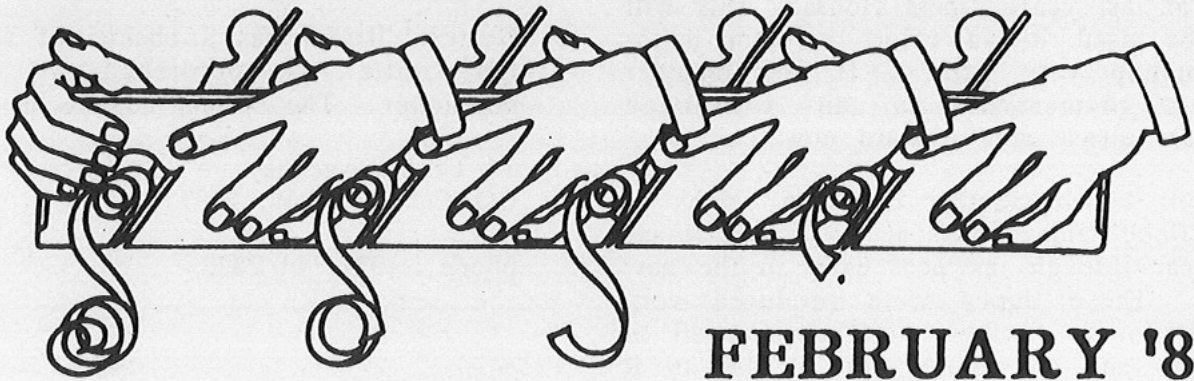


WOODWORKERS' GROUP OF N.S.W.



FEBRUARY '88

WOODWORKERS' GROUP OF N.S.W.

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Warriewood 2102

From The Chair

As you can see from the above list of office bearers a few changes in the committee have been made. Our appreciation goes to David Lockwood, Mike Darlow and Henry Black, who are standing down. David has been in the chair for the past two years, steering us through a few difficult issues with astute statesmanship.

Henry has served for some six or seven years and is due for a well earned rest but will continue to organise special workshops and tool sales (thanks Henry). Mike would rather be turning than totting (the Opera House finances were a bit heavy). Mike will also stay in the wings with some special events up his sleeve.

Our thanks also to those who are staying on (the late nights, pizzas and heavy red prove irresistible to some). Nick Hill transfers from newsletter editor to the onerous task of Secretary. Everyone will agree that our newsletter has flourished under his and Phillip Bohringer's command. Our sincere thanks go to them for a lot of time and effort. Phillip is continuing for a while

(six months he says) to act as assistant editor until a new face can be found - any offers ?

Mike Jefferys has agreed to stay on, giving us general advice and opinion, plus the fact of not knowing what to do with his evenings - thanks Mike.

Our welcome must now go to the new guys and gals. Jim Littlefield takes over as Editor and Gayl Leake as Treasurer. Jim will need your support with lively articles for our education and entertainment, so please contact him directly with your contributions. Gayl is our first lady committee member and between times of setting up her new workshop and cutting those immaculate dovetails has agreed (with a little persuasion) to look after our finances. She will need your support with *prompt payment* and *subscriptions* which, by the way, are now due.

This leaves us two committee members short so we are looking around, perhaps in your direction. I know that the boys in the sticks would dearly love to give of their time. A number have commented on this, particularly in regard to the exhibition organisation. Thanks for your thoughts but until such time as you can get together and build a fully laminated helicopter complete with inlaid dashboard and secret drawer to contain whatever G.H. brings with him on his infrequent Sydney visits, we will have to wait.

The committee will do its best to organise interesting and informative group meetings with guest speakers whenever possible so you all will have no excuses for not turning up. We are trying to arrange a regular place and time for group meetings to make it easier for you all to leave one weekday evening free every two months. I trust this is not too much to ask ?

We are planning our next major exhibition for mid-1989 and will be setting up a

committee. Now !!! The first task will be the preparation of a new portfolio using photos taken at last year's Opera House. This will then be used in an effort to gain major sponsorship very early. If any member fancies themselves as an exhibition organiser please step forward now !!!

We will be distributing duplicate copies of the official slides taken at the Opera House last year through the post early in the new year. These dupes were produced very cheaply for us through the Craft Council of Australia and our appreciation is due to it for this favour.

Most members will know that the committee is seeking incorporation. The main advantage of this move is the limitation of liability should any action arrive against the group. At the present, members of the committee are at risk (and have been for our ten years' existence) either personally or individually. The first step is to make application to the Corporate Affairs Commission for registration of our group name. Our first thought is to use our present title (the Woodworkers Group of N.S.W.) in the application. However, perhaps a change of name to The Woodworkers Association of N.S.W. sounds more official and professional. If any members have strong views on this matter please let me or Nick Hill know immediately.

In closing may I thank the past general committee members and the Opera House committee members for their support during my term as Secretary and I look forward to the continuing enthusiasm of the new committee for the future.

Laurie Oliver.

Our Last Meeting

This meeting was a great success with Richard Latrobe Bateman giving an interesting and vital workshop in the morning and Bernard Gay showing us his expertise in marquetry. (A complete report on the day is given by Graham Tilly in this issue.)

Richard returned at the end of the day to continue with slides and more ideas on design.

Many thanks to Richard Crosland for the use of his ideal workshop for these activities.

ERRATUM

Henry Black has a change of address but not quite as published in the last newsletter. The correct address is :

14 Corby Avenue
CONCORD N.S.W. 2137

phone : (02) 744 2822

OMMISSION

I'm very sorry to have not mentioned that the very interesting stool design was submitted and made by Neil Scobie.

Engineering a Stool - a Workshop with English Designer/Maker Richard Latrobe Bateman

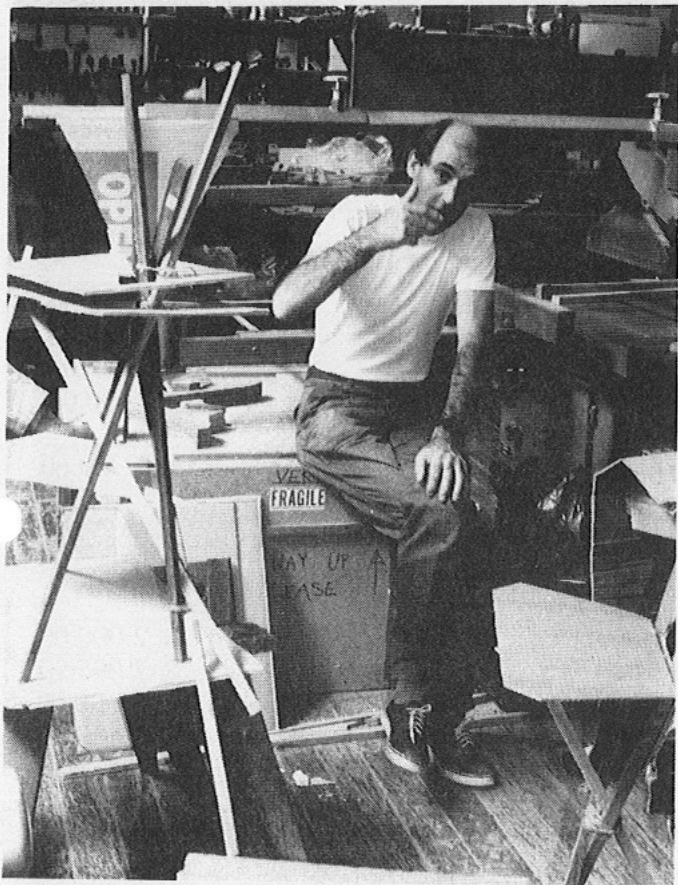
The morning session was my first experience of an organised design workshop and I attended with mixed feeling, enthusiasm and apprehension. The enthusiasm worked best, even though the sight of the styrofoam, the cartons, the ill-assorted laths, the string and the hot glue was quite off-putting.

THE EXERCISE : 'design a stool, 26 inches high with foot rest'. No drawings, no joints, no use of the skills we are so proud of. Make it directly, realise it, hang it from a light fitting, let's talk about it.

THE DISCUSSION: Is it sculpture ? Oh! I like that, but its not a stool. Yes, but very two dimensional. Twist it, try for another dimension. That's great. Why not that internal shape ? Splendid (only an Englishman can say splendid in a serious tone). But you missed an opportunity to change it twenty minutes ago, you've lost the aesthetic balance, let alone the dynamic stability.

THE HARD BIT : Have another go, refine, change, twist, re-combine. Learn from the first discussion, go on. My personal inclination here was to tighten the joints and avoid the re-design. In fact my 'stool' collapsed as I vascillated between more hot glue and working on the design. I wanted to 'make' the stool and not go on with the design. I suspect this was part of the lesson !

THE SUMMARY : Richard once again helped us to see the potential or lack of potential in our stools and, more importantly, in the design process. I realised that Richard's enthusiasm had won me over and I also observed his apprehension in his oft-reported rhetorical question: 'Did you get something out of this ?'



In the afternoon Richard showed slides of his work. It was great to see his development as a furniture designer :

- the transformation from a traditional chair to a folding chair (minimal in the number of pieces);
- the growth from a Windsor type cottage chair to a triangulated chair made with split laths;
- bridges with tensioned steel wire;
- great dining tables ageing in our modern world;
- strange round tables.

The no-ornament, 'less-is-more', no precious wood, serendipitous approach is not where I am. I would not be a disciple but I would be delighted to be a colleague.

Perhaps the most impressive part of the day with Richard was sharing in his vision of the kind of world we live in and the kind of person he is.

Graham Tilly.

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Meetings for 1988

A permanent meeting site is being arranged, hopefully in the new Powerhouse museum which is opening in March. The dates will be listed in the next issue when we have confirmation from the Powerhouse. The idea of a permanent site is to be central for all members and have facilities for lectures and slides on Monday evenings.

Our Next Meeting

The next meeting will be at the Sturt School for Wood, hosted by Alan Wale. Our last visit was early days for the school so we'll be able to hear how three years have progressed and what directions Alan has for the school.

The meeting will be on Sunday 21 February at Sturt School for Wood, Range Road, Mittagong. Mittagong is only 1-1/2 hours from central Sydney so don't be put off by the distance - it's an easy drive.

Arrive late morning, bring meat for a barbeque and bread and salads will be supplied. We'll have a fairly early meeting about 1.00 pm so as not to be too late for the drive home. See you all there.

Nick Hill.

A Handover to Laurie

With a bit of gentle pressure from his mates, Laurie Oliver has agreed to take on the job of Chairman of our Group.

At our last meeting I mentioned a few changes in the committee and that I was not sure of my own plans. As I have an extraordinarily heavy program of work and it is clear that there will be the necessary continuity (Nick Hill has agreed to be Secretary), I'm happy to hand over to Laurie after my two years as Chairman.

If I were asked what I've done, I'd say that I've set down on paper a standard of workmanship. I think that's important for our Group - in fact, the basis of it.

There has been criticism of the adjudication at our last Opera House Exhibition on the grounds that there weren't many submissions rejected.

A Hungarian / Yugoslav friend of mine lived for a time in Schwabia. The town gaol flew a flag to indicate that there were no prisoners.

It had been flying for twelve years. The measure of a system of regulation is not how many offenders are apprehended, but how few offenders there are.

David Lockwood.

SUBSCRIPTIONS

Due to the passing of another year we find it necessary to remind all that subscriptions to the Woodworkers Group of N.S.W. are now due. When you see what we've got in store for you this year you'll wonder why we aren't charging double the fee.

Anyway, due to the stock market crash of last October and the stagnation of a rise in subs for some four years, we feel that a rise is overdue. This gives scope for paid guest speakers and a continuing high quality newsletter which costs between \$300 to \$400 per issue (we need more ad's)

Members : \$45.

Assoc. Members : \$35.00

Nick Hill.

Note from the new Treasurer

As the new treasurer for the WWG N.S.W., I felt members would be interested in hearing a summary of our accounts for 1987. The exhibition account is best treated separately from the general account of the WWG. The figures for the exhibition account given here have been tallied by the outgoing treasurer, Mike Darlow.

for the 1987 Opera House exhibition, incoming money to the group was composed of :

exhibitors fees	\$ 6 235.00
commission from works sold	\$ 4 684.60
catalogue sales	\$ 2 320.00
sponsorships	\$ 6 400.00
	<hr/>
total income	\$19 729.60

expenses incurred to the group from the exhibition were :

catering	\$ 2 000.00
photography	\$ 1 095.90
Sydney Opera House costs	\$ 300.00
exhibition design	\$ 440.00
advertising	\$ 313.60
catalogue	\$11 065.00
poster	\$ 3 643.00
invitation	\$ 102.30
portfolio	\$ 1 070.78
GIO insurance	\$ 100.15
1/2 cost of judges diner	\$ 125.00
	<hr/>
total expenditure	\$20 255.81

This shows the Group made a loss of \$ 526.21 from the exhibition. It is interesting to note that gross sales of exhibitors work totalled \$23,423. Deducting the commission paid to the Group, \$18,738.40 was returned to the exhibitors.

income to the general account of the WWG for 1987 was made from :

subscriptions	\$ 2 470.00
advertising in the newsletter	\$ 674.00
	<hr/>
total	\$ 3 144.00

<u>expenses to the Group were for :</u>	
newsletter	\$ 2 363.82
committee meeting rfrshmnts \$	80.00
lecture / meeting costs	\$ 551.91
legal literature	\$ 20.00
sundry	\$ 79.95
total	<u>\$ 3 095.68</u>

This shows the Group just managed to break even with \$48.32 to spare in 1987.

Gayl Leake.

Turning Talks

The cobbler's boots always need mending. For much the same reason my dear wife recently bought a shelving unit come chest-of-drawers from IKEA.

Considering that everything would have been cut on computer controlled equipment the inaccuracies seemed excessive. But the IKEA range does illustrate the emphasis on conservation in Scandinavia and that no skerrick of spruce is wasted.

The third National Wood Conference was held in Canberra at the A.N.U. in December. The venue was excellent as was the organisation. It was good to meet old and new friends but did the conference achieve anything lasting and is it unrealistic to expect that it should ?

The conference theme, 'Appreciating Wood' was sufficiently vague to permit almost any speaker to pursue his pet interests. Alan Williams gave a crisp and effective lecture which led, at least in the short term, to the resurrection of a potential timber lobby. Richard Latrobe Bateman was the outstanding personality promulgating an uncompromising approach. But the range of reactions illustrated the disparate woodworking situations and ambitions of the delegates and the remote change of achieving consensus on any significant woodworking issue.

There was a feeling that the next conference should be in Sydney and it ideally should, but prospective organisers need to think seriously about conference objectives before deciding to hold one and before becoming bogged down in the organisational morass.

Mike Darlow.

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Beaver Galleries Award 1988

The Finishing Touch An Exhibition of Occasional Furniture July 10 - 31 1988

Planning is now underway for the annual award exhibition for 1988. This annual event which commenced in 1979 has up until now been by invitation only. For 1988 the award will be open to all furniture designers.

The award is non-acquisitive and for 1988 it will be for \$1,000 for an occasional type piece of furniture such

as a hall table, cabinet, blanket chest, etc. No dining settings, lounge settings or large pieces will be accepted.

Selection will be from slides or photo prints of entrants' current work. Slides or prints are to be received by the gallery no later than April 30.

Entry forms are available from :

the Beaver Galleries
81 Denison Street
DEAKIN A.C.T. 2600
phone : (062) 82 5294

The Case for Splined Edge Gluing **- A Counterblast to** **Michael Podmaniczky**

This concerns the article 'The case for simple edge gluing', reprinted in the November issue of our newsletter from an article by Michael Podmaniczky in the *Wooden Boat Magazine* of July / August 1984.

I take issue with the method of argument and with the conclusion.

The method of argument offended in its use of the relentlessly repeated assertion. There were fifteen assertions that the rubbed joint was superior to a splined one, before any supportive argument. There were three appeals to authority !

Throughout, there was the assumption that all glue joints, if 'properly made' (method not discussed), are stronger than the wood. There was some bemoaning of 'lost' craft standards. I presume we are to accept that if we have a glue failure, that's because we're substandard in our workmanship (but he won't tell us how). He said (I quote) 'what applies for the strongest adhesive also applies for the weakest'. What in hell is that supposed to mean ?

He then goes on to discuss eighteenth century gluing techniques, presumably under the misapprehension that hide glue represents the weakest adhesive. I have news for him - it's one of the strongest ! What a pity about its mould nutrient nature and its short clamping time.

Podmaniczky's analysis of the joint strength depended utterly on this assumption that the glue bond was, and would remain, stronger than the wood. All of us know that it is not always so.

There is no discussion of long-term stress glue failure, although the possibility of it was mentioned obliquely in respect of joints in a box spar and hatch cover. The use of herring-bone splines was mentioned but the analysis was done for the case of the parallel-grain spline, which is known to be inferior. There was no mention of creep and, most importantly, no mention of shear failure, which is the most common cause of simple edge joint failure in a table top. We had a classic case of it at our recent exhibition.

The article repeats the idea that the gluing process depends upon penetration of the wood on either side of the joint. That is to say that it is a sort of mechanical keying of the one piece to the other. I understand the more recent idea is that the adhesion is a matter of molecular cohesion to the surfaces and that the surface condition is crucial, prompt gluing after cutting being advisable. Of course, in the real world, that's not always practical and there's still the creep problem if you use PVA (even if it's yellow); the brittle fracture problem if you use the formaldehyde group (urea-, phenol- and resorcinol formaldehyde); and the mould problem if you use the hide, fish, blood or casein group. I'm not sure about the epoxies. I've been using them for various purposes for 30 years, along with the other types above, but I'd love to speak to someone who's used them for 200 years !

The epoxies, as well as the various other glues, use high reactivity to form a strongly bonding compound. It's a matter of detailed inter-atomic forces. Of course, the actual molecular structure of the glues and their long-term behaviour varies quite a deal from type to type, so it should never be said 'that's an epoxy glue' - the question is, which ? I think the epoxy group has the best promise but I don't trust them.

The trouble with glue is that it doesn't stand up well to repeated stressing which is provided for us by God - in the form of the annual humidity cycle. The importance of this was not mentioned in the article, yet it is crucial. I remember that there was a discussion of it in an early issue of *Fine Woodworking* (U.S.A.). Look it up if you can find it. There were test joints made and broken before and after humidity cycling over a period of months. The strength rating of the glues used changed dramatically after the humidity cycles.

It's a bit spotty, as the investment in time obviously became too heavy, but it does make the point that to evaluate the ultimate worth of a glue, there's no point in simply

making a trial joint and breaking it after a few weeks. It's the slow inexorable working of the fibre bundle which does the damage - and the prolongation of brittle fracture line (it's best to put some barriers in the path of these).

I return to the first paragraph of the article and vehemently deny the assertion: 'remember that the naturally occurring chemical bond between wood fibres is weaker than the bond made by good wood glue between fibres'. To be sure, I've seen many of the Olde Colonial red cedar table tops, (pockets screwed to the frames) which have split - the wood rather than at the joint - but that's a weak second-rate wood. In 'first class' woods, it's always the joint which fails.

I recommend the use of splines, double if the stuff is over 30mm. Preferably using the same species and back / quarter sawn.

The splines should be herringboned, which is to say that the grain in the spline makes an angle of 30 - 40° to the grain of the planks. That means short lengths of spline (around 200 to 300 mm) with the grain slopes alternated. With double splines the grain slopes should be opposite across the pair and the joints staggered. The splines should be thickened to a firm but not tight fit in the grooves. The tolerance is +/- 0.05 mm. They should be cut to width so that they fill the groove almost completely, the combined depth of the grooves exceeding the width of the spline by 0.2 to 0.4 mm.

The glue should be spread thoroughly but sparingly - a 0.5 to 1 mm squeeze-out bead is about right. Mean spreading means a starved and weak joint. Excessive glue can generate enough hydraulic pressure under desperate clamping to explode or damage the strongest wood. Tighten the clamps slowly to allow the glue to flow.

David Lockwood.

Allowing For Shrinkage

Species of timber vary in shrinkage from the freshly sawn (unseasoned) to dry (seasoned) state. The shrinkage rate also depends on the orientation of the growth rings to the face.

In this short article I will explain how it is possible to make reasonably accurate predictions of the extent to which shrinkage will affect the unseasoned

dimensions of sawn timber. This can be done by using a simple calculation and reference to standard shrinkage rate tables for various species.

Calculating freshly sawn-to-dry sawn dimensions will be useful for those of the group who intend to saw their own from ex-street trees or getting a sawmill to custom-cut a log. It will be especially useful to those who are cutting valuable species and anxious not to waste a scrap from dressing down to dimension or being undersized.

Shrinkage essentially occurs when moisture is gradually removed from a moisture content level known as the fibre saturation point (f. s. p.) commonly around 25% to 30%, down to a point at which the moisture content of the timber is at equilibrium with that of the surrounding atmosphere. This point is known as the equilibrium moisture content (e.m.c.), commonly being around 5% to 16%. E.m.c.s essentially relate to the average humidity levels in an area. Therefore the e.m.c. at Bourke will be much less than that at Coffs Harbour; and the e.m.c. inside an airconditioned office can be much less than the outside environment.

Shrinkage occurs relatively steadily or linearly between f.s.p. and e.m.c., thereby allowing easy calculations of shrinkage rates at various moisture contents. Tangential dimension shrinkage (i.e. at right angles to the rays) is about twice that in the radial dimension. This is caused mainly by the restraining effect of the rays on movement in the direction of their length. This is why back-sawn boards, having a wide face at right angles to the rays, have the greatest shrinkage rate across their width. A quarter-sawn board, having its face parallel to the rays, incurs a greater shrinkage rate across its thickness. New developments in seasoning practice such as the use of fine 'shrink-wrap' plastic on jarrah squares has revolutionised the drying of this material - by up to 3" thick - without internal checking in mid back-sawn / quartersawn conditions. This practice essentially has been successful due to the 'evening-out' of the drying rate at various levels within the wood and from each face.

Getting back to the method of calculating green-to-dry sawn dimensions, the following formula can be used :

$$\text{sawn dimension (mm)} = \frac{\text{dry dimension in (mm)}}{1 - (S+2)} \times 100$$

: where S is the relevant shrinkage value from tables.

Past experience indicates that at least 90% of a particular species sawn to dimensions including allowances calculated on this basis will be above the targeted minimum dry dimension.

To illustrate this calculation firstly some shrinkage rates for some common cabinet grade Australian hardwoods:

	SHRINKAGE (%)			
	from f.s.p. and above, down to 12% m.c.			
	tangential		radial	
	air-dried	re-cdtd	air-dried	re-cdtd
blackbutt	7.3	5.8	4.3	3.5
brush box	9.7	6.8	4.4	3.6
sydney blue gum	9.5	5.8	5.4	3.6
rose gum	7.2	5.5	4.0	3.4
spotted gum	6.1	5.0	4.3	3.7
jarrah	7.4	6.7	4.8	4.6

Using back sawn blackbutt as an example with a finished required dimension of 150 x 25 mm after air seasoning to 12% m.c., the following calculation illustrates the use of the formula :

(i) allowance on width - with tangential shrinkage being considered :

$$\text{sawn dimension (mm)} = \frac{150}{1 - (7.3 + 2)} \times 100 = 165 \text{ mm}$$

(ii) allowance on thickness - with radial shrinkage being considered :

$$\text{sawn dimension (mm)} = \frac{25}{1 - (4.3 + 2)} \times 100 = 27 \text{ mm}$$

Therefore to ensure 90% of boards to finish 150 x 25 mm plus tolerances after seasoning to 12% m.c., the sawn dimension should be 165 x 27mm

Phillip Bohringer.



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