run the lathe for Face Plate work, the following factors must be considered:

- *diameter and thickness of the timber*
- *weight of the timber*
- *balance of the timber*
- *construction of the lathe (heavy or light)*
- *mounting of the lathe (how it is fastened down)*

If in doubt, run the lathe at the slowest speed and always stand to the side when starting it.

The Centre Screw Face Plate is a cheap and efficient holding device which should help you produce turned wooden articles in a practical manner. 



Rotating workpiece onto Centre Screw.



First step in turning a bowl using the Centre Screw Face Plate.



Shaping the bowl



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The Hirsh Saw Table is designed principally to convert a portable circular saw into a saw bench. Made in USA and available in Australia through hardware stores and other tool suppliers, the Hirsh Saw Table can also be used to convert a router into a spindle moulder or a portable jig saw into a jig saw table.

Faced with a large box full of bits, the task of assembling the Saw Table may at first appear somewhat daunting. Fortunately, there is a 28 page instruction manual which is sufficiently detailed to eliminate most of the hassles. The text is easy to follow and there are step by step drawings showing where each of the components fits into the overall assembly. A particularly handy feature of the manual is that many of the parts are shown full size (next to the relevant drawing) as an aid to

identification.

Once the Saw Table has been assembled, three things become apparent.

The first is that the unit is very well braced; an arm on each side connects and fixes the legs to each other and another set of arms holds the table top to the legs. The sum total of all this bracing is that the Saw Table feels solid, even though it is very light.

The second feature is that the Saw Table is easy to fold away, even with the power tool still attached. This is just as well, since it takes perhaps five minutes to secure a power saw (for example) to the Table and to line it up properly. But having done this once, the Table can be set up or folded for storage (or transport) in a matter of seconds. With a portable saw attached, the folded Saw Table measures about 1000mm x 700mm x 350mm which is small enough to tuck out of the way in even a tiny workshop — or to fit into the boot of most hatchbacks and many sedans.

(With a router or jigsaw attached, the smallest dimension grows to around 500mm.)

Finally, Hirsh have clearly given a great deal of thought to matters of safety. Nowhere is this more obvious than in switching the saw off — a function which is achieved by a light touch on a shut-off bar which runs along beneath the front edge of the chipboard table top.

The whole electrical system, in fact, appears to be well thought out. We were told by P.A.E. Distributors who are the Australian importers, that the electrical system used on the model sold here was designed with the help of engineers from the State Electricity Commission of Victoria and an independent electrical advisor.

Once a portable tool is mounted on the Saw Table, it is plugged into the back of a switch box which forms part of the Table. A lead from the switch box is then plugged into the mains.

USER REPORT

Hirsch Saw Table

The switch — a rocker type of conventional operation — is in the centre of the front face of this box. It takes a little while to get used to finding the switch, located as it is behind the spring loaded shut-off bar. But this is a small price to pay for the speed and ease with which the unit can be switched off — with a thigh or hip, if necessary, since it always seems to happen that hands are otherwise occupied in an emergency.

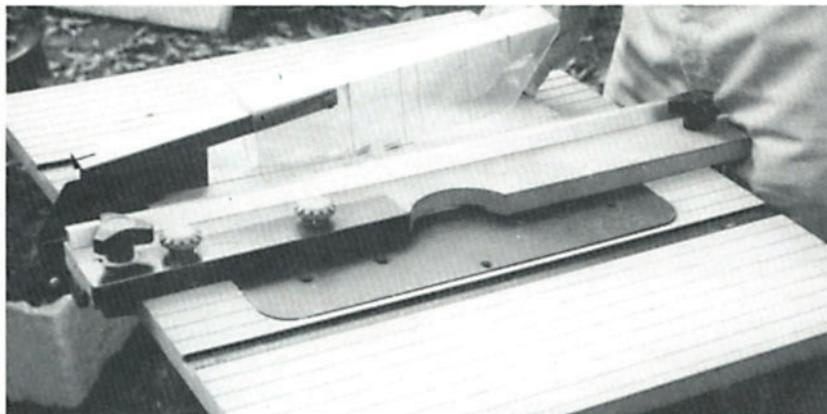
The distributors made an interesting comment about Hirsh's interest in safety. It was that they believe that by improving the intrinsic safety of the Table they reduce the need for "total concentration on the power tool and allow more attention to the quality of work in progress. Naturally, as confidence is gained, more and more projects are undertaken."

This seems to indicate that Hirsh sees the market for its Saw Table as people who can be encouraged to do more than be

simply "do-it-yourself" handymen (or women) but, on the other hand, people who are not yet accomplished woodworkers since these might reasonably be

adequate.

The same chipboard fence is used both for rip sawing and as a router fence. A simple adjustable guide is provided for



Rip Sawing

expected to be experienced and comfortable in the use of a variety of power tools.

This notion is borne out by the general appearance and operation of the Saw Table. The mitre gauge and rip fence, for example, are spartan but

the latter purpose to permit the width of the fence to be increased beyond the cutter. (This allows for the thickness of the cut and permits the workpiece to be supported against the fence on both sides of the cutter.)

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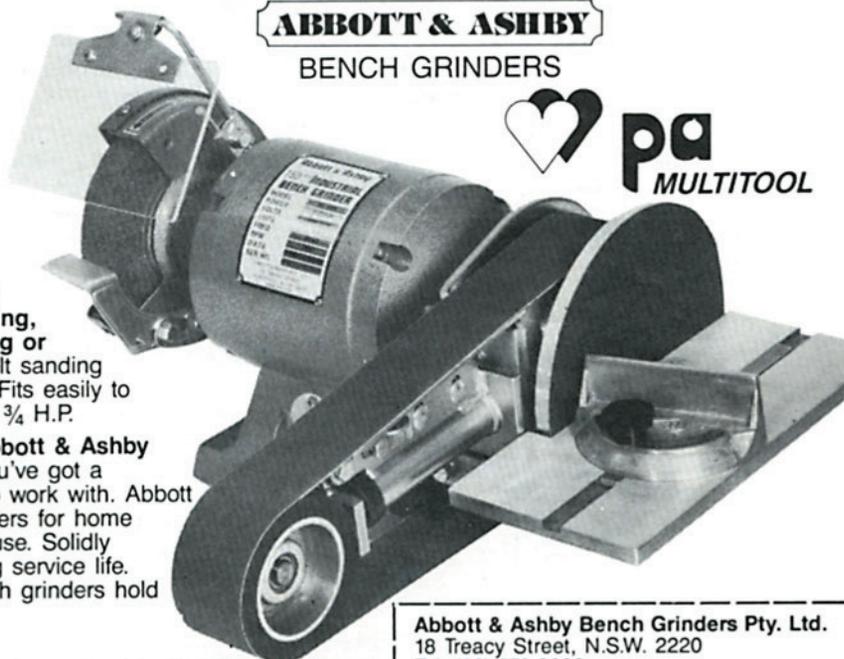
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A metal splitter (call it a riving knife if you prefer) is incorporated in the pivoted saw guard together with two anti-kick pawls. Although they look rather light, these latter are a definite plus in practice. The whole of this assembly can be removed by undoing one knob and removing the machine screw which secures it to a plate at the rear of the Saw Table. This is, of course, necessary to allow easy conversion of the Table for routing or jig-sawing.

It should be mentioned here that additional sawplates are available. Since the sawplate is fixed to the table top with some half dozen wingnut screws, this means that a power saw could be removed and replaced with, say, a router (mounted to its own sawplate) in much less time than it would take using only one sawplate.

The ease or difficulty of adjusting the height of the saw or router bit above the table top

depends mainly upon the power tool itself. Generally, however, there is enough room between the legs and other obstructions beneath the Saw Table for these adjustments to be carried out fairly easily. Bevel cutting, using the in-built adjustment of the power saw, is also possible without much difficulty.

Given a good quality portable saw and that most essential of essentials, a well-sharpened saw blade, careful use of this Saw Bench will allow quite good work to be carried out.

It isn't possible to quantify just how good the work might be. It must be remembered that this is a relatively simple Saw Table which allows the alternative use of the power saw as a truly portable tool. Under these circumstances, the ease with which reasonably accurate cuts can be made is more surprising than the fact that it cannot compete with much more expensive purpose-built

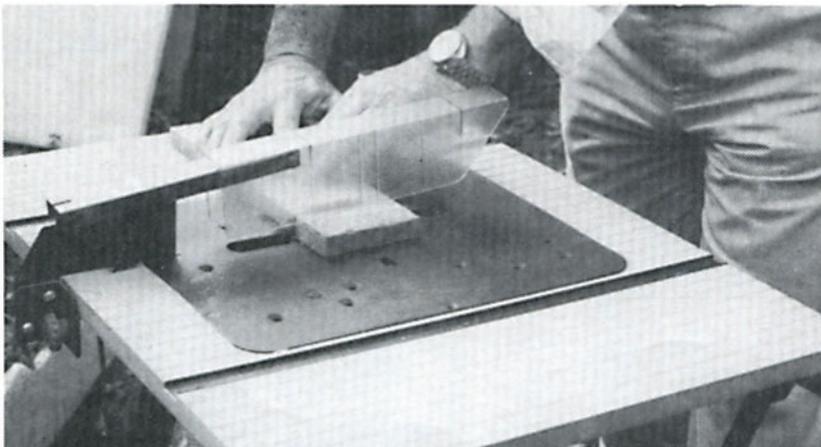
saw tables, jig-saws or spindle moulders.

It is also difficult to say what size timber one ought to be able to cut using the Saw Table since so much depends upon the saw itself. But it can be said that the types of work encountered in light framing, house finishing and simple furniture construction are well within its limitations.

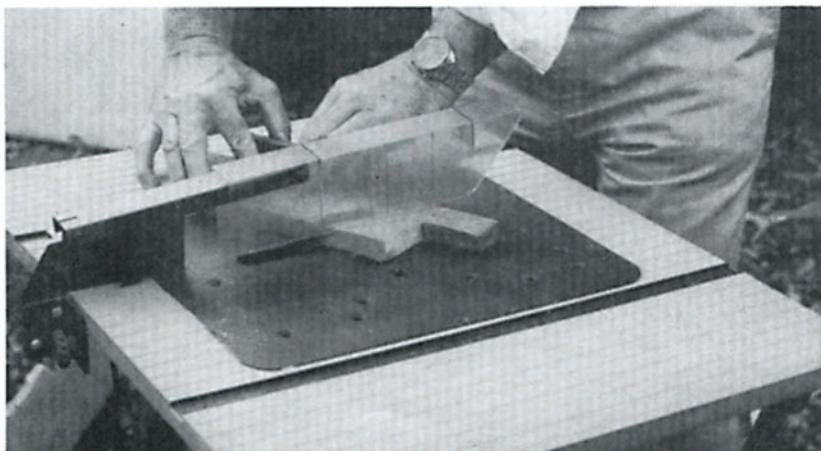
Then, of course, there is its portability.

The fact that you can take a Saw Table to site is often worth more than any other attribute it may possess.

All in all, the Hirsh Saw Table could find a home in the workshop of any budget conscious woodworker who can't see the justification for purchasing a separate table or floor mounted circular saw — or, indeed, any woodworker who must from time to time pack a saw in his boot and head off to some job or other. W



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So you want to turn Pro?

What makes a person with a safe, well-paid job and a good future (at least by conventional standards) throw it all away and become a full-time woodworker?

A brief conversation with practically any professional woodworker will quickly establish that it isn't exactly the best paid vocation in Australia.

Yet turning professional is an idea that occurs to many amateur woodworkers. For most, it will never be more than a dream — a dream that provides, perhaps, a little comfort on a miserable, rainy day or when the boss is on a rampage.

Occasionally, there might be enough internal or external pressure to prompt a review of "the figures". Sadly, "the figures" are rarely good enough. A single sale may go on a long way towards uplifting the ego but it generally takes a lot more sales to uplift the bank balance.

But some people do eventually turn professional. They give up the security of regular employment to enter the world of small business, forcing themselves to live by their craft — and, some might say, by their wits.

What is it that eventually leads them to taking the final step? How do they survive? Does it get easier as time goes by? Or do they simply use up all their savings and finally trudge back to more conventional employment?

To try to find some answers to these questions, we asked Sydney woodturner, Mike Darlow, how he came to enter his profession and whether things had turned out exactly as he had planned.

Mike is listed in the Telephone Directory as "Darlow Mike Woodtrnr". A small sign beside a large doorway is the only obvious clue to his whereabouts in the cavernous old factory building which he shares with several other woodworkers in Chippendale, an inner city suburb.

Mike has been a professional woodturner now for about six years. It certainly wasn't his first choice as a profession. In fact, until a couple of years before he turned professional, Mike admits that he had never even had a home workshop!



signing "real" work

The route which brought Mike to Chippendale began in Birmingham, U.K.. He left school, trained as a Civil Engineer and then spent the next couple of years getting experience as a junior engineer on building sites in the Birmingham area.

Committed to his profession, but restless and looking for more than he could see in the immediate future in England, he decided to try his luck in Australia. How he formed this notion, he can no longer remember but the result was that in 1969 he came to Sydney and started work, again as an engineer in building construction. Over the next few years he worked on a series of major buildings, among them, projects such as the MLC Centre which is now a Sydney landmark.

His interest in woodworking, still mainly dormant, found an outlet in reading. Eventually, he came across Peter Child's book, *"The Craftsman Woodturner"* — a book that was to change his life.

Suddenly, Mike says, woodturning became almost an obsession. Simultaneously, he began courses in cabinetmaking and woodturning at Sydney Technical College and started to put together a workshop in his garage.

For the next three years, Mike spent four nights a week at Tech and most weekends in his garage workshop. Although the courses were essentially practical, he nevertheless found his engineering training invaluable. Rather than accept a standard technique, he says that he tended to start from scratch. He admits ruefully that this had a habit of leading to some long "discussions" but it also led to the development of new tools and equipment. These Mike believes to be superior to those currently in use and he has subsequently patented many of them.

Just as he was finishing the woodworking and woodturning course, Mike came to a crossroads in his career. It was time to change jobs. The logical thing to have done would have been to look for another engineering position along the lines of those in which he had already proven himself successful.

Instead, Mike decided, this was the moment to make the big break — to go it alone as a woodturner.

"I just couldn't see myself going on and on, working on construction sites. Looking back, I was probably a bit too ambitious about how well I would do financially as a woodturner, but I never doubted that I could survive".

Mike started as a professional working in the same garage workshop he had when he was an amateur. He realised that he had to get known before he could expect to receive many commissions and that meantime, he would have to produce a lot of straight out commercial pieces for sale through shops and other outlets.

Fortunately, he says, when he started out, there wasn't a lot of woodturning of good quality being offered to retailers so it

often happened that a sale to one shop led to sales to others interested in handling the same products. Even so, this was a slow process and it took more than two years before Mike could move from his garage to his present workshop.

Since then, he has been able to build the business to the stage where it employs two apprentices and gives him time to concentrate on what he sees as his "real work" — the kind of woodturning that has led to two one-man shows at Sydney galleries.

"And money?", we asked, "Is it profitable being a professional woodworker?"

"This is one of the shocks you have in store when you turn professional. To work fast enough to receive anything like a reasonable return for your time, you must invest in good machinery. If I had to go out and buy everything you see in this workshop, it would cost over \$50,000. I doubt if you can ever make a living from woodworking and get that sort of money back".

That didn't seem like much encouragement to the amateur woodworker hell-bent on turning professional. But for all Mike's pessimism about the financial rewards of woodworking, he certainly didn't seem unhappy about his prospects.



"straight out commercial pieces..."

"Nobody would ever become a woodworker just for money. I'd have been a lot better off if I'd stayed in engineering. All of my savings are now tied up in machinery and equipment".

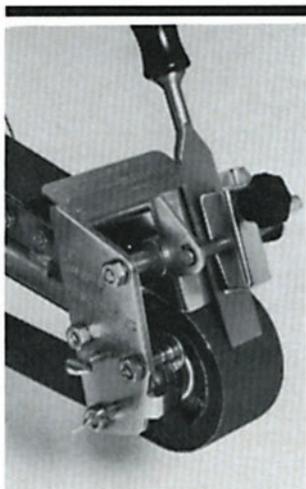
So we asked him one final question — whether he regretted his decision and would prefer to be doing something else.

All he did was grin and look around his workshop.



\$50,000 later

Products



Quick sharpener

P.A. Products, manufacturers of the Multitool belt and disc grinding attachment, have introduced an optional accessory designed to sharpen chisels, plane blades and power plane blades (including tungsten carbide blades) to their correct angles. Screwdrivers can also be re-tipped using the device. The accessory, called the Quick-Fit Sharpening Jig, attaches to the arm of the Multitool and holds the tool to be sharpened at a pre-set angle to the sanding belt.

The radius of the belt at the point of contact with the tool ensures that the tool is hollow ground.

P.A. Products claim that the Jig can be used to achieve a razor-sharp edge without burning.

*P.A. Products Pty Ltd,
6 Barry Avenue,
Mortdale, 2223*

Weather Beating Glue

Selleys Resorcinol Resin Glue has been designed specifically for jobs that demand high resistance to water and weather.

Made to BS (British Standard) 1204, Part 1 — 1964 WBP and 1204, Part 2 (Amended Jan., 1966) WBP, Selleys Resorcinol Glue is supplied as two components — a Resorcinol Resin (which has a solids content of 60% in a water/alcohol solvent) and a Hardener H170 (a formaldehyde containing compound dispersed in a special inert organic powder).

The glue cures at room temperatures. It is claimed to provide superior gap filling ability which makes it especially suitable for such work as boat building.

*Selleys Chemical Company,
1 Gow Street,
Bankstown, 2200*

Make mates with your ladder

If your kind of woodwork runs to fancy barge boards, a new Australian invention may be just the thing to take you to the top.



Laddermate is an attachment designed to fit practically all hollow rung ladders and aluminium builder's

ladders (without the use of tools) and lifts the top of the ladder away from the wall on which it rests.

This, says the manufacturer, means that there is no longer the likelihood of the ladder damaging delicate barge boards or guttering, but work can still be done on them without strain or discomfort.

Weighing 3.3kg and costing around \$75, the Laddermate can be used with ladders up to 9 metres in length and is adjustable within the range 100mm to 1000mm.

*Pynve Pty Ltd,
6 Vancouver Ave,
Toongabbie, 2146*

The lure of LUREM

Although they make a range of individual units including a planer/thicknesser, saw and spindle moulder, the French manufacturer, LUREM, specialises in Universal type woodworking machines.

The LUREM C2100 is a solidly built machine, relying extensively on heavy duty iron castings and steel to ensure stability, rigidity and therefore accuracy. Despite its weight, the C2100 is easily manoeuvrable.

The change from function to function is simple and

construction plans

For craftsmen and women of varying skills, simple-to-follow plans for projects ranging from the basic workbench to ornate 19th. Century Lancet clocks.

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fast, with special care being taken to ensure the safety of both the operator and the machine. For example, the motor is automatically cut-off if a change of mode is attempted while the machine is in operation. In addition, a securing device on the selection lever assures that the machine cannot be accidentally started.

The 1120 W (1.5hp) motor has ample power to drive the 200mm saw which has a maximum cutting depth of 62mm. The planer/thicknesser cutting block is 210mm wide and the planing table 1000mm long.

The C2100 also includes a spindle moulder with a fully adjustable fence and guard and a full function motorising table.

All sliding and moving parts are adjustable (to compensate for wear over the life of the machine) and grease nipples are provided for the lubrication of high friction areas.

LMS Australia Pty. Ltd. say that the LUREM C2100 complies totally with the latest Department of Labour and Industry Regulations.

LMS Australia Pty. Ltd.,
22-24 Lionel Road,
Mt. Waverley, Vic. 3129

Handy Electric Stapler

The recent release of the West German manufactured NOVUS range of Electric Staplers brings a group of complementary products to the established industrial pneumatic appliances already marketed by local firm, Jambro Pty. Ltd.

The NOVUS J170 Tacker fulfills the dual roles of Stapler and Brad Nailer without the need to change magazines. Staples which can be accommodated range in size from 4mm to 30mm and brads from 16mm to 30mm, depending upon

the model.

Ease of use and control of application are enhanced by the ability to vary the impact to suit job conditions. Also available is an extra-long nose-piece (15mm) which allows work in grooves and other difficult places.

Such jobs as upholstery and ceiling fixing, insulating and batten nailing are made easier and faster by another of the new range — the versatile and powerful NOVUS J171 Electric Nail Gun. Accessories include a profile board claw stop, soft material protective stop, equidistant roller stop, precision corner

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Products



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*Jambro Pty. Ltd.
154 Adderley Street,
Auburn, N.S.W. 2144*

Quick Screws

The Toulan 2000 is an attachment designed to convert a normal power drill (or even a hand drill) into an automatic screwdriver.

The British made Toulan 2000 is simply fitted into the drill chuck in the same way as an ordinary drill. It is claimed to allow woodscrews to be sunk into wood of virtually any hardness without the need for a pilot hole. Phillips, Pozi-drive and slotted head screws can be accommodated, the screws being locked into the head of the Toulan 2000 while being driven.



A variable depth gauge allows the finished level of the screw to be pre-determined. The gauge has eight positions, ranging from 1 (which leaves the head of the screw proud of the surface) to 8 (which fully countersinks).

*Balsugin Pty Ltd,
P.O. Box 286,
St Leonards, 2065*

Combat combats weather

Leaving unprepared timber to the mercy of the weather for even a short period before it is properly finished, is hazardous but sometimes unavoidable.

For those occasions when "nothing else can be done", Watty Limited has released a timber coating called Combat. It is quick and easy to apply but enables timber to withstand exposure to the weather for up to six weeks without coming to harm. Paint or stain can simply be applied over the top of Combat which supplies a solid base for the top coats.

*Watty Limited,
48 Walker St.,
Canada Bay, N.S.W. 2046*

If you cannot find a local supplier for a product, we suggest you write to the address supplied.

A Universal Woodworker

A new model Combination Saw, Planer, Sander and Borer with many new ideas and great versatility is being manufactured in Australia by Durden Machinery Co., Adelaide, makers of a range of woodworking machines which includes saw benches, planers, lathes and thicknessers.

Durden say that they have taken the needs of the home craftsman fully into account in the design of the UJ8-450 "Junior Joiner" Woodworking Machine. The unit will saw to 55mm (2 1/8") deep, plane 114mm (4 1/2") wide, bore or mortise to 12mm (1/2") and comes complete with a 200mm (8") Sanding Disc

for end grain shaping work. In addition, sixteen different patterns or moulds can be produced by the use of the optional two knife moulding. A thickening attachment with a capacity of 115mm x 115mm (4 1/2" x 4 1/2") is also available.



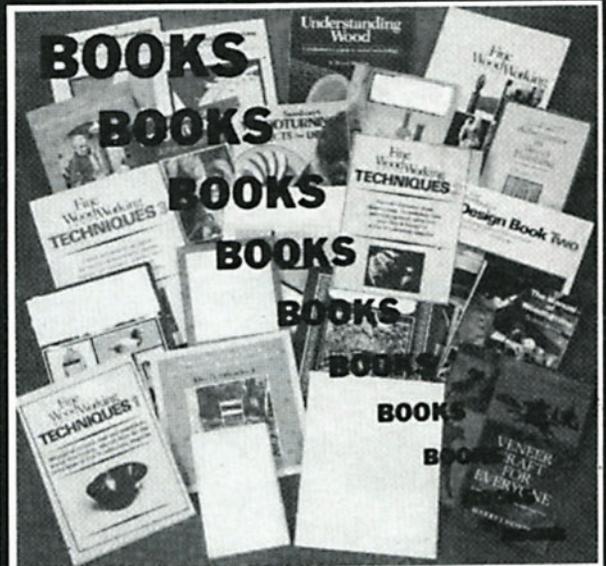
The "Junior Joiner" is constructed so as to be transportable, having the electric motor mounted on the actual machine.

Major features of the new machine include a ballrace mounted spindle, special full circle collet type chuck, separate height controls and all angle fence for both Saw and Planer, separate boring table, totally enclosed electric motor (for dust-free operation); overload cut-off switch, full below table guards for saw and planer plus automatic above table guards.

*Durden Machinery Co.,
3 Home Avenue,
Glynde, S.A. 5070*

W

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Cabriole Spells Class



Cabriole legs after bandsawing

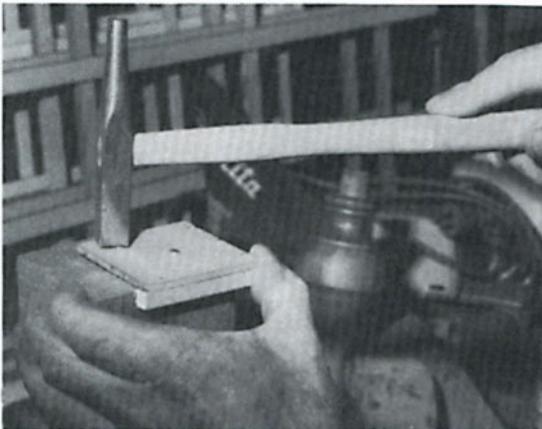
When Dave Manning went back to school after half a lifetime as a builder, it was as much as anything so that he could learn to make Cabriole legs. He had seen and admired these classically shaped legs over the years but had never had time to study them.

A change of occupation (he owns a hardware store in the inner Sydney suburb of Rozelle) gave Dave enough spare time to attend classes in woodturning at the Sydney Technical College. Equipped with a bandsaw, thicknesser, circular saw and wood lathe — all located in the workshop close to his store — Dave now turns out the Cabriole legs needed for the attractive occasional tables for which he accepts commissions from private customers.

In the next issue of "The Australian Woodworker", John Ewart (see "Putting on a New Face", page 37) has promised to tell us how to make the simplest, fully-turned type of Cabriole leg. Later, perhaps, we will be able to entice John or another skilled practitioner of the art to describe the much more complicated techniques involved in making the type of Cabriole leg which Dave Manning is seen making here.



Dave Manning holds the master template which he uses to mark out timber for bandsawing.



This special jig marks the two centres required for turning — first with the wood mounted in the lathe along one axis, then along another.



The section between the two turned areas is smoothed with a spokeshave.



Grog in the Glory Hole

Most conventional, ready-made bars seem to be fabricated from wood or wood look-alikes. It has always struck me as odd that those that are made from natural wood very often look flimsy — whilst those made from wood look-alikes often ape the appearance of heavy timber.

Either way, the end result is rarely satisfying. Perhaps it's my small boy image of what a drinking house should be — a place with a low beamed ceiling, solid, rustic benches and a bar that many a carousing sailor might have leant against (fallen against!) without leaving much of a dent.

Whether these notions are valid or not, is immaterial. They are merely offered to explain the approach taken to the design of this bar for a century old terrace house. The bar and its associated cupboard are quite easy to build and they conveniently

fill an otherwise hard-to-use corner.

This corner, for what reason I don't know (perhaps another reader can tell why) is sometimes called the "Glory Hole" in England. It is an awkward shape that is difficult to use sensibly. Just putting a cupboard along under the stairs tends to make the room look narrower than it already is. Seating arrangements are OK, provided you don't mind banging your head occasionally or living in fear of having things dropped on you by people walking up the stairs.

The bar solves the problem neatly without making the room look cramped.

The Glory Hole Bar

The first step is to line the bar area with a suitable wall cladding. In this case, shiplapped Western Red Cedar was used simply because it was available. It is not, perhaps, the best choice since it is a rather soft timber and easily marked. However, the colour and figuring of the wood — accentuated by staining — have a character which I feel suits this environment.

The cladding of the wall is not particularly difficult. The only prerequisite is to obtain a flat mounting surface. If the wall is already flat, the boards can be mounted directly. But if the walls are in bad condition, or misshapen, it will be necessary to mount horizontal battens one at the top, one at about hip height, and another near the floor. The one at hip height is obviously to make sure that the wall can take a few knocks from a possibly wobbly bar-tender. To make the battens lie flat with their front surfaces parallel, they may be either gouged into the wall, or they may be planed to fit.

If there is a decorative lower cap on the newel post at the head of the stairs, this must first be removed. Two methods of construction can be used. Either the posts can be cut to length and fixed in position by whatever means are available, or the posts can be made up as part of a frame with two horizontal members joining them at the top and bottom. The latter is, of course, the more elegant method. It requires more work to make the blind mortise and tenon joints at each corner of the frame, but once the frame is made, it is easy to locate, plumb and fix.

The upright posts are made from 100mm x 100mm rough sawn Oregon so as to achieve the desired appearance — although it will probably be necessary to sand them lightly with a coarse grit paper if the bar patrons are not to get splinters

with their drinks.

In designing the bar, a feature has been made of the joint at the outer end of the top shelf support. This support is a piece of 75mm x 75mm (D.A.R.) Oregon fixed at its inner end in a blind full mortise. Its outer end passes through a full mortise in the outer post. A trunnel pin, cut from 25mm hardwood, and inserted in an augered hole through both the post and the support, completes this joint.

Incidentally, it is a sad reflection on these days of things-that-look-something-else that many non-woodworkers ask how the "effect" of this joint was achieved. Not for a moment do they believe that one piece of wood actually passes through the other.

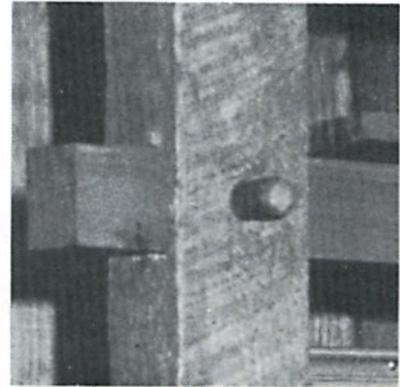
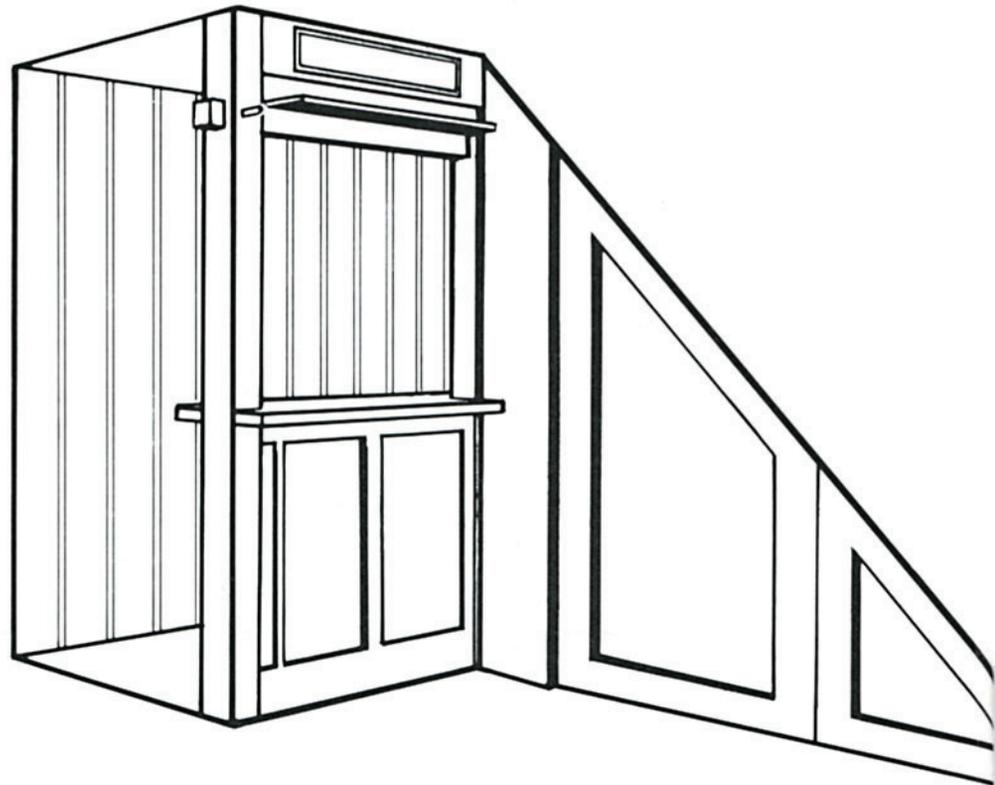
The support for the bar is similarly fashioned except that the joint at each end is a blind mortise.

Veneered coreboard above the glasses shelf and below the bar is let into shallow rebates in the posts. These rebates may be cut by hand (with chisel and mallet) or, more conveniently, with a router. They need only be a centimeter or so deep, since this depth provides more than adequate strength.

The bar top, again selected because it happened to be available, is a piece of 50mm thick Western Red Cedar. The thickness is important, not only because the large section timber helps to achieve the appearance required, but also because the bar top is only supported along the centre. When someone leans on the outer edge of the bar, it tends to bend across the grain. This produces tensile forces towards the top surface of the bar and timber is weakest in tension across the grain. To avoid the bar top breaking under the load of a heavy (!) drinker, it must therefore be relatively thick.

The only tricky part may come when the whole bar is to be assembled. The inner post is laid on the floor of the workshop and the two support rails (for the shelf and bar) and the veneered coreboard entered in their appropriate places. PVA glue should of course be used at each of these joints.

The outer post is then dropped over the shelf support rail (it will presumably be a snug fit and require gentle persuasion) and lowered into position so that the bar top rail and the coreboard enter into their correct locations. Again, PVA glue should be used on these joints except the one with the trammel pin. There is little



Trunnel Pin Joint is featured

point in using adhesive on this joint and in any case it would be difficult to avoid smearing it over the exposed timber and having to go through the process of careful cleaning-up.

The top and bottom horizontal beams can now be slipped into their respective mortises and the whole bar erected in place under the stairs. The bar top and glasses shelf are the last pieces to be added.

The adjoining cupboard and the bar mixing shelf can be seen in the photos. Little needs to be said about these except that they were framed up using 50mm x 50mm Oregon and sheeted with the same veneered coreboard used for the front of the bar. A few simple mouldings completed the job.



Book Review



Japanese Joinery

by Yasuo Nakahara

It needs no more than a casual glance through this book to recognise that here is a craft which is remote from our conventional notions of woodworking.

It is in the joints — their number and complexity — that the most important differences appear to exist between Japanese and Western joinery.

Some of the joints which are generously illustrated in this book are simply stunning. They are at once works of art and engineering. At the beginning of his chapter on End Joints, the author says:

"The numerous joints require expert technique to construct. They also give the impression of having been designed strictly for appearance by a master craftsman".

Indeed they do. But the author goes on:

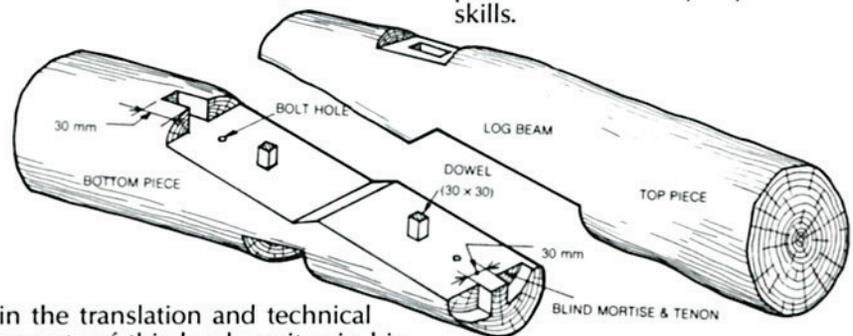
"However, *tsugite* (end-joints) and *shiguchi* (right angle joints) were developed on the basis of structural principles, to resist shear, bending, and moment during an era when metals were scarce."

Take, as an example, the "Log Beam Stub Tenon Scarf Joint" — whose description alone would be likely to put all but the most accomplished woodworker on the defensive. It is a complex joint (see drawing) combining a multi-angle splice with dowels, blind mortise and tenons and, finally, of all things, bolts. Examination of the forces on this joint (which commonly plays a central role in the roof structure of Japanese domestic buildings) proves the point made by Yasuo Nakahara. But it is the beauty of the joint which impresses rather than any feeling for its intrinsic strength.



The idea that people have been making joints such as these for perhaps a thousand years or more, is overwhelming. Little wonder that Len Brackett, who acted as advisor to the publisher

Western reader, this is an unusual, if not unique, opportunity to view a woodworking culture foreign to our own — a culture which offers a host of new vantage points from which to view the woodworking with which we are more familiar. If, from its publication in countries other than Japan, there comes eventually a blending of these two streams of thought on the use and appreciation of wood, the author will have done much more than merely help to preserve his country's special skills.



in the translation and technical aspects of this book, writes in his foreword that he spent five years working 70 to 80 hours a week "to get the basics down".

"Fifteen years", he says, is considered necessary for becoming a temple carpenter". And to drive home the point, he adds "... the equivalent of 30 years at 40 hours a week".

It was the author's avowed intention to make this book a collection of traditional Japanese woodworking methods. To what extent he has succeeded only his peers could judge. But for the

Japanese Joinery (A handbook for Joiners and Carpenters) by Yasuo Nakahara.

Softcover, 239pp (approx).
235mm x 190mm

Published by Hartley & Marks, Publishers, Washington, U.S.A. (Original Copyright - Japan - 1967. Translated 1983)

Our copy from Second Back Row Press, 50 Govett Street, Katoomba 2780 Phone (047) — 82 3588



Meranti

Well over 100,000 cubic metres of Meranti are currently imported into Australia each year. This represents more than 10% of all imported timber and is second only to Douglas Fir which makes up approximately 45%.

Meranti is therefore one of the most widely available timbers in Australia and for this reason if for no other, it is likely to find its way into most workshops. Whilst serious woodworkers might not entertain its use for anything other than general household projects, it is possible to achieve surprisingly good results using it not merely as a joinery or finishing timber, but also for simple furniture construction.

Meranti is not itself a species but a generic name applied to a large number of species of Shorea. These light to medium weight hardwoods grow to a height of more than 50m and occur widely in Malaysia, Indonesia and Singapore. The vast majority of Meranti sold in Australia originates in Malaysia.

Meranti timber is divided into red and pale Merantis. Each is sub-divided again, the first into Dark Red and Light Red, the second into Yellow and White Meranti.



Light-red Meranti

This is a pale pink to red, medium-textured wood that works easily, is relatively stable in use and accepts a good finish.

Dark-red Meranti

White resin streaks are often apparent in the coarser textured medium red to darkish red-brown Meranti. This, too, is relatively stable, works easily and accepts a good finish.

Yellow Meranti

The colour of Yellow Meranti actually varies between pale yellow and yellow brown. This is a medium textured wood, also relatively stable in use which works easily and can be rotary peeled to produce a good veneer. It is, however, more likely to show evidence of border damage.

White Meranti

A moderately coarse textured timber, white Meranti has a very high silica content; so high, in fact, that it is rarely used for anything other than the manufacture of veneer — a process which is carried out while the timber is still green.

Working with Meranti

Because of the variety of individual timbers which are included within the generic group called Meranti, it is impossible to offer any meaningful general comment about the strength of the wood. Strength across the grain, for example, an important factor in end nailing, varies widely.

The use of Meranti outdoors is not considered advisable in Australia although Dark Red Meranti is sometimes used externally in more temperate climates.

The weight and texture of the three Meranti timbers used for sawn wood are such that unless tools are kept very sharp, the wood tears as much as it cuts, leaving an unattractive woolly surface.

All of the Merantis can be readily glued (the best for this purpose being Dark Red Meranti) but none are suitable for steam bending.

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Regional suppliers of woodworking products and services are invited
to advertise in this Directory section. For the convenience of readers,
listing is by State followed by category. The following categories are
currently available: Woodturning, Wood Carving, Wood Sculpture,
Furniture Making, Home Building & Renovations, Tools and Wood-
working Supplies. (Other categories will be considered should they
be required.)

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charge of \$12.

Please send required copy and payment to "The Australian Woodworker", P.O. Box 421, ROZELLE, N.S.W. 2039

Dear Reader,

By completing and forwarding this Questionnaire, you will help us produce the best magazine for you. Please send the completed form (or a photocopy, if you don't want to damage the magazine) to:

"The Australian Woodworker"
P.O. Box 421, Rozelle, N.S.W. 2039

Questionnaire

1. My location is _____ (city or town)
in _____ (State or Territory)
2. I am: an amateur woodworker
 a professional woodworker
3. I spend on average less than 2 hours a week woodworking
 between 2 and 10 hours a week
 over 10 hours a week
4. I do not have an actual workshop
 I have an area which is used principally as a workshop for woodworking
5. My woodworking equipment includes:
 portable power saw
 bench saw
 router
 planer
 woodworking lathe
 thicknesser
 combination woodworking machine
6. My next major purchase will probably be a:

7. My main interests are (please tick all your interests):
 general woodworking
 furniture making
 woodturning
 wood carving
 wood sculpture
 building or renovations in timber
 wooden boat building
8. My age is: under 30 years
 30 - 45 years
 over 45 years
9. I prefer to read articles on the following subjects (please tick all articles of interest):
 projects in my main area of interest
 projects in other areas
 reviews of workshop tools or machines
 how other woodworkers do their work
 stories of professional craftspeople
 the technology involved in woodworking tools, machines or consumables
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accuracy. Carbide tipped
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4321 ORBITAL SANDER
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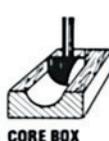
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