

# STEAMLINES

PERTH

**N.D.M.E.S.**

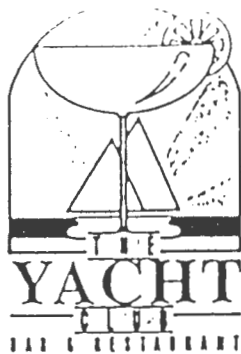
W. A.

NORTHERN DISTRICTS  
MODEL ENGINEERING  
SOCIETY PERTH INC.

EDITOR: DOUG BAKER

THIS MENU APPLIES FOR

- NOVEMBER & DECEMBER
- GROUP OF 15 GUESTS AND OVER
- END OF YEAR SOCIAL WIND-UP
- EXCLUDING CHRISTMAS DAY
- THESE PRICES ARE NOT APPLICABLE ON SATURDAY NIGHT & SUNDAYS



2 course + vege or salad \$19-50  
3 course + " " \$23-50  
3 course + " " + coffee & sugaries \$25-00

any of the above menus include a carafe of wine or soft drink per couple

ENTREE

SOUPE du JOUR

Our special soup for the day OR

MUSSEL KEBABS

Fresh local mussels, marinated and steamed in wine & herbs then lightly crumbed and grilled OR

MUSHROOM & SPINACH RAVIOLI

Home made and served with a light basil and garlic sauce



MAINS

ESCALLOPE de VEAU

Thin slices of veal, pan-fried and finished with a sweet marsala, lemon-thyme glaze OR

SUPREME OF CHICKEN

Oven roasted breasts of chicken wrapped in black seaweed and pork tulle and served with a mixed mushroom sauce OR

NOR'WEST SNAPPER

Filleted, pan-fried in butter and finished with a parsley capers and lemon juice sauce

HOT STEAMY VEGETABLES OR GARDEN FRESH SALAD



DESSERT

PROFITEROLES aux FRAISES

Choux pastries filled with strawberry ice cream and topped with brown and white chocolate OR

PASSIONFRUIT PARFAIT

Light frozen mousse flavoured with passionfruit, grand-marnier liqueur and bathed in a mango coulis



It's finally arrived!! After all those weeks of not receiving a news letter, *it's here!!* To those members who tossed and turned with insomnia, to those who were contemplating suicide, and to those who considered a mental breakdown "hold the 'phone", you are saved.

The hold up has been due to a 4-8-6-DX. "That's an unusual loco.", I can hear you say ... "and what's a DX?" To be honest, I'm not really sure and for a 486, well you're right! It's a confounded computer - you know, one of those magical boxes that is supposed to make life easier(?), free you from the burden of the everyday mundane trivia in the business world, assist in producing error-free documents etc. Don't be fooled as there are Computer Gremlins lurking everywhere, and if you don't know how to talk in DOS (no, it's not a foreign country, but to a computer illiterate such as myself it may as well be, as it sure is a foreign language) these machines will not work.

There is, in fact, a ritual - sacred or not - and if one does not adhere to this mystical ritual faultlessly it comes back at you quicker than a blink of an eye telling the operator that they are some kind of nitwit and to try again. So much for 'user-friendly'. A hammer is 'user-friendly' if you pick it up and wallop the tripe out of something, then put it back. Not so with a computer: the tools that one has to buy with the standard machine is mind-boggling, to say the least.

It's like buying a motor car through the spare parts dept., i.e. a sparkplug at a time. You quickly learn what it's all about. If you like a very quick lesson in Life Skills without the understanding of what goes on - forget it - your purchase is a lemon, and an expensive one at that.

This is how it goes: Imagine walking in to a store and you are confronted by a salesman who goes through the preamble of breaking the ice. Then he asks the question "Do you require ....", and from his mouth like an endless waterfall dribbles out all the jargon like "286, 386, 486. what type of printer, 9-pin, 24-pin, bubble jet, laser?" and so on, all of which, at this stage, means absolutely nothing to you, being a Total Computer Illiterate. Once you have decided on a machine and its options, including hard disc drive, floppy drives (what size?), CD Rom, Sound Blaster etc. you come home and set it all up - only to find you can't use it as you haven't bought a book that will tell you how to do it. So back to the store to purchase the necessary ... and so the saga goes on until one day "bingo", it all happens!!

All this is to replace a biro that is truly 'user friendly' and only costs a dollar! Something is wrong, don't you agree? Yet without it I'm told I'm backward ... I wonder. Now I have thrown my hat into the ring and offered a plausible explanation as to my seemingly apathetic attitude to the Newsletter. I hope I'll be able to produce an informative one more regularly from now on.

NOW to what's happened in the past eon or two.

The track is a good place to start. Ken Collett and his willing helpers have assembled more than 50% of it and it looks absolutely magnificent. I know it's a biased comment, however.

without any doubt in my mind our track would have to be the best in Australia, and whilst I haven't travelled abroad I'll stick my neck out and say there won't be too many better throughout the rest of the world. I believe we have rewritten the books again. To those members who haven't yet seen it, do yourself a favour, bring your camera and take some shots because it is truly fantastic.

To those who are into "Don Burke's Backyard", you should see what Geoff Evelyn has done with *our* backyard! The transition from a sandy, barren dustbowl to a botanic garden is mindboggling, I would not have believed so much could be achieved so quickly.

Steve Briggs, John Martin and Jerry Witham have been working diligently on the steaming bay, and a fine job they are doing as well. The support legs for the tracks are in place and painted and the steps at the north end are now complete. The services go in next and Lindsay and Ian have this project well in hand. Each steaming bay will have 12 and 24V supply, with rainwater and compressed air also available. There will be no 240V in the steaming bays, however there is a mains GPO. This power outlet is for portable tool use only as mains power steam raisers will be discouraged - simply put, "You can't have 'em"!

The coach has progressed in leaps and bounds. Bill Wall, who was coordinator, had to retire because of employment demands. I was sorry this was necessary as he has done an 'awesome' job. During Bill's reign he had a number of windows manufactured and glassed at 'the right price'. He also managed to obtain some brown carpet squares which, when laid, will look absolutely fantastic. With the inside of the coach painted with a white ceiling and beige walls, the chocolate brown carpet will really set it off. Bill also had a wheel chair door put in and a number of other jobs concluded.

John Tuffin has been Bill's right arm and hand. Without John's expertise, quite frankly, I'm sure we would be still flapping on the deck like a fish out of water. John has the enviable knack of turning what seems to be an insurmountable problem into something very simple. It embarrasses me because I didn't think it could be so easily done. His usual catchphrase is "You engineers are not rough enough".

Ian Allison and Lindsay Adams have completed the wiring and now we have lights, power points and a hot water system over the sink in the kitchen. As you can imagine, there isn't much more to do before we can use the coach to our advantage. (Typist's comment: I'm just wondering when you'll all decide to have a 'sleepover' there - you've already had breakfast, lunch & dinner!). With the aid of the D.C.S. Volunteers sand has been pushed, shoved and levelled into position and slabs laid as a walkway. Now lawn and garden have to be organised. Knowing Geoff and his green fingers (Brunswick green, of course) I'm sure it will be looking terrific in no time.

I mentioned earlier that Bill had to abdicate his position from the committee. Because of this, I approached Ian Allison to undertake the duties of coordinator for coach restoration. I know he has a task to fill Bill's shoes, but with some backup from you, he will come through. Please help him in any way you can, as he needs it and deserves some assistance. He has taken on a thankless job that no-one else really wanted.

With the aid of a crude piece of engineering I recently made up a bird seeder. Already pink & grey galahs, twentyeights and various other breeds of birds are starting to come in to our area. It is quite delightful to see how tame these birds have become as a consequence.

The work list for things to come is quite horrendous, in short, it goes on forever! However the immediate main thrust now (outside of the preceding) is the station, driveway and fence. We have permission to move the north boundary fence including gates and this will give us a diesel parking area, if the need arises (shudder the thought).

Well, folks, I guess that's it in a nutshell. A lot has been done, but we are nowhere near finished. To those members who have not been to a work day for a while, don't be put off with the after-pain of muscles you haven't used for a while. With a little rest and intensified physiotherapy you can be just like the rest of us - proud of what we are achieving! So come down and give it a go, Saturdays are really a lot of fun.

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It is my unenviable duty to advise you that Reg Barltrop has died. I don't intend writing a eulogy, as all of you knew and respected him as I did. To commemorate him the committee has decided to dedicate a tree in his honour. This tree will have a brass plaque placed in front by his wife Lily on Saturday Nov. 28th at 4.30pm. All members are expected to attend.

Doug Baker  
(President)

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## MONEY MATTERS

We have several types of fundraising activities on the go at the moment. Amongst his already existing duties, John Martin has generously offered to organise souvenirs. First up, we have had some Sleeper Certificates printed which are available at only \$1.00 each. If each member buys \$5.00 worth this will cover the cost of printing, and in doing so every one sold after that is 'straight cop'. I would ask all members to get behind this as these Certificates will make great Christmas presents - particular for the Model Engineer Who Has Everything.

It is our aim to have the track completed by November 28 (Saturday) when we intend having a Steam Up. (*Typist: Don't tell anyone, but it's Doug's birthday - so please come and help him celebrate*). The significance of the track completion date is that we are selling tickets at \$20 each in a Raffle to be drawn on the day to be the first driver on the new track. If you don't have a locomotive don't be put off, as Doug or Lindsay will let you use one of theirs.

We are doing this to raise funds as our bank balance is very sick. But just think of the prestige - it's a part of history to be the first to run. It doesn't happen very often, and it never will again at NDMES!

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## DIARY OF EVENTS

Stirling Fair: Set up Saturday 31st October, Run day Sunday 1st November.

South West Model Engineers, Bunbury: Invitation to a steam-up on 14th November.

Northern Districts Steam Up: Saturday, 28th November from 4pm onwards (BYO bbq, drinks etc.

Stirling City Council Children's Party: 6th December.

NDMES Christmas Dinner: Friday 11th December.

Hobby Spectacular: 16-17th January 1993.

This year the Christmas dinner will be held at the Yacht Club Restaurant in North Beach, cnr of North Beach Road and West Coast Highway. There are only thirty seats available; if you wish to join in, it costs \$25 per head and includes a free bottle of wine between two. You must advise either Lindsay or me by the next club meeting (Nov. 13, Black Friday) if you would like to attend. Payment must be made in full to Lindsay by the Steam Up on November 28th. If you haven't paid by then, sorry, but you'll miss out as the restaurant must be advised no later than Monday, Nov. 30 of numbers attending. There will be no late bookings at this stage. Enclosed, please find a copy of the menu.

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## FROM THE BOILER INSPECTORS

In the past few months a couple of members have not played the game according to the rules. Because of this, one of the boilers has been condemned. The short of it is if you intend building a boiler all of the AMBSC Rules must be adhered to. If you don't, we have to assume you are not going to run or display in public the machine you have just built.

If you don't understand the criteria a Flow Chart of Inspection has been drafted, based on the one published in Australian Model Engineer. Unless you have a boiler certificate you are not permitted to run your locomotive on our club track. This directive also includes "out of hours" times i.e. Sunday morning, when no-one is about. If any member chooses to

ignore this directive the committee will have to take action to ensure it will not happen again.

If any member wishes to use the track he must advise the committee of the times. If you don't, you may find in the event of an accident that you have no insurance cover. Your boiler inspectors are Peter Goddard and Doug Baker. If you have any doubts whatsoever ring them - they are there to help.

#### FOR SALE

1. Complete workshop, Myford lathe etc. (List enclosed).
2. 1 Douglas Shaper - \$1000. Ring Doug Baker, 3411630.
3. Photo-copy machine, works well, needs service - donation to the Club of \$100 or thereabouts.

#### N.D.M.E.S. CHRISTMAS SOCIAL 1993

#### HOTHAM VALLEY RAILWAY

As a change from the normal Christmas function, this year your committee tried to book a carriage on the Hotham Valley Railway. Unfortunately this period of the year is very heavily booked and we were unable to obtain a reservation. To make sure we are not caught out again, we have now made a booking for Saturday 11th December 1993 at a price of \$52 per head. This price includes transportation from and back to Perth, pre-dinner drinks and a five-course meal, which in our case will be a Christmas special. The carriage accomodates only 40 people so you are advised to get in early in order to secure a place.

For those who are not familiar with the itinerary, we will assemble at the East Perth railway station at 1715hrs, be picked up by bus at 1730hrs and will be driven to Dwellingup railway station to board the train. Pre-dinner drinks will be served before we are allocated our carriage and tables. As we dine, the train trundles through the jarrah forest and, being fitted out with floodlights illuminates the trees as we pass. Return to East Perth is normally between midnight and 0030hrs. Anyone who has already experienced this function will undoubtedly vouch for the fact that it is a very enjoyable evening and good value for money.

With plans for the official opening of the tracksite, 1993 promises to be a very special year in the society's history and it seems appropriate that we should round off the year with a special Christmas function such as this. The telephone booking for the party has to be confirmed with a substantial deposit which requires early commitment from members together with a deposit of at least \$15.00 per head. John Martin has agreed to coordinate the function and will be collecting names and deposits both at the track and at monthly meetings. He has also agreed to collect the balance of payments, on an instalment basis of \$5 - \$10 per month if members would prefer to do it this way, by the November 1993 deadline. Naturally, payment in full at the time of booking would be most welcome as this will help to clear the total deposit for the outing at an earlier stage and thus guarantee a firm reservation.

Please put this date in your diary and get in touch with John (Tele:448-8843 Home, 383-8221 Work).

**\*\* PRIVATE WORKSHOP SALE \*\***

**\* COMPLETE WORKSHOP / METAL TURNING LATHE / TOOLS / MATERIALS ETC \***

LATHE - Myford Super 7, 3.5" x 19", 25 - 2,150 rpm speeds, power cross feed, on makers cabinet stand, grey, 12 yr old one owner, imperial, 3/4 HP reverseable motor single phase, screw cutting imperial or metric, coolant pump / tank, changewheels, fine feed & metric conversion gears, 3 jaw / 4 jaw chucks & hard jaws, 5 sets soft jaws one set extended, 6 multi stop for saddle, face plate, drive plate, spare plate, fixed & travelling steadies with spare pads / rollers, centre, single & 4 way tool post, rear tool post, headstock dividing attachment, Myford compound vertical milling slide, hand shaper attachment, lever collet chuck & 40 'dead length' imp / met collets, Dixon interchangeable toolpost, parting, vee and 10 off standard tool holders, tool rest and drive for wood turning, small bore ball race steady, crank to hand drive headstock, adjustable headstock bar stop, spare new leadscrew & 1/2 nuts, cross slide & top slide nuts etc, guards, duckboard.

BENDING ROLLS - 12" wide, both rollers geared, M.E. George Thomas design (model engineer).

MATERIALS - Huge amount of hex / tube / square / round / angle / flats / sheet / in mild steel, high tensile, spring steel, stainless, brass, copper, phos. bronze, aluminium, silver st, gauge plate, nickel silver, tufnol, nylon, P.T.F.E. etc. Stainless & spring steel wires in various gauges.

ARC WELDER - Oxford Bantam 185 on wheels, OIL COOLED, 185 amps with good stepped range, dual 50v & 80v open circuit also has a brazer outlet, capacitor fitted to use on domestic electric, professional type to run all day, leads, mask, holder. Huge amount of steel, hard coating, cutting & stainless welding rods etc.

MILD STEEL copper coated and flux coated bronze welding rods for oxy / aseth welding.

OTHER TOOLS ETC - Fly cutter, face plate, trepan cutter, small surface plate, bench centres, 1/2" new Coventry die head and dies, new Mitutoyo magnetic base stand, new Eclips surface gauge block, new ground precision angle plate medium size.

ELECTRIC MOTORS - 2 off, one new induction type, one brush type, both single phase and reverseable.

CABINATE TRAYS - 5 off, various sizes.

STEEL HEARTH - Good shield for welding or brazing, .9m x .4m x .4m.

Everything is here for the locomotive / traction engine / clock or model maker etc. ALL IN MINT CONDITION, PRICE - \$6,000 COMPLETE (WILL NOT SPLIT). Contact Graham Clarke to view, Tel 399 1469. BUYER COLLECTS.

I also have 3 "John Wilding" brass skeleton clocks about one third completed, and other construction books, including congrave and wall clocks etc. Please contact if interested to negotiate a price.



## BOOK REVIEW - BUILDING THE SHAY, BUILDING THE HEISLER AND BUILDING THE CLIMAX

Kozo Hiraoka's three books, *Building the Shay*, *Building the Heisler* and *Building the Climax* are three outstanding books on miniature live steam locomotive construction that every locomotive builder should read. The books describe 3.5" gauge versions of the Shay, Heisler and Climax geared drive locomotives that were developed for logging work in the forests of the west coast of America. Although the three books are specific to geared drive locomotives, they present to every locomotive builder a magnificent general treatise on miniature locomotive construction.

The three books are worth reading just to appreciate Kozo's drawings and sketches. In addition to his conventional drawings showing every component of the locomotives, Kozo shows, throughout the books, his recommended construction and fabrication techniques through exquisite sketches and drawings. His attention to detail means that every part, no matter how small or insignificant, for each locomotive is included.

Kozo's first book, *Building the Shay*, takes the reader logically through the construction, painting and operation of a typical two truck Shay locomotive. In doing this, it gives a wealth of information on general construction and fabrication techniques applicable to any locomotive. Kozo does not specify castings for his locomotives, but his fabrication techniques guide a builder through fabricating cylinders, spoked wheels, chimneys and other components that, traditionally for us, start as castings.

On machining components Kozo writes "The crankshaft is probably the most difficult component to be machined in this locomotive. However, if you follow these instructions it can be machined easily with great pleasure. Indeed, crankshaft turning is one of the most interesting jobs in lathe operations." The crankshaft has three big end journals, four main bearing journals and three pairs of eccentrics for Stephenson valve gear! And Kozo's step by step "words and music" really do make it look easy.

Having bought read and learned from Kozo's first book, my expectations for his second book, *Building the Heisler*, were high. When it arrived by mail from America, I was not disappointed. In addition to the chapters on constructing the locomotive, Kozo includes some real bait; a chapter on making miniature pressure gauges. As he did in *Building the Shay* he also discusses the construction of 5" and 7.25" gauge versions and includes detailed drawings for boilers in these larger scales.

Kozo's third book, *Building the Climax*, has just been published. Again, I eagerly awaited its arrival. It is identical in style to the Shay and Heisler books and completes Kozo's dream of being able to fabricate all parts of his locomotives. The full size Climax locomotives used skew bevel gears to allow the longitudinal drive shafts to pass above the axles. Kozo initially modified his miniature design to allow radial tooth bevel gears to be used; these gears are used in the full size Shay and Heisler, and are readily available commercially in the sizes needed for 3.5", 5" and 7.25" gauge locomotives. However, he was not happy using radial tooth gears in place of the skew gears of the prototype Climax and eventually developed a lathe based machining procedure which he details in three chapters and an appendix in his Climax book. These chapters describe the cutters, fixtures and machining techniques for skew and radial straight tooth bevel gears and are the highlight of this book. After reading Kozo's text and studying his drawings and sketches I felt I could adjourn to my workshop and make these complex gears on my Myford.

Kozo's precise, fully detailed approach to building miniature locomotives differs from the approach of those designers more familiar to us through *Model Engineer*, *Engineering in Miniature* and *Locomotives Large and Small*. His professional engineering skills and practice show clearly in his approach to miniature locomotive design, and his "words and music" stand proudly beside those of the more familiar designers.

These three books are closely based on construction series originally presented in the American magazine *Live Steam*, and are published by Wildwood Publications and Village Press of Traverse City, Michigan. Building the Climax can be obtained by direct order from the publishers. Building the Shay and Building the Heisler are not available at the moment, but a further print run is imminent. They are three books that I value highly, and frequently use for inspiration. I recommend these three books to anyone who is interested in building miniature live steam locomotives, regardless of whether they are geared or conventional types.

Dick Langford



Seen at the Track

## LIBRARY

I am pleased to report that the publications, referred to in the last edition of Steam Lines as missing, have now been traced. These have been duly catalogued and are now in the library, available for loan. It transpires that this batch constitutes the remainder of a large consignment of magazines, purchased in and shipped over from the Eastern states by Doug Baker some years ago, many of which have been in the library for some time already. A list of these new additions, which contain a host of early model engineering material, is provided below:-

### Magazines

Railway Engineer - 1981 Pts 1 - 4, 1982 Pts 1 - 3  
Railway Engineer International - Jan/Feb/Nov/Dec - 1980.  
Steam Railway - No 13 - May 1981  
Steam - Vol 11-Nos 23 - 25, Vol 12-Nos 26/27, Vol 13-No 28  
How It Works - Pt 69  
Newne's Practical Mechanics - Jan 1940  
M.E.in Australia & NZ - Nov 1935, Feb/Mar/Oct 1936, Mar 1937  
Feb 1938  
ME Exhibition Handbook-1967/69, 70, 71, 72, 74, 75, 76, 77(2), 78(2)  
Practical Engineering - Vols 2-11 (about 130 mags. 1940-1945)

### Books

Clocks and Clock Repairing - Smith  
When We Rode the Rails - Adam-Smith  
Railway Rules & Regulations - WA Government Railways  
Tich - LBSC  
Model Locomotive Boilers - Evans

Thanks are extended to Jim Crawford for the following donation:-

### Magazines

Miscellaneous copies of Model Engineer (1951 - 1987)  
Engineering in Miniature - Vol 9 No 2 July 1987  
Locomotives Illustrated - No 13  
History of Railways - Pt 9  
Great Trains (sequel to History of Railways)  
- Pts 2, 6, 8, 12, 13  
ME Exhibition Handbook - 1982, 83, 84, 85, 86

### Catalogues

Micro-Mark Tools - Spring 1991, August 1991  
E & J Winter  
Demco Tools  
Demco Accessories

Books

Model Railway Constructor Annual - Stevens/Stratten

Model Railways Locomotive Album - Doherty

Locomotive Handbook - Emu Bay Railway Co Ltd

Thanks must also go to Lyndsay Adams for the following donations:-

Various Model Engineer magazines 1953 - 1983

ME Exhibition Handbook - 1972/1980

A copy of the 1989/90 Radiospares catalogue has been added to the library for reference. If anyone has a more up to date version they wish to donate please come forward. Following my appeal in the last circular, Peter Goddard provided me with an address in South Africa of a model engineer who had published a comprehensive index to the ME magazine. An enquiry was sent off in May but to date no reply has been forthcoming.

Thanks to the contributions of a small number of members the library shelves are filling nicely. With the evacuation of the Guildcliffe Community Hall the library has been temporarily transferred to Doug Baker's residence, which fortunately is located opposite our new temporary venue at the Guildcliffe Street Autumn Centre. We are still keen to receive further donations so please check your literature for any duplicate copies you may have or any issues you can spare. Many of the magazines that have been received consist of loose copies. To preserve these and to render them more accessible we plan to arrange for as many as possible to be bound. We already have some ideas as to what form the binding will take but initially are looking for a member who either has the skills or just the willingness to coordinate the job. It is hoped that by spreading the load across our members, perhaps one volume each, the job would be no great burden on anyone. Is there a volunteer out there?



**TRACK RAFFLE**

Name: .....